

# Assessment of England Coast Path proposals between Silecroft in Cumbria and Cleveleys in Lancashire

On:

- Morecambe Bay and Duddon Estuary Special Protection Area
- Morecambe Bay Special Area of Conservation
- Morecambe Bay Ramsar site
- Duddon Estuary Ramsar site

Version 2  
September 2020

## Changes in this version

Section	Detail of changes
Whole document	Update for accessibility with e-readers. Changes include; removing shading in tables, updating table headings and changing location descriptions of tables within text.
Table 7b, page 57.	Update to table 7b, <i>Current status, influences, management and condition for breeding seabirds</i> to incorporate additional information about breeding little tern at Bullstone Bed, Haverigg.
Table 15, page 112.	Addition of an assessment of the impact of our proposals on breeding little tern at Bullstone Bed, Haverigg, to incorporate additional data and information.
Map, page 117 and table SCS 1.1, page 118	Update to map and update to the assessment of the impact of our proposals on breeding ringed plover at Haverigg, to incorporate additional data and information.
Table 16h, page 179	Update to assessment of adverse effect on site integrity alone (breeding seabirds).
Page 197	Update to references.

## Certification of changes

Revisions made by:

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24/09/2020

Revisions authorised by:

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07/10/2020

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

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

## Summary

### I) Introduction

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

Natural England has a statutory duty under the Marine and Coastal Access Act 2009 to improve access to the English coast. This assessment considers the potential impacts of our detailed proposals for coastal access from Silecroft in Cumbria to Cleveleys in Lancashire (a combination of the 'Silecroft to Silverdale' and 'Silverdale to Cleveleys' stretches, as published on our web pages) on the following sites of international importance for wildlife: Morecambe Bay and Duddon Estuary Special Protection Area (SPA), Morecambe Bay Special Area of Conservation (SAC), Morecambe Bay Ramsar site and Duddon Estuary Ramsar site.

Duddon Mosses SAC, Roudsea Woods SAC, Leighton Moss SPA and Leighton Moss Ramsar site are also affected by these proposals. Separate HRAs have been written for these 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 two contiguous stretches 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 stretches.**

These Reports can be viewed here:

[www.gov.uk/government/publications/england-coast-path-from-silecroft-to-silverdale-comment-on-proposals](http://www.gov.uk/government/publications/england-coast-path-from-silecroft-to-silverdale-comment-on-proposals)

[www.gov.uk/government/publications/england-coast-path-from-silverdale-to-cleveleys-comment-on-proposals](http://www.gov.uk/government/publications/england-coast-path-from-silverdale-to-cleveleys-comment-on-proposals)

### II) Background

The main wildlife interests for this stretch of coast are summarised in Table 1 (see section B1, tables 3a and 3b for a full list of qualifying features).

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**Table 1. Summary of the main wildlife interest**

Interest	Description
Non-breeding waterbirds.	Waterbirds occur in nationally and internationally important numbers in the Morecambe Bay and Duddon Estuary SPA both on passage and over winter. The majority of waterbirds feed on the extensive areas of mud, sand, saltmarsh and coastal fields and often roost at the water's edge on beaches, saltmarsh and sea defence structures. In the winter the SPA regularly supports over 210,000 individual waterbirds.
Breeding seabirds.	Morecambe Bay and Duddon Estuary SPA is an important site for breeding terns and gulls. In the breeding season the area regularly supports nearly 62,000 individual seabirds.
Subtidal and intertidal habitats.	Morecambe Bay and the Duddon Estuary support numerous areas of subtidal sandbanks and intertidal reefs, saltmarsh, sand flats and mud flats. These features are important in their own right and are essential habitats for nationally and internationally important populations of waterbirds.
Sand Dunes.	Extensive well-developed dune systems occur around Morecambe Bay SAC, principally at the entrance to the Duddon Estuary and on Walney Island. They provide excellent examples of dune succession and support a number of rare plants and animals such as the natterjack toad and the great crested newt.

### 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 1].

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

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

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The conclusions of our assessment 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. These changes will influence how people use the coast for recreation and our aim in designing our detailed proposals has been to secure and enhance opportunities for people to enjoy their visit whilst ensuring appropriate protection for affected European sites.

Of particular concern during the development of our proposals for these stretches of coast has been disturbance to breeding seabirds and non-breeding waterbirds. There have also been concerns about impacts on saltmarsh habitats. Our aim in developing our proposals has been to secure and enhance opportunities for people to enjoy their visit and actively engage with the natural environment whilst ensuring appropriate protection for the designated site features. Objectives for design of our detailed local proposals have been to:

- avoid exacerbating the impacts of disturbance at sensitive locations by making use of established coastal paths (and to facilitate a reduction in any existing impacts, wherever possible and appropriate);
- 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 when, where and how 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; and
- where practical, incorporate opportunities to raise awareness of the importance of Morecambe Bay and the Duddon Estuary for birds, and how people can help efforts to protect them.

## **V) Conclusion**

We have considered whether our detailed proposals for coastal access between Silecroft in Cumbria and Cleveleys in Lancashire might have an impact on Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SAC, Morecambe Bay Ramsar site and Duddon Estuary Ramsar site. 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 the sites. These measures are summarised in Table 2a & b.

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**Table 2a: Summary of risks and consequent mitigation built in to our proposals  
– Morecambe Bay SAC & Duddon Estuary Ramsar site**

Risk to conservation objectives	Relevant design features of the access proposal
<p><b>Saltmarsh &amp; associated assemblages</b></p> <p>More frequent trampling following changes in recreational activities as a result of the access proposal and constructing sections of new path through these habitats leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site;</li> <li>• Reduction in extent of the feature within the site;</li> <li>• Changes in key structural, influential and distinctive species;</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation;</li> <li>• Changes in structure and function: presence and patterning of creeks and salt pans; and</li> <li>• Structure and function: presence of unvegetated surfaces.</li> </ul>	<p>Where the England Coast Path is aligned on saltmarsh, safe routes are promoted avoiding areas that could be damaged by trampling. It mainly follows existing paths on raised, firm ground and with vegetation that will withstand regular use appropriate to the context.</p> <p>In places the path crosses channels within the saltmarsh or short sections of wetter ground due to drainage from adjacent land. At these locations sleeper bridges and stone flags will be installed to improve the path surface.</p>
<p><b>Sand dunes &amp; associated assemblages</b></p> <p>More frequent trampling following changes in recreational activities as a result of the access proposal and constructing sections of new path through these habitats leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site;</li> <li>• Reduction in extent of the feature within the site;</li> <li>• Changes in key structural, influential and distinctive species;</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation;</li> <li>• Changes in future extent of habitat within the site and ability to respond to seasonal changes; and</li> <li>• Structure and function: presence of unvegetated surfaces.</li> </ul>	<p>Where the ECP is aligned through sand dunes we avoid aligning in embryonic dunes as these are sensitive to changes in access. We align through vegetated, stable dunes towards the back of the dune system where possible.</p> <p>Where we align through mobile dunes, infrastructure is kept to a minimum.</p>

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<b>Risk to conservation objectives</b>	<b>Relevant design features of the access proposal</b>
<p><b>Sand dunes &amp; associated assemblages</b></p> <p>Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site;</li> <li>• Reduction in extent of the feature within the site;</li> <li>• Changes in key structural, influential and distinctive species; and</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation.</li> </ul>	<p>Access with dogs to the Coastal margin within the grazing enclosures at Haverigg will be restricted by a formal direction on land management grounds. Where the trail passes through the grazing enclosures, dogs must be on leads.</p> <p>Signage at entrances to the grazing enclosures to inform people about the access restrictions.</p>
<p><b>Perennial vegetation of stony banks</b></p> <p>More frequent trampling following changes in recreational activities as a result of the access proposal:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site;</li> <li>• Reduction in extent of the feature within the site;</li> <li>• Changes in key structural, influential and distinctive species; and</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation.</li> </ul>	<p>The access proposals promote routes that avoid areas of vegetated shingle</p> <p>At Bazil Point, where the trail passes close to an area of vegetated shingle, access to the shingle will be excluded by formal direction and notices will be installed to inform people about the access restrictions.</p>
<p><b>Reefs</b></p> <p>More frequent trampling following changes in recreational activities as a result of the access proposal:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site;</li> <li>• Reduction in extent of the feature within the site;</li> <li>• Changes in key structural, influential and distinctive species;</li> <li>• Changes in physical structure of rocky substrate; and</li> <li>• Species composition of component communities.</li> </ul>	<p>Because this habitat is difficult to walk over and is sensitive to trampling damage, the ECP is not aligned through it. This habitat would however often fall within the Coastal margin.</p>

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<b>Risk to conservation objectives</b>	<b>Relevant design features of the access proposal</b>
<p><b>Great crested newt</b></p> <p>An increase in incidences of dogs accessing breeding ponds, following changes in recreational activities as a result of the access proposal, causes disturbance, injury or death of eggs, larvae or adults, leading to a reduction in population abundance.</p>	<p>Signage will be placed along the route of the ECP at Sandscale Haws, requesting that visitors keep dogs on a short lead or under control, and that they do not allow dogs to enter ponds.</p>
<p><b>Natterjack toad</b></p> <p>An increase in incidences of dogs accessing breeding ponds, following changes in recreational activities as a result of the access proposal, causes disturbance, injury or death of eggs, larvae or adults, leading to a reduction in population abundance.</p>	<p>Where the ECP is aligned close to breeding ponds we will install signage at key locations along the route of the ECP and at key access points between the ECP and the Coastal margin, asking that visitors do not allow dogs to enter ponds.</p>
<p><b>Natterjack toad</b></p> <p>Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to a reduction in population abundance and loss of supporting habitat.</p>	<p>Access with dogs to the Coastal margin within the grazing enclosures at Haverigg will be restricted by a formal direction on land management grounds. Where the trail passes through the grazing enclosures, dogs must be on leads.</p> <p>Signage at entrances to the grazing enclosures to inform people about the access restrictions.</p>



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**Table 2b: Summary of risks and consequent mitigation built in to our proposals  
– Morecambe Bay and Duddon Estuary SPA, Duddon Estuary Ramsar site &  
Morecambe Bay Ramsar site**

<b>Risk to conservation objectives</b>	<b>Relevant design features of the access proposal</b>
<p><b>Breeding seabirds</b></p> <p>Disturbance to breeding seabirds, following changes in recreational activities as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the distribution of Qualifying Features within the site.</p>	<p>The alignment of the ECP has been designed to avoid the areas where these birds breed.</p> <p>Access exclusions and restrictions are proposed at Foulney Island, Inner Marsh and Carnforth Marsh. Fencing is proposed between Ings Point and Cotestones to keep people and dogs to the line of the ECP.</p> <p>Signage is proposed, to highlight the access restrictions and exclusions.</p>
<p><b>Non-breeding pink-footed goose &amp; whooper swan</b></p> <p>Disturbance to foraging or resting birds, 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.</p>	<p>The alignment of the ECP avoids sensitive areas.</p> <p>Access restrictions are proposed to exclude access from sensitive areas at times when the birds are present. Fencing is proposed at Pilling to keep people and dogs to the line of the ECP. Signage is proposed to highlight the access restrictions.</p>
<p><b>Non-breeding lesser black-backed gull, Mediterranean gull</b></p> <p>Disturbance to resting gulls 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.</p>	<p>A year round access exclusion is proposed at Red Nab.</p>
<p><b>Non-breeding waders, little egret, pintail, shelduck</b></p> <p>Disturbance to foraging, resting or breeding birds, following changes in recreational activities as a result of the access proposal, leads to reduced fitness and reduction in population and/or</p>	<p>The alignment of the ECP avoids sensitive areas.</p> <p>Access restrictions and exclusions are proposed in sensitive areas at times of year when birds are present.</p>

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<b>Risk to conservation objectives</b>	<b>Relevant design features of the access proposal</b>
contraction in the distribution of Qualifying Features within the site.	<p>Signage is proposed to highlight access restrictions and important roost areas and breeding areas.</p> <p>Various other mitigation measures (e.g. fencing), as described in section D3.3.2.</p>
<p><b>Internationally important waterbird assemblage (non-breeding)</b></p> <p>Disturbance to foraging or resting birds, 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.</p>	<p>The alignment of the ECP avoids sensitive areas.</p> <p>Access restrictions and exclusions are proposed in sensitive areas at times of year when birds are present.</p> <p>Signage is proposed to highlight important roost areas and access restrictions.</p> <p>Various other mitigation measures (e.g. fencing), as described in section D3.3.2.</p>

## **VI) Implementation**

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

## **VII) Thanks**

The development of our proposals has been informed by input from people with relevant expertise within Natural England and other key organisations. The proposals have been thoroughly considered before being finalised and our initial ideas were modified during an iterative design process. We are particularly grateful to Morecambe Bay Partnership, Arnsdale & Silverdale AONB, RSPB, and other organisations and local experts whose contributions and advice have helped to inform development of our proposals.

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## **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'<sup>1</sup>, 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 1]. 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 adjacent and contiguous stretches of coast between Silecroft in Cumbria and Cleveleys in Lancashire (which are to be found on our web pages under the headings 'Silecroft to Silverdale' and 'Silverdale to Cleveleys'). Our proposals to the Secretary of State for these stretches 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 stretches. Within this assessment we consider each of the relevant reports, both separately and as an overall access proposal for the stretch in question.

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

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The coastal access proposals are presented as follows:

### **Stretch name: Silecroft to Silverdale**

We have published an Overview Report for this stretch. Within this stretch we have published 6 length reports:

<b>Report</b>	<b>Start Point</b>	<b>End Point</b>
SCS 1	Silecroft beach car park	Green Road railway station
SCS 2	Green Road railway station	Jubilee Bridge (north)
SCS 3	Jubilee Bridge (south)	Newbiggin
SCS 4	Newbiggin	Greenodd Footbridge
SCS 5	Greenodd Footbridge	Kents Bank
SCS 6	Kents Bank	Cove Well, Silverdale

### **Stretch name: Silverdale to Cleveleys**

We have published an Overview Report for this stretch. Within this stretch we have published 6 length reports:

<b>Report</b>	<b>Start Point</b>	<b>End Point</b>
SDC 1	Cove Well, Silverdale	Wild Duck Hall, Bolton-le-Sands
SDC 2	Wild Duck Hall, Bolton-le-Sands	Ocean Edge Caravan Park, Heysham
SDC 3	Ocean Edge Caravan Park, Heysham	Carlisle Bridge, Lancaster
SDC 4	Carlisle Bridge, Lancaster	Glasson Dock swing bridge
SDC 5	Glasson Dock swing bridge	Fluke Hall Lane car park, Pilling
SDC 6	Fluke Hall Lane car park, Pilling	South Promenade (Kingsway), Cleveleys

Our proposals for coastal access have two main components:

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

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## **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 occasional cliffs on this stretch erode or slip, solving long-standing difficulties with maintaining a continuous route on this stretch of coast.

## **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 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 1]. 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 in relation to 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 large areas of salt marsh and mud flat within Duddon Estuary and Morecambe Bay are considered unsuitable for a new general right of public access and will be excluded from the new coastal access rights at all times, regardless of any other considerations.

## **Establishment of the path**

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

## **Maintenance of the England Coast Path**

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

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partnerships and there is regular reporting and scrutiny of key performance indicators, including the condition of the trail.

### **Responding to future change**

The legal framework that underpins coastal access allows for adaptation in light of future change. The coastal path will be able to 'roll back' if necessary as a result of coastal erosion or encroachment by the sea. In other circumstances Natural England has powers to change the route of the trail and limit access rights over the Coastal margin in ways that were not originally envisaged. These new powers can be used, as necessary, alongside informal management techniques and other measures to ensure that the integrity of the site is maintained in light of unforeseen future change.

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## **PART B: Information about the European Sites which could be affected**

### **B1. Brief description of the European Sites and their Qualifying Features**

#### **Morecambe Bay SAC**

Morecambe Bay SAC incorporates the second largest embayment in Britain after the Wash, Norfolk. The site includes four large estuaries - the Leven, Kent and the Lune which flow directly into Morecambe Bay and the Duddon Estuary which flows into the Irish Sea. The SAC has a very large tidal range of approximately 10 metres on spring high tides, which produces the largest continuous area of intertidal mudflats and sandflats in the U.K. This represents an area of approximately 31,000 Ha and means that many of the habitats in the SAC are heavily influenced by tidal cycles and processes [Ref. 2].

In wave-sheltered and estuarine areas of the SAC the intertidal sediment transitions into extensive areas of saltmarsh and pioneer saltmarsh, which can also include nationally rare habitat transitions from saltmarsh to freshwater and terrestrial vegetation.

Extensive, well-developed dune systems provide excellent examples of dune succession, supporting a number of rare plants and animals such as the natterjack toad and the great crested newt. Walney Island, a barrier island of high geomorphological interest, supports a number of saline and brackish lagoons and nationally rare vegetated stony habitats which form on the shingle banks.

#### **Morecambe Bay & Duddon Estuary SPA**

The boundary of the SPA is formed by the amalgamation of two existing SPAs (Morecambe Bay SPA and Duddon Estuary SPA), and the addition of a marine foraging area for terns. The protected site comprises areas for breeding seabirds, foraging breeding seabirds, non-breeding seabirds and waterbirds utilising a range of habitats. The original features of the two SPAs are retained, with the addition of newly qualifying species. There are currently 27 features including two assemblages; in the breeding season the area regularly supports nearly 62,000 individual sea birds and in the winter it regularly supports over 210,000 individual waterfowl [Ref. 3].

#### **Duddon Estuary Ramsar Site**

Duddon Estuary is formed by the River Duddon and the smaller Kirkby Pool opening into the Irish Sea, in south-western Cumbria. Most of the site consists of intertidal sand and mudflats, important for large numbers of wintering and passage waterfowl. A range of grazed and ungrazed saltmarsh habitats occur around the edge of the estuary, especially the sheltered inner section. The site is the most important in Cumbria for sand-dune communities, including large areas of calcareous dunes at Sandscale and Haverigg Haws and contrasting acid dunes on North Walney. Artificial habitats include slag hanks and a flooded mine working known as Hodbarrow Lagoon, the largest coastal lagoon in northwest England [Ref. 4].

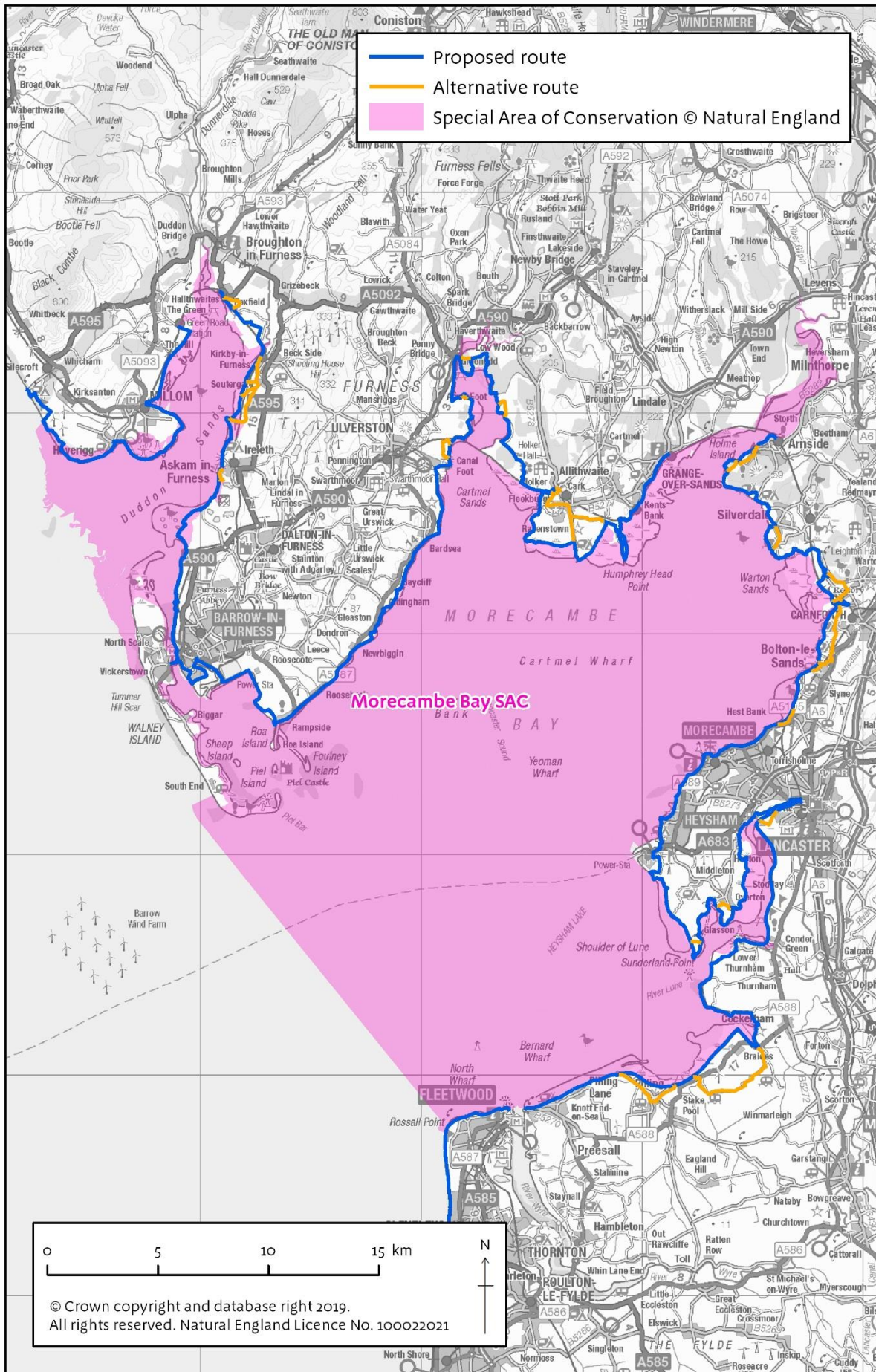
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## **Morecambe Bay Ramsar Site**

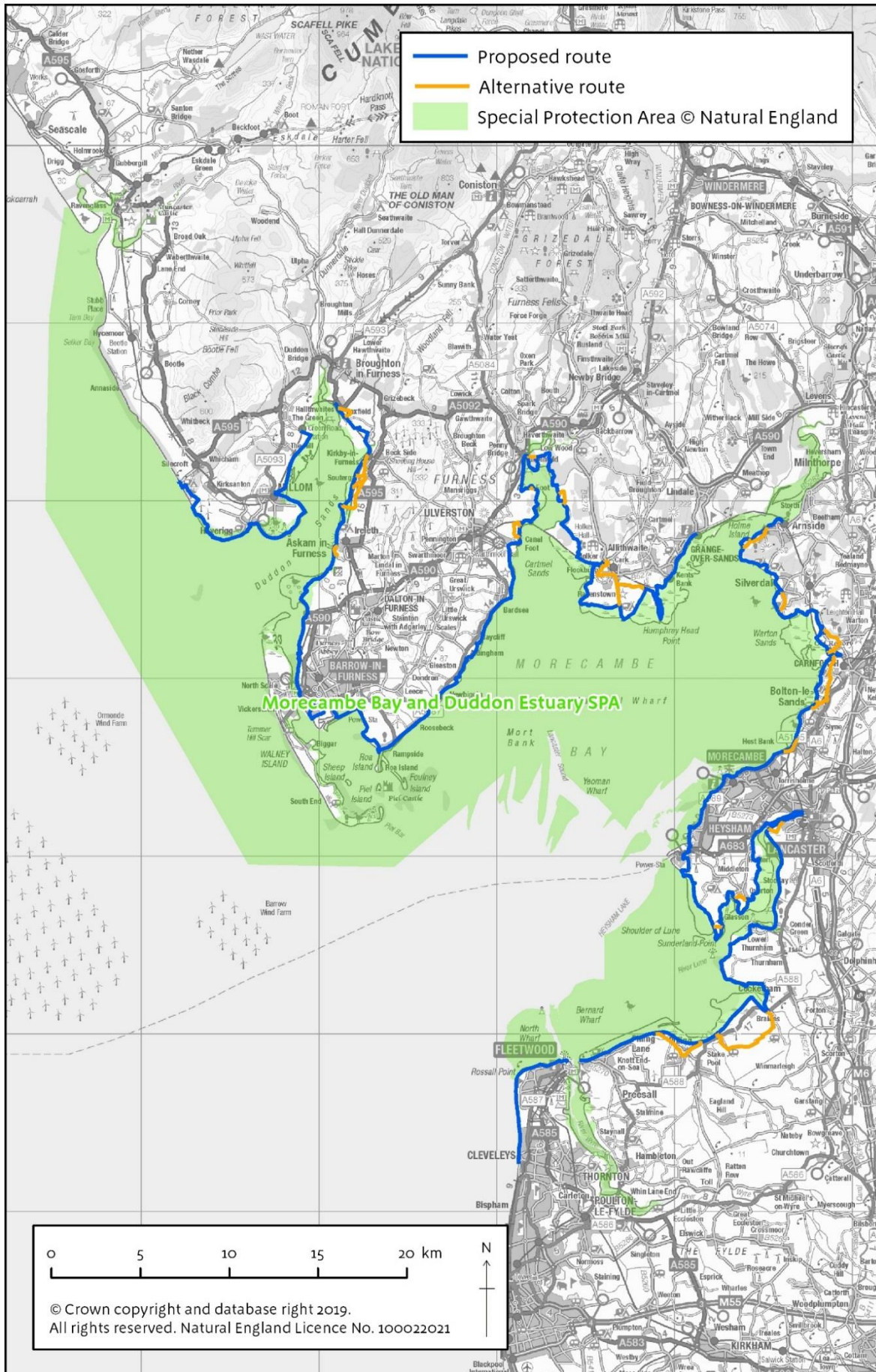
Morecambe Bay lies between the coasts of South Cumbria and Lancashire, and represents the largest continuous intertidal area in Britain. Morecambe Bay comprises the estuaries of five rivers and the accretion of mudflats behind Walney Island. The area is of intertidal mud and sandflats, with associated saltmarshes, shingle beaches and other coastal habitats. It is a component in the chain of west coast estuaries of outstanding importance for passage and overwintering waterfowl (supporting the third largest number of wintering waterfowl in Britain), and breeding waterfowl, gulls and terns [Ref. 5].



# Map of Morecambe Bay SAC and route of the proposed ECP

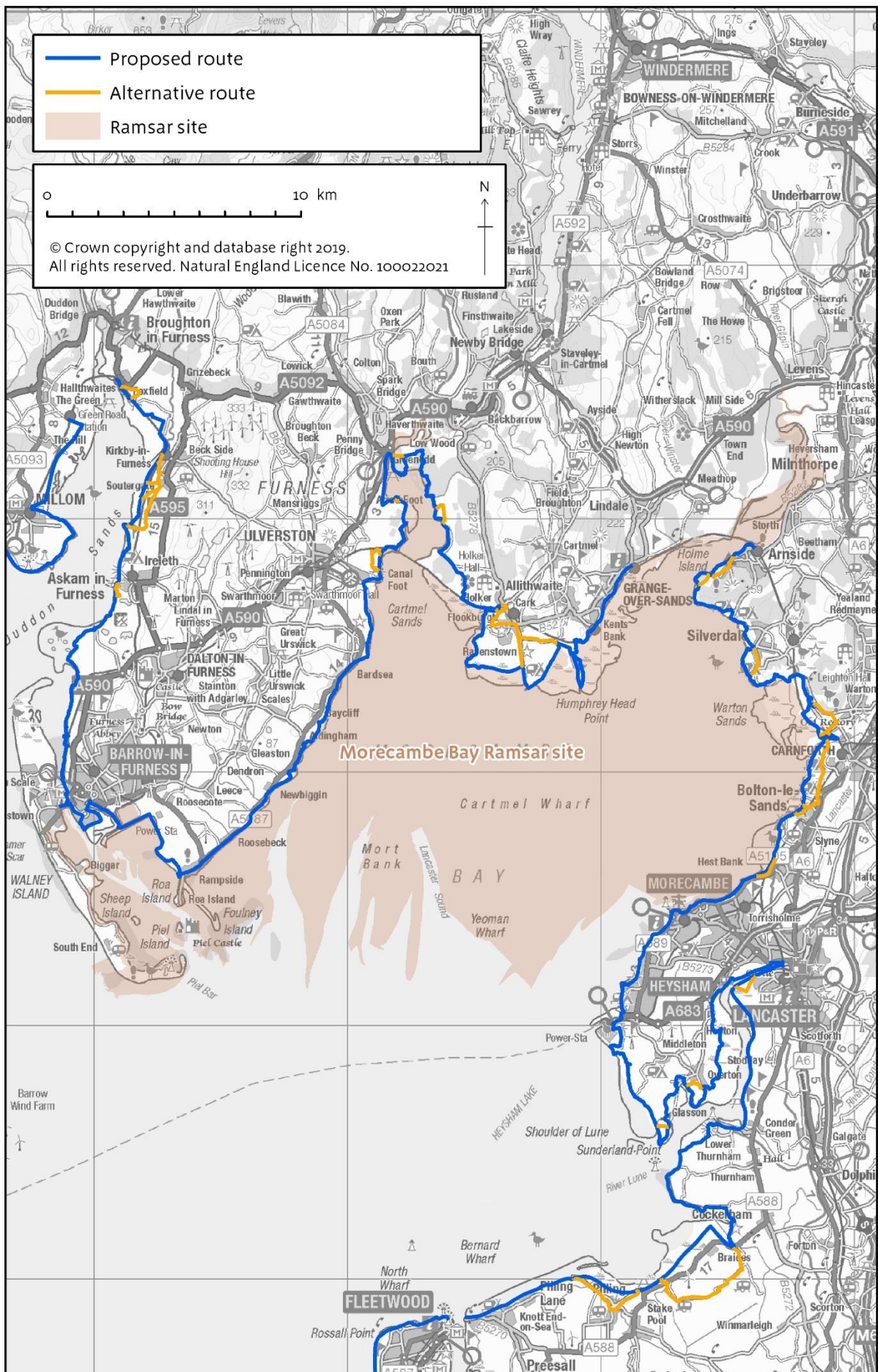


# Map of Morecambe Bay and Duddon Estuary SPA and route of the proposed ECP





# Map of Morecambe Bay Ramsar Site and route of the proposed ECP



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**Table 3a. Qualifying features of Morecambe Bay SAC**

<b>Qualifying Feature</b>
H1110 Sandbanks which are slightly covered by sea water all the time
H1130 Estuaries
H1140 Mudflats and sandflats not covered by seawater at low tide
H1150 Coastal lagoons
H1160 Large shallow inlets and bays
H1170 Reefs
H1220 Perennial vegetation of stony banks
H1310 Salicornia and other annuals colonising mud and sand
H1330 Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )
H2110 Embryonic shifting dunes
H2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('White dunes')
H2130 Fixed dunes with herbaceous vegetation ('Grey dunes')
H2150 Atlantic decalcified fixed dunes ( <i>Calluno-Ulicetea</i> )
H2170 Dunes with <i>Salix repens</i> ssp. <i>argentea</i> ( <i>Salicion arenariae</i> )
H2190 Humid dune slacks
S1166 Great crested newt, <i>Triturus cristatus</i>

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**Table 3b. Qualifying features of Morecambe Bay & Duddon Estuary SPA,  
Morecambe Bay Ramsar site, and Duddon Estuary Ramsar site**

Qualifying Feature	Morecambe Bay and Duddon Estuary SPA	Morecambe Bay Ramsar Site	Duddon Estuary Ramsar Site
Bar-tailed godwit ( <i>Limosa lapponica</i> ), Non-breeding	✓	✓	
Black-tailed godwit ( <i>Limosa islandica</i> ), Non-breeding	✓		
Common tern ( <i>Sterna hirundo</i> ), Breeding	✓		
Curlew ( <i>Numenius arquata</i> ), Non-breeding	✓	✓	
Dunlin ( <i>Calidris alpina alpina</i> ), Non-breeding	✓	✓	
Golden plover ( <i>Pluvialis apricaria</i> ), Non-breeding	✓		
Grey plover ( <i>Pluvialis squatarola</i> ), Non-breeding	✓	✓	
Herring gull ( <i>Larus argentatus</i> ), Breeding	✓		
Knot ( <i>Calidris canutus</i> ), Non-breeding	✓	✓	✓
Lesser black-backed gull ( <i>Larus fuscus</i> ), Breeding	✓		
Lesser black-backed gull ( <i>Larus fuscus</i> ), Non-breeding	✓		
Little egret ( <i>Egretta garzetta</i> ), Non-breeding	✓		
Little tern ( <i>Sternula albifrons</i> ), Breeding	✓		
Mediterranean gull ( <i>Ichthyaetus melanocephalus</i> ), Non-breeding	✓		
Oystercatcher ( <i>Haematopus ostralegus</i> ), Non-breeding	✓	✓	
Pink-footed goose ( <i>Anser brachyrhynchus</i> ), Non-breeding	✓	✓	
Pintail ( <i>Anas acuta</i> ), Non-breeding	✓	✓	✓
Redshank ( <i>Tringa totanus</i> ), Non-breeding	✓	✓	✓
Ringed plover ( <i>Charadrius hiaticula</i> ), Non-breeding	✓	✓	
Ruff ( <i>Calidris pugnax</i> ), Non-breeding	✓		
Sanderling ( <i>Calidris alba</i> ), Non-breeding	✓		
Sandwich tern ( <i>Thalasseus sandvicensis</i> ), Breeding	✓		
Shelduck ( <i>Tadorna tadorna</i> ), Non-breeding	✓	✓	

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Qualifying Feature	Morecambe Bay and Duddon Estuary SPA	Morecambe Bay Ramsar Site	Duddon Estuary Ramsar Site
Turnstone ( <i>Arenaria interpres</i> ), Non-breeding	✓	✓	
Whooper swan ( <i>Cygnus cygnus</i> ), Non-breeding	✓		
Internationally important waterbird assemblage, Non-breeding.*	✓	✓	✓
Seabird assemblage, Breeding Black-headed gull, lesser black-backed gull, herring gull, great black-backed gull, little tern, Sandwich tern, common tern and Arctic tern	✓	✓	
Staging area for passage waders			✓
Natterjack toad; <i>Bufo calamita</i>			✓
Wetland invertebrate assemblage			✓
Wetland vascular plant assemblage			✓

\* All qualifying species are included in the SPA waterbird assemblage as main components. There are a further 19 species listed as main components: Black-headed Gull, Brent Goose (Light-bellied Nearctic), Common Gull, Cormorant, Eider (non-breeding), Goldeneye, Great White Egret, Greenshank, Green-winged Teal, Lapwing, Little Stint, Mallard, Red-breasted Merganser, Ring-necked Duck, Spotted Redshank, Teal, Wigeon. There are an additional 63 species that make up the rest of the waterbird assemblage: Arctic Tern, Avocet, Barnacle Goose, Bean Goose, Bean Goose (Tundra), Bewick's Swan, Bittern, Black Tern, Black-necked Grebe, Black-throated Diver, Bonaparte's Gull, Brent Goose, Brent Goose (Black Brant), Brent Goose (Dark-bellied), Common Sandpiper, Common Scoter, Coot, Curlew Sandpiper, Gadwall, Garganey, Glaucous Gull, Glossy Ibis, Goosander, Great Black-backed Gull, Great Crested Grebe, Great Northern Diver, Green Sandpiper, Grey Heron, Greylag Goose, Grey Phalarope, Iceland Gull, Jack Snipe, Kingfisher, Kittiwake, Lesser Yellowlegs, Little Grebe, Little Gull, Little Ringed Plover, Long-billed Dowitcher, Long-tailed Duck, Moorhen, Night-heron, Pectoral Sandpiper, Pochard, Purple Sandpiper, Red-necked Grebe, Red-throated Diver, Roseate Tern, Sabine's Gull, Scaup, Shag, Shoveler, Slavonian Grebe, Smew, Snipe, Spoonbill, Tufted Duck, Velvet Scoter, Water Rail, Whimbrel, White-fronted Goose (European), White-fronted Goose (Greenland), Wood Sandpiper, Woodcock and Yellow-legged Gull.

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## B2. European Site Conservation Objectives (including supplementary advice)

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

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

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

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

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

### **Morecambe Bay and Duddon Estuary SPA**

<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9020326&SiteName=morecambe&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

### **Morecambe Bay SAC**

<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013027&SiteName=morecambe&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 site interests.



# Assessment of the Coastal Access programme under regulation 63 of the Habitats Regulations 2017 ('Habitats Regulations Assessment')

## 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 with or necessary to the management of all of the European sites' qualifying features, and/or contains non-conservation elements, further Habitats Regulations assessment is required.

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

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

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

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

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

#### C2.1 Risk of Significant Effects Alone

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

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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 4a. Feature groups (Morecambe Bay SAC)**

<b>Feature group</b>	<b>Qualifying feature(s)</b>
<b>Mudflats and sandflats not covered by seawater at low tide</b>	H1140. Mudflats and sandflats not covered by seawater at low tide
<b>Perennial vegetation of stony banks</b>	H1220. Perennial vegetation of stony banks
<b>Saltmarshes</b>	H1310. Salicornia and other annuals colonising mud and sand H1330. Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> )
<b>Sand Dunes</b>	H2120. Shifting dunes along the shoreline <i>with Ammophila arenaria</i> ("white dunes") H2130. Fixed dunes with herbaceous vegetation ("grey dunes") H2190. Humid dune slacks H2110. Embryonic shifting dunes H2150. Atlantic decalcified fixed dunes ( <i>Calluno-Ulicetea</i> ) H2170. Dunes with <i>Salix repens ssp. argentea</i> ( <i>Salicion arenariae</i> )
<b>Coastal Lagoons</b>	H1150. Coastal lagoons
<b>Reefs</b>	H1170. Reefs
<b>Sandbanks which are slightly covered by water at all times</b>	H1110. Sandbanks which are slightly covered by sea water all the time
<b>Estuaries &amp; Large Shallow Inlets and Bays</b>	H1130. Estuaries H1160. Large shallow inlets and bays
<b>Great crested newt <i>Triturus cristatus</i></b>	S1166. <i>Triturus cristatus</i> ; Great crested newt

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**Table 4b. Feature groups (Morecambe Bay & Duddon Estuary SPA, Duddon Estuary Ramsar site, Morecambe Bay Ramsar site)**

Feature group	Qualifying feature(s)
<b>Non-breeding waterbirds</b>	Bar-tailed godwit, black-tailed godwit, curlew, dunlin, golden plover, grey plover, knot, lesser black-backed gull, little egret, Mediterranean gull, oystercatcher, pink-footed goose, pintail, redshank, ringed plover, ruff, sanderling, shelduck, turnstone, whooper swan, internationally important waterbird assemblage
<b>Breeding seabirds</b>	Common tern, Arctic tern, little tern, Sandwich tern, herring gull, lesser black-backed gull, black-headed gull. Internationally important seabird assemblage of over 20,000 individuals (breeding)
<b>Natterjack toad; <i>Bufo calamita</i></b>	Natterjack toad; <i>Bufo calamita</i>
<b>Wetland invertebrate assemblage</b>	Wetland invertebrate assemblage
<b>Wetland plant assemblage</b>	Wetland plant assemblage

## Assessment of likely significant effects alone

Table 5a. Assessment of likely significant effects alone for Morecambe Bay SAC

Feature Group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Mudflats and sandflats not covered by seawater at low tide	Trampling of sensitive habitats	<p>Small plants and the burrows of small creatures living in the top layer of sand and mud flats may be compacted if people walk on them. Compaction can cause the burrows to collapse.</p> <p>These communities are resilient to occasional compaction caused by people who venture out at low tide, because the structure of the surrounding substrate is restored by the next tide.</p> <p>However, repeated or widespread compaction may result in localised losses of sensitive species and/or reduce food availability for waterbirds and some fish species.</p> <p>Areas with seagrass (<i>Zostera</i> spp) beds are particularly sensitive to trampling.</p>	<p>The level of risk is low.</p> <p>It is well understood locally that flats are dangerous to walk on because of the soft mud and extreme tidal range.</p> <p>There will be widespread exclusion of access rights to areas of mud and sand that are considered unsuitable for a general right of access.</p> <p>Where exclusions are not proposed, it is because the flats closest to the shore are already used for beach activities.</p> <p>Therefore there is no credible risk of significant damage to this feature (excluding the seagrass beds) as a result of the proposals.</p> <p><b>Seagrass beds</b></p> <p>North Morecambe Bay supports the SAC subfeature 'Intertidal seagrass beds' (<i>Zostera</i> spp, Eelgrass). Seagrass beds are found around Concle Bank, between Roa Island and Foulney Island, and to the east of Foulney Island, and fall within the Coastal margin.</p> <p>Recent monitoring of the seagrass beds has shown that they are generally in good condition. The main threats to the seagrass beds have been identified as an increase in boat moorings and the potential for pioneer saltmarsh to outcompete existing seagrass species. [Ref. 6].</p> <p>Coastal access rights do not allow the creation of new boat moorings, therefore this activity will not increase as a result of our proposals.</p> <p>The area between Roa and Foulney Island will be covered by a s25A exclusion and will not be subject to coastal access rights.</p> <p>The seagrass beds on Concle Bank and the intertidal area to the east of Foulney will become spreading room (accessible Coastal margin). These areas are very muddy, not particularly attractive to walkers, and are not pleasant to walk on. Current use is fairly low and this is not expected to increase as a result of the proposals.</p> <p>There will be negligible change in access in the areas of margin that support seagrass beds as a result of the Coastal Access proposals, so trampling of the seagrass beds will not increase as a result of the proposals.</p>	No
Perennial vegetation of stony banks	Trampling of fragile vegetation	Vegetation may be lost, damaged and prevented from establishing on shingle where people regularly walk.	The level of risk is higher where access proposals would be likely to bring people onto areas of vegetated shingle.	Yes
Saltmarshes	Trampling of fragile vegetation	Vegetation may be lost, damaged and prevented from establishing on soft, wet substrates where people regularly walk.	The level of risk is higher in areas where the coast path is aligned on or very close to saltmarsh.	Yes

Feature Group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
	Habitat loss due to path construction and other associated infrastructure	Vegetation may be lost under path surfacing or infrastructure.	The level of risk is higher in areas where the coast path is aligned on or very close to saltmarsh.	Yes
Sand Dunes	Trampling of fragile vegetation	Fore dune habitats (H2120 and H2110) are particularly sensitive to increased trampling. The pioneer plants in these habitats are very vulnerable to trampling damage with a loose substrate being all that anchors them down.  Coastal sand dunes have experienced impacts of over-stabilisation and there is potential for trampling to be used as a means of re-invigorating surface movement of sand to restore some of the necessary dynamism of this habitat for some of the more diverse vegetation types. [Ref. 7].	Where the ECP is aligned through dunes the path avoids the fore dune habitats which are particularly sensitive to trampling.  There could be an increase in trampling in areas of sand dunes within the Coastal margin, particularly where access levels are currently low and are expected to increase as a result of the proposals.	Yes
	Habitat loss due to path construction and other associated infrastructure	Vegetation may be lost under path surfacing or infrastructure.	The level of risk is higher in areas where the coast path is aligned through sand dunes.	Yes
	Nutrient enrichment of soils by dog faeces	All of the sand dune features can be sensitive to nutrient enrichment from dogs leading to changes in vegetation composition; this is particularly an issue due to the otherwise very nutrient-poor conditions. [REF. 1 & 7]	The level of risk is low.  Research shows that nutrient enrichment is usually higher around car parks and access points. This is because defecation will normally take place within about 10 minutes of the walk starting. In addition, most faeces will be deposited close to the path [Ref. 18].  It is expected that there will be negligible change in access around the sand dune car parks as a result of the proposals, as these areas are already very popular.  Once walkers and their dogs are on the line of the ECP, any enrichment will be widely dispersed along the path and throughout the Coastal margin and therefore the risk of significant enrichment in the wider dunes is low. Therefore there is a low risk that the proposals will lead to changes in vegetation composition in the dune systems.	No
	Changes in conservation grazing patterns	There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing.	The level of risk is higher in areas with grazing animals where access is expected to increase.	Yes
Coastal Lagoons	Trampling of vegetation	In general there appear to be relatively few issues relating to saline lagoons and public access and few direct studies of recreational impacts to this habitat. [Ref. 8].	This risk is low because:  The proposed ECP runs adjacent to Cavendish Dock and Hodbarrow Lagoon. Both of the lagoons are landward of the trail and therefore will not fall into the Coastal margin. In both locations the trail is aligned	No

Feature Group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
		Trampling around the margins of coastal lagoons could damage the specialised species that are adapted to the unusual brackish conditions.	on existing busy routes – a vehicle track and public footpath at Hodbarrow, and a cycle route at Cavendish Dock. Therefore trampling of vegetation is unlikely to increase as a result of the proposals.	
Reefs	Trampling	Reefs supporting intertidal mussels and biogenic reef structures such as honeycomb worm reef are sensitive to trampling damage.	The level of risk is higher where access proposals would be likely to bring people onto areas of reef.	Yes
Sandbanks which are slightly covered by water at all times	None	None	This SAC qualifying feature is not present within the proposal area. As the sandbanks are covered by water at all times, they will not be accessible.	No
Estuaries & Large Shallow Inlets and Bays	Trampling of fragile vegetation	Some of the habitats within this feature are sensitive to trampling; these are saltmarshes, sand dunes, vegetated shingle, eelgrass beds and reefs. The rest of the habitats are not sensitive to trampling or are below mean low water and so are not affected by our proposals.	The level of risk is higher where access proposals would be likely to bring people into contact with these features.	Yes
	Habitat loss due to path construction and other associated infrastructure	Some of the habitats within this feature could be affected by habitat loss due to path construction and associated infrastructure; these are saltmarshes and sand dunes.	The level of risk is higher where the ECP is aligned through saltmarshes and sand dunes.	Yes
	Nutrient enrichment of soils by dog faeces	Some of the habitats within this feature group (sand dunes) are sensitive to nutrient enrichment by dog faeces.	The level of risk is low. Research shows that nutrient enrichment is usually higher around car parks and access points. This is because defecation will normally take place within about 10 minutes of the walk starting. In addition, most faeces will be deposited close to the path [Ref. 18]. It is expected that there will be negligible change in access around the sand dune car parks as a result of the proposals, as these areas are already very popular. Once walkers and their dogs are on the line of the ECP, any enrichment will be widely dispersed along the path and throughout the Coastal margin and therefore the risk of significant enrichment in the wider dunes is low. Therefore there is a low risk that the proposals will lead to changes in vegetation composition in the dune systems.	No
	Changes in conservation grazing patterns	Some of the habitats within this feature group could be affected by changes in conservation grazing patterns due to disturbance of grazing animals by dogs. These are sand dunes.	The level of risk is higher where the ECP is aligned through sand dunes, and / or where these features fall within the Coastal margin.	Yes

Feature Group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Great crested newt <i>Triturus cristatus</i> .	Recreational activities in or close to pools used by breeding great crested newts	Dogs running around the shallow edges of ponds where great crested newts are present could cause injury to the adult newts, eggs or newt larvae.	The level of risk is higher where the access proposals would be likely to bring people and dogs near to breeding ponds.	Yes
	Path construction and other associated infrastructure.	Path construction and Installation of infrastructure could result in great crested newts being injured or killed and lead to loss of supporting habitat. Leaving holes exposed could lead to newts being trapped, and newts could be squashed while sheltering in stacked materials.	The level of risk is high in areas where great crested newts are known to occur.	Yes
	Footpath maintenance	Great crested newts could be disturbed, injured or killed during vegetation clearance and other on-going maintenance work.	The level of risk is high in areas where great crested newts are known to occur.	Yes
	Spread of disease by people and dogs	Potential for chytrid fungus <i>Batrachochytrium dendrobatidis</i> and other diseases to be spread by people and dogs.	The level of risk is higher in areas where the ECP connects sites where great crested newts are known to occur, particularly if this is new access.	Yes
	Changes in conservation grazing patterns.	There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing. This may impact on great crested newts if the habitat becomes unsuitable for them.	The level of risk is higher where the ECP is aligned through grazed areas of sand dunes, and / or where these features fall within the Coastal margin.	Yes

**Table 5b. Assessment of likely significant effects alone for Morecambe Bay & Duddon Estuary SPA, Duddon Estuary Ramsar site & Morecambe Bay Ramsar site.**

<b>Feature Group</b>	<b>Relevant pressure</b>	<b>Sensitivity to coastal access proposals</b>	<b>Assessment of risk to site conservation objectives</b>	<b>LSE alone?</b>
Non-breeding waterbirds.	Disturbance of feeding or resting birds.	Birds feeding on intertidal areas (including saltmarsh) or farmland, or resting in the vicinity of the coastal path or within the Coastal margin may be disturbed by recreational activities including walking and walking with a dog.	The level of risk is higher where access proposals would be likely to bring people close to places on which large numbers of birds depend including undisturbed roost sites and important feeding areas.	Yes
Non-breeding waterbirds.	Disturbance of breeding birds.	<p>The breeding population of a species may contribute to the non-breeding population of a site by being wholly or largely resident.</p> <p>Breeding birds are potentially at risk from disturbance by recreational activities including walking and walking with a dog.</p> <p>There is also scope for disturbance from construction activities necessary for the physical establishment of the path.</p> <p>Ground-nesting birds may leave their nests when disturbed; this leaves their eggs and chicks more vulnerable to mortality through exposure and/or predation.</p> <p>Juvenile birds, having left the nest, are also at risk from disturbance. Before they are able to fly, they are vulnerable to predation by dogs.</p>	<p>The level of risk is higher at places where a breeding population of a species significantly contributes to the non-breeding population.</p> <p>Most adult waterbirds leave Morecambe Bay and the Duddon Estuary to breed. For most species, any adults that do remain to breed are not considered to contribute significantly to the non-breeding population.</p> <p>However, the breeding population of redshank, shelduck, ringed plover and Mediterranean gull within Morecambe Bay and Duddon Estuary SPA / Ramsar sites are considered to contribute significantly to the non-breeding populations.</p>	Yes: for redshank, shelduck, ringed plover and Mediterranean gull only.
Breeding seabirds.	Disturbance of breeding birds.	<p>Birds nesting in the vicinity of the coastal path or within the Coastal margin may be disturbed by recreational activities including walking and walking with a dog.</p> <p>Shingle nesting species are particularly vulnerable to disturbance due to trampling of nests and chicks, scaring of adult birds by people and dogs, predation of chicks by dogs.</p>	The level of risk is higher where access proposals would be likely to bring people close to places where birds nest.	Yes
Non-breeding waterbirds and breeding seabirds.	Path construction and other associated infrastructure.	Supporting habitat could be lost under path surfacing and infrastructure.	The level of risk is higher where the ECP is aligned through supporting habitats.	Yes
Non-breeding waterbirds.	Establishment works.	Roosting, feeding or breeding birds could be disturbed during establishment works.	The level of risk is higher where establishment works are required close to areas where these birds roost, feed or breed.	Yes
Breeding seabirds.	Establishment works.	Breeding seabirds could be disturbed during establishment works.	There is a low risk of construction activities impacting breeding seabirds as the areas used by breeding seabirds are not close to areas of path where construction works are required.	No



Feature Group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Natterjack toad; <i>Bufo calamita</i> .	Recreational activities in or close to pools used by breeding natterjack toads.	Dogs running around the shallow edges of ponds where natterjacks are present could cause injury to the adult toads, eggs or tadpoles. People walking near breeding ponds could tread on emerging toadlets in early summer.	The level of risk is higher where the access proposals would be likely to bring people and dogs near to breeding ponds.	Yes
	Path construction and other associated infrastructure.	Path construction and installation of infrastructure could result in natterjacks being injured or killed and lead to loss of supporting habitat. Leaving holes exposed could lead to toads being trapped, and toads could be squashed while sheltering in stacked materials.	The level of risk is high in areas where natterjacks are known to occur.	Yes
	Footpath maintenance.	Natterjacks could be disturbed, injured or killed during vegetation clearance and other on-going maintenance work.	The level of risk is high in areas where natterjacks are known to occur.	Yes
	Spread of disease by people and dogs.	Potential for chytrid fungus <i>Batrachochytrium dendrobatidis</i> and other diseases to be spread by people and dogs.	The level of risk is higher in areas where the ECP connects sites where natterjacks are known to occur, particularly if this is new access.	Yes
	Changes in conservation grazing patterns.	There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing. This may impact on natterjack toads if the habitat becomes unsuitable for them.	The level of risk is higher where the ECP is aligned through grazed areas of sand dunes, and / or where these features fall within the Coastal margin.	Yes
Wetland invertebrate assemblage	Trampling of vegetation.	Research has shown that in grassland and sand dunes the invertebrate fauna of unmanaged grassland litter is significantly reduced across most groups by very light trampling. [REF. 7 & 8] Invertebrates associated with early successional habitats may benefit from increased trampling and erosion caused by access. [REF. 8]. Impacts of access may be site specific, depending on factors such as size, degree of fragmentation etc. [REF. 8].	The level of risk is higher in areas where the coast path is aligned on or very close to the sand dune habitats which support this assemblage.	Yes
	Habitat loss due to path construction and other associated infrastructure.	Assemblage species may be lost under path surfacing or infrastructure.	The level of risk is higher in areas where the coast path is aligned on or very close to the sand dune habitats which support this assemblage.	Yes

Feature Group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
	Changes in conservation grazing patterns.	There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing. This may impact on individual assemblage species if the habitat becomes unsuitable for them.	The level of risk is higher in areas of sand dunes with grazing animals where access is expected to increase.	Yes
Wetland plant assemblage	Trampling of fragile vegetation.	Assemblage species may be lost, damaged and prevented from establishing on substrates where people regularly walk.	The level of risk is higher in areas where the coast path is aligned on or very close to the habitats which support this assemblage.	Yes
	Habitat loss due to path construction and other associated infrastructure.	Assemblage species may be lost under path surfacing or infrastructure.	The level of risk is higher in areas where the coast path is aligned on or very close to the habitats which support this assemblage.	Yes
	Nutrient enrichment of soils by dog faeces.	Assemblage species may be sensitive to nutrient enrichment from dogs.	<p>The level of risk is low.</p> <p>Research shows that nutrient enrichment is usually higher around car parks and access points. This is because defecation will normally take place within about 10 minutes of the walk starting. In addition, most faeces will be deposited close to the path [Ref. 18].</p> <p>It is expected that there will be negligible change in access around the sand dune car parks as a result of the proposals, as these areas are already very popular.</p> <p>Once walkers and their dogs are on the line of the ECP, any enrichment will be widely dispersed along the path and throughout the Coastal margin and therefore the risk of significant enrichment in the wider dunes is low. Therefore there is a low risk that the proposals will lead to changes in vegetation composition in the dune systems.</p>	No
	Changes in conservation grazing patterns.	There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing. This may impact on individual assemblage species if the habitat becomes unsuitable for them.	The level of risk is higher in areas with grazing animals where access is expected to increase.	Yes

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## Risk of Significant Effects Alone - Conclusions

### Morecambe Bay SAC

#### Conclusion

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

H1130 Estuaries

H1160 Large shallow inlets and bays

H1170 Reefs

H1220 Perennial vegetation of stony banks

H1310 Salicornia and other annuals colonising mud and sand

H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

H2110 Embryonic shifting dunes

H2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes')

H2130 Fixed dunes with herbaceous vegetation ('Grey dunes')

H2150 Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)

H2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)

H2190 Humid dune slacks

S1166 Great crested newt, *Triturus cristatus*

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

- H1140 Mudflats and sandflats not covered by seawater at low tide
- H1110 Sandbanks which are slightly covered by sea water all the time
- H1150 Coastal lagoons

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

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## Morecambe Bay & Duddon Estuary SPA, Morecambe Bay Ramsar site and Duddon Estuary Ramsar site

### Conclusion

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

- Non-breeding waterbirds: Bar-tailed godwit, black-tailed godwit, curlew, dunlin, golden plover, grey plover, knot, lesser black-backed gull, little egret, Mediterranean gull, oystercatcher, pink-footed goose, pintail, redshank, ringed plover, ruff, sanderling, shelduck, turnstone, whooper swan, internationally important waterbird assemblage
- Breeding seabirds: Common tern, Arctic tern, little tern, Sandwich tern, herring gull, lesser black-backed gull, black-headed gull, internationally important seabird assemblage of over 20,000 individuals
- Natterjack toad
- Wetland invertebrate assemblage
- Wetland plant assemblage

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

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

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

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

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## **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 6a. Scope of Appropriate Assessment: Morecambe Bay SAC, Duddon Estuary Ramsar site**

Environmental pressure	Qualifying features affected	Risk to Conservation Objectives
<p><b>Trampling of vegetation and / or substrate.</b></p>	<ul style="list-style-type: none"> <li>• H1170 Reefs.</li> <li>• Saltmarshes (H1310 Salicornia and other annuals colonising mud and sand, H1330 Atlantic salt meadows).</li> <li>• Sand dunes (H2110 Embryonic shifting dunes, H2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('White dunes'), H2130 Fixed dunes with herbaceous vegetation ('Grey dunes'), H2150 Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>), H2170 Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>), H2190 Humid dune slacks).</li> <li>• H1220 Perennial vegetation of stony banks.</li> <li>• H1130 Estuaries.</li> <li>• H1160 Large Shallow Inlets and Bays.</li> <li>• Wetland invertebrate assemblage.</li> <li>• Wetland plant assemblage.</li> </ul>	<p>More frequent trampling, following changes in recreational activities as a result of the access proposal, leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site,</li> <li>• Reduction in extent of the feature within the site,</li> <li>• Changes in key structural, influential and distinctive species,</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation,</li> <li>• Changes in physical structure of rocky substrate (reefs only),</li> <li>• Species composition of component communities (reefs only).</li> </ul>
<p><b>Path construction and other associated infrastructure.</b></p>	<ul style="list-style-type: none"> <li>• Saltmarshes (H1310 Salicornia and other annuals colonising mud and sand, H1330 Atlantic salt meadows).</li> <li>• Sand dunes (H2110 Embryonic shifting dunes, H2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('White dunes'), H2130 Fixed dunes with herbaceous vegetation ('Grey dunes'), H2150 Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>), H2170 Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>), H2190 Humid dune slacks).</li> <li>• H1130 Estuaries.</li> <li>• H1160 Large Shallow Inlets and Bays.</li> <li>• Wetland invertebrate assemblage.</li> <li>• Wetland plant assemblage.</li> </ul>	<p>Constructing a path through these habitats leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site,</li> <li>• Reduction in extent of the feature within the site,</li> <li>• Future extent of habitat within the site and ability to respond to seasonal changes,</li> <li>• Structure and function: presence of unvegetated surfaces,</li> <li>• Structure and function: presence and patterning of creeks and salt pans (saltmarsh only).</li> </ul>
<p><b>Changes in conservation grazing patterns.</b></p>	<ul style="list-style-type: none"> <li>• Saltmarshes (H1310 Salicornia and other annuals colonising mud and sand, H1330 Atlantic salt meadows).</li> <li>• Sand dunes (H2110 Embryonic shifting dunes, H2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('White dunes'), H2130 Fixed dunes with herbaceous vegetation ('Grey dunes'), H2150 Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>), H2170 Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>), H2190 Humid dune slacks).</li> <li>• Wetland invertebrate assemblage.</li> <li>• Wetland plant assemblage.</li> <li>• Natterjack toad.</li> <li>• Great crested newt.</li> </ul>	<p>Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site,</li> <li>• Reduction in extent of the feature within the site,</li> <li>• Changes in key structural, influential and distinctive species,</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation,</li> <li>• Reduction in population size or distribution of assemblage features,</li> <li>• Reduction in population abundance of natterjack toad and great crested newt.</li> </ul>
<p><b>Recreational activities in or close to pools used by breeding natterjacks and great crested newts</b></p>	<ul style="list-style-type: none"> <li>• Natterjack toad.</li> <li>• Great crested newt.</li> </ul>	<p>An increase in incidences of dogs accessing breeding ponds, following changes in recreational activities as a result of the access proposal, causes disturbance, injury or death of eggs, tadpoles or adults. This leads to a reduction in population abundance.</p> <p>An increase in people walking next to breeding ponds following changes in recreational activities as a result of the access proposal, causes disturbance, injury or death of emerging natterjack toadlets. This leads to a reduction in population abundance.</p>
<p><b>Path construction and other associated infrastructure.</b></p>	<ul style="list-style-type: none"> <li>• Natterjack toad.</li> <li>• Great crested newt.</li> </ul>	<p>Works to construct the England Coast Path causes disturbance, injury or death of these species, leading to reduction in population abundance.</p> <p>Loss of supporting habitat.</p>
<p><b>Footpath maintenance.</b></p>	<ul style="list-style-type: none"> <li>• Natterjack toad.</li> <li>• Great crested newt.</li> </ul>	<p>Vegetation clearance and other works during ongoing maintenance of the ECP causes disturbance, injury or death of these species, leading to reduction in population abundance.</p>
<p><b>Spread of disease by people and dogs.</b></p>	<ul style="list-style-type: none"> <li>• Natterjack toad.</li> <li>• Great crested newt.</li> </ul>	<p>Potential for chytrid fungus <i>Batrachochytrium dendrobatidis</i> and other diseases to be spread by people and dogs. This leads to a reduction in population abundance.</p>

**Table 6b. Scope of Appropriate Assessment, Morecambe Bay & Duddon Estuary SPA, Morecambe Bay Ramsar site, Duddon Estuary Ramsar site.**

Environmental pressure	Qualifying features affected	Risk to Conservation Objectives
<b>Disturbance of feeding or resting birds.</b>	<ul style="list-style-type: none"> <li>Non-breeding waterbirds: Bar-tailed godwit, black-tailed godwit, curlew, dunlin, golden plover, grey plover, knot, lesser black-backed gull, little egret, Mediterranean gull, oystercatcher, pink-footed goose, pintail, redshank, ringed plover, ruff, sanderling, shelduck, turnstone, whooper swan, internationally important waterbird assemblage .</li> </ul>	<ul style="list-style-type: none"> <li>Repeated 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.</li> <li>Loss of extent of supporting habitat due to an increase in disturbance reducing the area of habitat available for non-breeding waterbirds.</li> </ul>
<b>Disturbance of breeding birds.</b>	<ul style="list-style-type: none"> <li>Breeding seabirds: Common tern, Arctic tern, little tern, Sandwich tern, herring gull, lesser black-backed gull, black-headed gull, internationally important seabird assemblage of over 20,000 individuals.</li> <li>Breeding populations of non-breeding waterbird features: redshank, ringed plover, shelduck, and Mediterranean gull.</li> </ul>	<ul style="list-style-type: none"> <li>Repeated disturbance to breeding birds, direct predation of eggs by dogs or trampling of nest, eggs and chick by walkers, following changes in recreational activities as a result of the access proposal, leads to reduction in population and/or contraction in the distribution of Qualifying Features within the site.</li> <li>Loss of extent of supporting habitat due to an increase in disturbance reducing the area of habitat available for breeding birds.</li> </ul>
<b>Path construction and other associated infrastructure.</b>	<ul style="list-style-type: none"> <li>Non-breeding waterbirds: Bar-tailed godwit, black-tailed godwit, curlew, dunlin, golden plover, grey plover, knot, lesser black-backed gull, little egret, Mediterranean gull, oystercatcher, pink-footed goose, pintail, redshank, ringed plover, ruff, sanderling, shelduck, turnstone, whooper swan, internationally important waterbird assemblage.</li> <li>Breeding seabirds: Common tern, Arctic tern, little tern, Sandwich tern, herring gull, lesser black-backed gull, black-headed gull, internationally important seabird assemblage of over 20,000 individuals.</li> </ul>	<ul style="list-style-type: none"> <li>Construction of the ECP leads to loss of extent of supporting habitat.</li> <li>Disturbance to feeding, breeding or roosting waterbirds, during path establishment work, leads to reduced fitness and reduction in population and/or contraction in the distribution of Qualifying Features within the site.</li> </ul>

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## **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**

### **Morecambe Bay SAC**

#### **Site Condition**

A marine condition assessment has not been carried out for this site. All features have ‘maintain’ targets.

#### **Qualifying Features affected by the plan or project**

##### **H1130 Estuaries**

Morecambe Bay is the convergence of five estuaries. These include the Duddon, Leven, Kent, Lune, and Wyre. Although the latter flows into Morecambe Bay SAC, the estuary itself lies outside of the site boundary. The River Keer also flows into Morecambe Bay through a small estuary south of the Kent Estuary. There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

##### **H1160 Large shallow inlets and bays**

The majority of the SAC area is comprised of habitat which is classified as the “Large shallows inlets and bays” feature, with only the areas highest up the river estuaries excluded. At over 31,000 ha, it contains the largest continuous area of intertidal mudflats and sandflats in the UK. There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

##### **H1310 Salicornia and other annuals colonising mud and sand & H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)**

Saltmarsh is located throughout the Morecambe Bay SAC and its associated estuaries. Salicornia habitat is present in areas protected from strong wave action. Salicornia is found predominantly in the pioneer saltmarsh, where there is a transition from the extensive intertidal sand and mudflats to the distinctive salt meadows. Areas of saltmarsh are dynamic, constantly eroding or accreting in response to natural changes such as shifts in the position of estuary channels. At many sites within the SAC, marsh formation, evolution and transition is hampered by manmade coastal infrastructure which prevent the marsh from spreading back and forming the upper transitional marsh habitats.

The saltmarsh extent in the Morecambe Bay SAC is approximately 3,744 ha. Morecambe Bay SAC represents 31 % of the whole saltmarsh extent within the north west of England and 11 % nationally. Saltmarsh extent in the SAC is controlled by dynamic physical processes of erosion and accretion meaning the extent values are likely to be highly variable with time.

There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.



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## H2110 Embryonic shifting dunes

The total UK extent of embryonic shifting dune habitat is estimated to be less than 1,000 ha and Morecambe Bay SAC supports a proportion of this habitat. Embryonic shifting dune vegetation exists in a highly dynamic state and is dependent on the continued operation of physical processes at the dune/beach interface. In most cases embryonic dunes rarely occur in isolation as they often initiate dune succession.

Within Morecambe Bay SAC, this feature mainly occurs within the Duddon Estuary and at a small area within south Walney, and at Fleetwood. The best examples occur at Haverigg, Sandscale Haws, and North Walney.

Few plant species are able to survive in this habitat; species associated with this habitat in the SAC are sea holly *Eryngium maritimum*, sea spurge *Euphorbia paralias*, Portland spurge *E. portlandica*, and sea bindweed *Calystegia soldanella*.

There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

## H2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes')

Morecambe Bay SAC is considered to be one of the best areas in the United Kingdom for this habitat type. Shifting dunes are actively-building or growing, found in areas receiving large quantities of blown sand. Continual burying by sand restricts the number of plants that can survive, but provides ideal conditions for the growth of sand-binding marram *Ammophila arenaria*. A small number of other specialised dune plants can also tolerate these conditions.

This habitat forms a major component of the active sand dune system at the entrance to Morecambe Bay on Walney Island, and at Sandscale Haws in the Duddon Estuary, where a mosaic of shifting dune communities form a continuous block around the seaward edge of the site. A small area is also present in the Wyre Estuary.

This habitat rarely occurs in isolation as it transitions into other dune habitat types. It is, however, of exceptional importance as an indicator of the general structural and functional health of a dune system. Creation of new dune habitat, and indeed the long-term survival of the dune system, is often dependent upon the survival of this habitat type.

There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

## H2130 Fixed dunes with herbaceous vegetation ('Grey dunes')

Sandscale Haws at the entrance to the Duddon Estuary supports the largest area of calcified fixed dunes within Cumbria; this contrasts to the acidic dunes that are found at the adjacent North End Haws on Walney Island. South End Haws on Walney Island supports a smaller area of fixed dunes. North Walney and Sandscale in particular show well-conserved structure and function. The fixed dunes support a rich plant diversity including wild pansy *Viola tricolor*, lady's bedstraw *Galium verum*, common restharrow *Ononis repens* and the uncommon dune fescue *Vulpia membranacea* and dune helleborine *Epipactis dunensis*.

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This feature is unevenly distributed across Morecambe Bay SAC, and is found across large areas within the Duddon Estuary and on Walney Island, but is not present within Morecambe Bay.

There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

### **H2150 Atlantic decalcified fixed dunes (Calluno-Ulicetea)**

This habitat type occurs on mature, stable dunes where the initial calcium carbonate content of the dune sand is low. The surface soil layers rapidly lose their remaining calcium carbonate through leaching, and become acidified.

This feature occurs within the Duddon Estuary, predominantly at North Walney, Haverigg and Sandscale Haws.

At most sites at which Atlantic decalcified fixed dune vegetation occurs, it forms a mosaic with other Annex I habitat types; this can be seen at North Walney in particular. Fixed dune vegetation tends to occur on the larger dune systems, which have the width to allow it to develop.

There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

### **H2170 Dunes with *Salix repens* ssp. *argentea* (Salicion arenariae)**

This habitat type comprises dunes or parts of dunes where creeping willow, *Salix repens* ssp. *argentea*, is dominant, forming prominent, low scrubby growth. Creeping willow is found on dunes throughout the U.K. It grows predominantly in and around dune slacks, though on some sites it may spread up the drier ridges. This type of vegetation marks the mature phase in the life cycle of calcareous dune slacks. When found with other wetland and dry dune vegetation, it indicates that successional processes are still active and that the structure and function of the dune system are well-conserved. On most of the highest-quality sites, this habitat type occurs alongside a number of others, particularly humid dune slacks, calcareous and acidic fixed dune vegetation and, locally, dune heath.

Within Morecambe Bay SAC, this feature tends to occur locally within calcareous dune slacks. The feature can be found in the Duddon Estuary, with the best examples at Haverigg, Sandscale Haws and small areas at North Walney.

There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

### **H2190 Humid dune slacks**

Within Morecambe Bay SAC, this feature only occurs in the Duddon Estuary. The best examples can be found at Haverigg and Sandscale Haws, and in North Walney patches of humid dunes occur within a complex mosaic of dune habitats. Dune slacks are particularly well-represented at Sandscale Haws, the largest calcareous dune system in Cumbria. The slacks support a good range of vegetation communities and are very species-rich. Several uncommon species including marsh helleborine *Epipactis palustris*, dune helleborine, *Epipactis dunensis* and coralroot orchid *Corallorhiza trifida* occur.

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As of 2017, work is taking place to retain open water for longer in dune slacks as the dune systems become more stable; this work is occurring at all sites in the SAC where the feature occurs. Larger scale work is required to reinstate large scale natural processes rather than the small and regular pool creation or turf stripping that has taken place in the past.

### H1220 Perennial vegetation of stony banks

This particular feature is found in select locations across Morecambe Bay SAC. On Walney Island it occurs on the spit and shoreline around South Walney Nature Reserve and on Foulney Island.

Within the Duddon estuary this feature occurs on the northern tip of Walney Island and within Sandscale Haws. It also occurs immediately south west of Haverigg and up the coast as the Duddon Estuary opens up to the Irish Sea.

Within the Lune estuary it is mainly found around the lower reaches of the river Lune around Glasson and Sunderland. As the river fans out into the wider Lune estuary it occurs on the seaward side of the Sunderland bank and the north of Cockerham sands.

The Wyre estuary also displays a small patch, immediately north of Fleetwood at the southern tip of the mouth of Morecambe Bay.

Within the wider Morecambe Bay SAC it is only found in one location along the coast at Rampside sands.

In total there are 157.51 ha of shingle habitat within the SAC, but it is currently unknown how much of this area supports perennial vegetation of stony banks. The figure provided is for the habitat extent of shingle throughout all the SSSIs that underpin the Morecambe Bay SAC. Currently distinct extent data for perennial vegetation of stony banks is not available.

The maintain target for extent and distribution of the feature has been set using expert judgement based on knowledge of the sensitivity of the feature to activities that are occurring / have occurred on the site.

### H1170 Reefs

In the U.K. temperate reefs are formed from rocky substrata or biological structures, and a characteristic zonation of marine flora and fauna that varies with local environmental conditions (e.g. salinity regime, tidal exposure, current exposure, substrate type). The Morecambe Bay SAC is mainly comprised of soft-sediment habitats, therefore exposed rocky boulder and cobble reefs, termed locally as 'skears' represent an important habitat contributing to the structure and complexity of the SAC. The rocky skears are often colonised by the blue mussel *Mytilus edulis* and associated organisms. There are also extensive biogenic reefs formed from dense populations of the polychaete *Sabellaria alveolata*, a U.K. Biodiversity Action Plan (BAP) priority habitat.

Morecambe Bay SAC reefs are patchily distributed, although notable extents occur in the outer part of the bay and to the east of Walney Island. Subtidal stony reefs occur to the south-east of Walney Island in the Walney Channel, north of the Lune Deep and in central areas of Morecambe Bay. The total extent and distribution of stony reef varies significantly with time as seabed sediments move, covering and uncovering areas of reef. The main intertidal mussel dominated skears can be found at the mouths of the Wyre, Heysham, to the

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south of Foulney Island and in the Duddon Estuary. Intertidal *Sabellaria alveolata* reefs are an important feature of the SAC but are highly variable in location, they can often be found at Foot Skear off Heysham but can be found in many other locations in the SAC such as the skears north west of Fleetwood.

There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.

### **S1166 Great crested newt, *Triturus cristatus***

Natural England is in the process of developing Conservation Advice for species features such as Great crested newt *Triturus cristatus*. Great crested newts are found at Sandscale Haws National Nature Reserve in the Duddon Estuary. A baseline survey of the population is currently being undertaken by the National Trust, who own the site.

## **Morecambe Bay and Duddon Estuary SPA**

In the breeding season the SPA regularly supports nearly 62,000 individual sea birds and in the winter it regularly supports over 210,000 individual waterfowl.

Morecambe Bay and Duddon Estuary SPA supports greater than 1% of the GB population of three Annex I species in the breeding season (little tern *Sternula albifrons*, Sandwich tern *Thalasseus sandvicensis*, common tern *Sterna hirundo*) and six Annex I species in the non-breeding season (whooper swan *Cygnus cygnus*, little egret *Egretta garzetta*, golden plover *Pluvialis apricaria*, bar-tailed godwit *Limosa lapponica*, ruff *Calidris pugnax* and Mediterranean gull *Ichthyaetus melanocephalus*). In addition, the site supports over 1% of the biogeographical populations of 16 regularly occurring migratory birds – two in the breeding season (lesser black-backed gull *Larus fuscus graellsii* and herring gull, *Larus argentatus argenteus*) and 14 in the non-breeding season (redshank *Tringa totanus*, knot *Calidris canutus*, pintail *Anas acuta*, ringed plover *Charadrius hiaticula*, pink-footed goose *Anser brachyrhynchus*, shelduck *Tadorna*, oystercatcher *Haematopus ostralegus*, grey plover *Pluvialis squatarola*, dunlin *Calidris alpina*, curlew *Numenius arquata*, turnstone *Arenaria interpres*, black-tailed godwit *Limosa*, sanderling *Calidris alba*, lesser black-backed gull, *Larus fuscus*). Finally, it also regularly supports a breeding seabird assemblage of over 20,000 individuals, including the qualifying breeding features as main components, and a waterbird assemblage of over 20,000, including all non-breeding qualifying features as well as 19 other species as main components. Several of these species occur in nationally and internationally important numbers and it is not uncommon during severe weather for the SPA to attract even greater numbers with birds attracted from other areas by the relatively mild climate and abundant food resources.

In wave sheltered and estuarine areas the intertidal sediment transitions into large and extensive areas of saltmarsh and pioneer saltmarsh which form an important roosting habitat for many bird species. At high tide the birds then congregate at roost sites on the shore, and very large numbers of birds can be concentrated along the shore at a very limited number of locations.

### **Site Condition**

A marine condition assessment has not been carried out for this site.

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Most of the non-breeding waterbirds and non-breeding waterbird assemblage have 'maintain' targets for population abundance, with the exception of dunlin, grey plover and sanderling, which have restore targets.

Common tern, herring gull, lesser black-backed gull, sandwich tern and the seabird assemblage have 'restore' targets for breeding population abundance.

Little tern has a 'maintain' target for breeding population abundance.

Disturbance of breeding and non-breeding birds by recreational activities such as dog walking, kite surfing and jet skiing has been identified as having a detrimental impact on the SPA features. For most of the features, the target for attribute 'Disturbance caused by human activity', is to: *reduce the frequency, duration and / or intensity of disturbance affecting roosting, breeding, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed* .

The following species do not have 'reduce' target for disturbance. The target has been set due to a lack of evidence that these features are being impacted by any anthropogenic activities:

- lesser black-backed gull
- little egret
- Mediterranean gull
- pink-footed goose
- ruff
- whooper swan.

The target for attribute 'Disturbance caused by human activity' for these species is to: 'restrict the frequency, duration and / or intensity of disturbance affecting roosting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed.

The Morecambe Bay Disturbance and Access Management report 2015 [Ref. 11] identified a wide range of sites where recreational disturbance was having a detrimental impact on SPA features, and suggested actions to reduce disturbance.

More information is given in the following tables.

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**Table 7a. Current status, influences, management and condition for non-breeding waterbirds**

<b>Qualifying Feature</b>	<b>Current status, influences, management and condition</b>  All information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]
<p>Bar-tailed godwit (<i>Limosa lapponica</i>), Non-breeding</p>	<p>In winter there are internationally important roosts of Bar-tailed Godwit on Conder Estuary and Glasson Marsh as well as nationally important roosts at Middleton and West Plain. There are other roost sites at North and South Walney, Plover Scar at Cockerham and Potts Corner and Ocean Edge at Heysham. This species feeds on the extensive areas of mud flats found within the SPA which are easily accessible from roost sites which are also contained within the SPA boundaries.</p> <p>The current citation value of 3,046 non-breeding individuals refers to the 5 year peak mean between 2009/10 – 2013/14 and represents 8% of the GB population. At the time of citation in 1991 the SPA supported 3,500 individuals which represented 6% of the GB population, the SPA therefore currently supports a greater proportion of the national total than previously. The current population has undergone a decline of 16.75% however there is evidence that changes in wintering distribution due to warmer winter temperatures are the driving factor in reduced numbers rather than site specific factors.</p> <p>There is evidence from surveying and monitoring to suggest that bar-tailed godwits are disturbed at roost sites by walkers and dogs.</p> <p>Bar-tailed godwits show a high sensitivity to disturbance and this is reflected in their habit of moving a considerable distance between roosts on being disturbed. Disturbance of this species at feeding and roosting sites is an issue. Although not the only causes or locations of disturbance within the SPA, dog walking and walkers are a major source of disturbance at the Middleton roost and Plover Scar near Cockerham.</p>
<p>Black-tailed godwit (<i>Limosa islandica</i>), Non-breeding</p>	<p>There are internationally important roost sites at Inner Marsh and Jenny Browns Point between Silverdale and Carnforth as well as at Arm Hill on the Wyre, Plover Scar at Cockerham and Morecambe Seafront. Key feeding areas are widespread around the SPA as this species utilises sand and mud flats, salt marsh and adjacent agricultural fields. At RSPB Leighton Moss the Eric Morecambe and Allen Pools are favoured for feeding. Due to the nature of the site, species have easy access to and from feeding and roosting sites.</p> <p>The current population of black-tailed godwit in the SPA is 2,413 individuals (5 year peak mean 2009/10 – 2013/14). This figure represents 5.6% of the GB population and 4% of the biogeographic population. Black-tailed godwit are a newly qualifying species for the Morecambe Bay and Duddon Estuary SPA and the population has undergone a consistent increase over the last few years with an increase of 1232% since 1985.</p> <p>There is evidence from surveying and monitoring to suggest that black-tailed godwits are disturbed at roost sites by walkers and dogs as well as kayakers.</p>

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	<p>Disturbance occurs at many locations in different forms within the SPA however the roost site at Plover Scar near Cockerham is one of the most disturbed key roosting sites in Morecambe Bay as well as at Arm Hill on the Wyre Estuary.</p>
<p>Curlew (<i>Numenius arquata</i>), Non-breeding</p>	<p>Roost sites within the SPA are concentrated around Meathop, Middleton and Pilling Lane Ends, Foulney Island, Bolton-le-Sands, Bank End, Fluke Hall and Flookburgh Marsh. When birds are disturbed from the main roost at Flookburgh Marsh, Cowp Scar acts as a refuge site. Around the Duddon; Millom, Dunnerholme and Kirkby are important sites. Feeding occurs on soft estuarine mud which is widely distributed throughout the SPA as well as saltmarsh, mussel beds and agricultural land. Roost sites are widely distributed and feeding habitat is abundant. Due to the open nature of the coast there is a lack of physical and visual barriers that would prevent movement of birds between habitats.</p> <p>Morecambe Bay and Duddon Estuary SPA has a non-breeding population of curlew and is the most abundant site for wintering curlew in the country. The SPA held 12,209 individuals (5 year peak mean 2009/10 – 2013/14), 8.7% of the GB population and 1.5% of the biogeographic population. At the time of original citation in 1991, Morecambe Bay held a non-breeding population of 10,400 curlew which equated to 3 % of the biogeographic population and 11% of the GB population.</p> <p>There is evidence from surveying and monitoring to suggest that curlew are disturbed at roost sites at a significant level.</p> <p>Disturbance occurs at many locations in different forms within the SPA however at Foulney there are nationally important numbers of curlew which are exposed to medium levels of disturbance at the roost site. West Plain at Humphrey Head has high levels of disturbance increasingly caused by vehicles. At Middleton there are nationally important numbers of curlew, a site which also suffers from high levels of disturbance. Along with West Plain, Plover Scar near Cockerham has the highest levels of disturbance of all roost sites in the SPA.</p>
<p>Dunlin (<i>Calidris alpina alpina</i>), Non-breeding</p>	<p>Large roost sites are on South Walney Island at South End as well as East Plain at Humphrey Head and Sandgate Marsh near to Flookburgh. Other roost sites including Middleton, Cockerham at Lane Ends and South Walney Island, at Western shore. Around the Duddon Estuary important sites include Roanhead, Dunnerholme and Millom. Dunlin roost on sand, shingle and saltmarsh and feed on small invertebrates predominately on mud and silty areas, these are wide spread habitats within the SPA and a lack of barriers between feeding and roosting locations means connectivity is good.</p> <p>Morecambe Bay and Duddon Estuary SPA ranks third in the country in terms of dunlin winter abundance. There is a non-breeding population of 26,982 individuals which represents 2% of the biogeographic population and 7.7% of the GB population. At the time of citation in 1991 there were 43,000 non-breeding individuals which represented 3% of the biogeographic population and 10% of the GB population.</p>

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	<p>Although dunlin have declined substantially in the SPA, by 45.57%, there are currently no identified issues within the protected area which can be attributed to such a large scale decline. Short stopping, due to changes in winter temperatures and a shift in wintering centroid to the north east has however been identified as a cause for decline both at a site level and regionally. Although the decline does not appear to be site-specific it is still of concern; the aspiration is to restore, however, tracking wider species trends, it is unclear if site-specific conservation measures will fully succeed.</p> <p>There is evidence from surveying and monitoring to suggest that dunlin are disturbed at roost sites by dogs, walkers and vehicles on a regular basis.</p> <p>Disturbance occurs at many locations in different forms within the SPA however sites at Walney, Western Shore and South End are highly disturbed by dogs, walkers and vehicles. Roosts at West and East Plain at Humphrey Head, Middleton, Plover Scar near Cockerham and Lanes End at Pilling all suffer from medium to high levels of disturbance. Rossall Point at Fleetwood is of high concern due to ‘packs’ of dogs off the lead on a regular basis.</p>
<p>Golden plover (<i>Pluvialis apricaria</i>), Non-breeding</p>	<p>This species uses both the intertidal and saltmarsh areas as well as low lying agricultural fields outside of the SPA. Large numbers have been recorded using the shingle and mussel scars around the bay as nocturnal roosting sites. In winter, during severe frosty weather the species has been known to make use of areas of shingle and rocky scars to feed, moving to fields at high tide. Due to the nature of this species using adjacent land as well as parts of the SPA, travel between off-site habitat and the protected site is common. Those birds that feed in the intertidal area tend to roost nearby, making use of the closest high tide gathering location.</p> <p>At the time of classification in 1991, the citation states a population of 1,900 non-breeding golden plover which represented 1% of the GB population. Currently the population of golden plover within the SPA reaches 3,494 individuals which is a 116.31% increase (5 year peak mean 2009/10 – 2013/14). Due to national increases however, this only represents 0.9% of the GB population.</p> <p>There is evidence from surveying and monitoring to suggest that sites used by this species are regularly disturbed.</p>
<p>Grey plover (<i>Pluvialis squatarola</i>), Non-breeding</p>	<p>South End and Western Shore on South Walney, Middleton and Lane Ends are the main roost sites for this species, Fluke Hall provides a refuge roost on high spring tides when other sites are inundated. This species feeds on sandy and muddy areas which are widespread within the SPA.</p> <p>At the time of classification in 1991, the citation for the SPA states that the population of non-breeding grey plover was 2,000 individuals, representing 1% of the biogeographic population. There has since been a decline in the grey plover population in the SPA with a current population of 1,013 individual (5 year peak mean 2009/10 – 2013/14) which</p>



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	<p>represents 0.4% of the biogeographic population. The original citation value of 2,000 individuals is retained. There has been a 43.71% decline in grey plover in the SPA. Although this is a substantial decline, these changes are likely due to offsite factors. The winter centroid of the species has shifted by over 100km to the north east which would be expected to cause a reduction in numbers to the west of the wintering range. Short stopping is the primary factor causing reductions rather than site specific factors which can be managed.</p> <p>The decline does not appear to be site-specific but is still of concern; the aspiration is to restore, however, tracking wider species trends, it is unclear if site-specific conservation measures will fully succeed.</p> <p>There is evidence from surveying and monitoring to suggest that grey plover are disturbed at roost sites by dogs, walkers and vehicles on a regular basis.</p> <p>Disturbance occurs at many locations in different forms within the SPA however Western Shore and South End on Walney have high levels of disturbance caused by walkers, dogs and vehicles. Roosts at Middleton, south of Heysham and Plover Scar near Cockerham, as well as Lane Ends and Fluke Hall near Pilling also experience high amounts of disturbance.</p>
Knot ( <i>Calidris canutus</i> ), Non-breeding	<p>Knot feed on a range of habitats, of which the majority are wide spread around the SPA including mudflats and sand flats which are the most extensive habitat in the protected site. Key roost sites are well distributed. Around the Duddon Estuary; Dunnerholme, Roanhead and North Walney are key sites. Within Morecambe Bay, Middleton is one of the most important roost sites in terms of internationally important numbers as well as sites at South Walney; Shelly Bars, Sheep Island, Western Shore and Piel Island. East Plain and Stone Jetty are also of international importance. Other key sites at a local level include Lane Ends, South End on South Walney, West Plain and Sunnyslopes Breakwater. Due to the distribution of feeding and roost habitat and the open nature of the site, there a very few, if any, barriers to movement.</p> <p>Morecambe Bay and Duddon Estuary SPA support nationally important numbers of knot in the winter, ranking third highest for this species' abundance in the UK with a 5 year peak mean of 32,739 individuals (2009/10 – 2013/14). Knot in the SPA represent 7.3% of the biogeographic population from the <i>islandica</i> race with a biogeographic population of 450,000. Nationally, numbers have remained stable over the past 30 years. The original citation from 1991 states the population at 26,300 individuals, 8% of the biogeographic population and 12% of the GB population. There has been a slight overall increase in the SPA population of 0.15% since 1985.</p> <p>There is evidence from surveying and monitoring to suggest that knot are disturbed at roost sites by dogs, walkers and vehicles on a regular basis.</p> <p>Disturbance occurs at many locations in different forms within the SPA. Walney is a key roosting site with Western Shore, Piel Island and Shelly Bars supporting internationally</p>

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	<p>important numbers of knot in the winter months and South End holding nationally important numbers. All of these sites are exposed to high levels of disturbance from dogs, people and vehicles. West Plain on Flookburgh Marsh has nationally important numbers of knot and is highly disturbed by land based activities.</p>
<p>Lesser black-backed gull (<i>Larus fuscus</i>), Non-breeding</p>	<p>Non-breeding lesser black-backed gulls scavenge, feeding on intertidal areas and the strand line. They also make use of the local urban human population and its associated waste. Individuals tend to utilise a similar range in the breeding and non-breeding season.</p> <p>Morecambe Bay and Duddon Estuary SPA hold a non-breeding population of 9,450 individuals (5 year peak mean 2009/10 – 2013/14). This represented 7.9% of the GB population and 1.7% of the biogeographic population which is estimated at 120,000 individuals. Non-breeding lesser black-backed gulls are a new addition to the SPA and as a result, insufficient time has elapsed for comparison between classification and present.</p> <p>Non-breeding lesser black-backed gulls generally roost and feed close to areas where breeding colonies are situated within nature reserves, particularly on South Walney. There is no access to The Spit for members of the public. The Gull Meadow site has a foot path running behind it, around 50 metres away, however disturbance is minimal.</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>
<p>Little egret (<i>Egretta garzetta</i>), Non-breeding</p>	<p>Little egret are doing well within the SPA with a continuous increase in the number of birds recorded. It is therefore considered that with the population increasing, the site is well suited to the species and connectivity between key sites is favourable.</p> <p>Little egrets are a newly qualifying species for Morecambe Bay and Duddon Estuary SPA, a reflection on the species’ continued national expansion both northward and westward. With 134 non-breeding individuals (5 year peak mean 2009/10- 2013/14), this contributes to 3% of the population in Great Britain of which there are considered to be 4,500 individuals.</p> <p>There is a lack of evidence about whether the feature is being impacted by any anthropogenic activities.</p>
<p>Mediterranean gull (<i>Ichthyaeetus melanocephalus</i>), Non-breeding</p>	<p>Mediterranean gulls aggregate at the outfalls of Heysham and also around the mouth of the Lune Estuary. Individuals have been reported around the Glasson area with some birds roaming in nearby fields with black headed gulls.</p> <p>Mediterranean gull is a newly qualifying feature of the Morecambe Bay and Duddon Estuary SPA with a five year peak mean of 18 non-breeding individuals (2019/10 – 2013/14). This represents 1.0% of the GB population. The species has increased nationally.</p>

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	<p>There is a lack of evidence about whether the feature is being impacted by any anthropogenic activities.</p>
<p>Oystercatcher (<i>Haematopus ostralegus</i>), Non-breeding</p>	<p>Higher concentrations of oystercatchers correlate with the areas containing large mussel beds, located at Heysham and to the east of Morecambe, and around the mouth of the Walney Channel. It is possible that birds feeding on these sites originate from the closest roosts and do not travel far. There is the possibility that a proportion of the oystercatchers in the SPA feed on other prey, off site during high tides.</p> <p>Morecambe Bay and Duddon Estuary SPA supports nationally and internationally important numbers of wintering oystercatcher, ranking first for site abundance in the UK. Oystercatchers in Morecambe Bay and Duddon Estuary SPA represent 17.5 % of the British population and 6.8 % of the biogeographic population with an average peak count of 55,888 individuals for the 5 year winter period 2009/2010 – 2013/2014. At the time of original classification in 1991, the population of non-breeding oystercatcher was 56,800, 20% of the GB and 6% of the biogeographic population. There has been a decline of 1.6% in the population since original citation on 1991 (56,800 individuals) however this is a very small change and is in line with national trends for decreasing numbers of the species which have been attributed to changes in wintering range due to short stopping caused by warmer winter temperatures.</p> <p>There is evidence from surveying and monitoring to suggest that oystercatchers are disturbed at many roost sites by dogs and walkers on a regular basis.</p> <p>Disturbance occurs at a number of sites and in a number of forms across the SPA. Hest Bank supports internationally important numbers of roosting oystercatcher and suffers from high levels of disturbance particularly from walkers and dogs. East Plain on Flookburgh Marsh at Humphrey Head has moderate levels of disturbance although this is increasing and the site is internationally important as a roost site for oystercatcher. Red Nab and Middleton also support internationally important numbers, access to these locations is easy and disturbance levels are high. Sunnyslopes breakwater on Morecambe seafront is nationally important as a roost, disturbance here is limited but fishermen can flush all birds when present. Fluke Hall near Pilling and Arm Hill on the Wyre Estuary are nationally important roosts with high levels of disturbance from dogs and people as well as kayakers on the Wyre. Shelly Bars roost site on Walney supports nationally important numbers of oystercatcher and has high levels of disturbance. Piel Island and Plover Scar near Cockerham also have high levels of disturbance.</p>
<p>Pink-footed goose (<i>Anser brachyrhynchus</i>), Non-breeding</p>	<p>Geese mainly remain within 5-10 km of roosting sites and disperse from the larger roosting groups into smaller feeding groups. The Wyre Estuary is where the main concentration of this species can be found, particularly around Pilling. Around the Lune birds often feed inland but roost on the estuary, coastal flats, sandbanks, undisturbed water and sometimes heather moor.</p>

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	<p>There are 15,648 non-breeding pink footed geese in the SPA (5 year peak mean 2009/10 – 2013/14). All of these individuals are from the Icelandic and eastern Greenland breeding populations, the SPA supports 4.5% of the biogeographic population. The original citation from 1991 stated 8,500 individuals which represented 8% of the GB population, numbers of this species have been increasing nationally and there has been an 1142% increase in the SPA population since 1985.</p> <p>There is a lack of evidence about whether the feature is being impacted by any anthropogenic activities.</p>
Pintail ( <i>Anas acuta</i> ), Non-breeding	<p>The main concentrations of pintail in the SPA are found on the Kent Estuary. There are other roosting sites at Hest Bank and Bolt-le-Sands and Meathop.</p> <p>The Morecambe Bay and Duddon Estuary SPA consistently supports some of the largest numbers of Northern Pintail in the UK. Between 2009/10 – 2013/14 the area was ranked the second highest for abundance in the country. The SPA holds 4.2%, 2,498 individuals, of the current biogeographic population, at the time of initial classification in 1991 the population was 2,300 individuals.</p> <p>There is evidence from surveying and monitoring to suggest that pintail are disturbed at roost sites.</p> <p>Disturbance occurs at a number of sites and in a number of forms however a main pintail roost at Bolton-le-Sands is a location which has very easy access and is highly disturbed. Water-based disturbance is currently low but increasing. There is some wildfowling which occurs within the SPA however this disturbance is managed by licensing and consent.</p>
Redshank ( <i>Tringa totanus</i> ), Non-breeding	<p>Redshank are well distributed around Morecambe Bay. The main roost sites are located at Walney lagoons and South Ulverston. There are a number of other sites which support smaller numbers of the species including at Canal Foot, East Plain, and Sunnyslopes breakwater at Morecambe seafront and Plover Scar at Cockersands. The Duddon Estuary supports highest numbers of this species at Millom, Hodbarrow and Haverigg. Redshank feed on a wide variety of habitats over the whole of the tidal cycle. However mud is very important, due to widespread roost sites and the species' preference for feeding on mud which is very widespread throughout the SPA. Connectivity between sites is good.</p> <p>At the time of citation the population of non-breeding redshank in the SPA was 11,133 (5 year peak mean 2009/10 – 2013/14). This represents 4.6 % of the biogeographic population. In the original citation (1991) there were 7,200 individuals which was 7% of the biogeographic population. Population levels have increased overall in the SPA by 6.83% since 1985.</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>

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	<p>There is evidence from surveying and monitoring to suggest that redshank are regularly disturbed at a number of roost sites.</p> <p>Disturbance occurs at a number of locations in a number of forms. The roost sites at South Walney Lagoons are easily accessible and have high levels of disturbance. Sunnyslopes breakwater roost on Morecambe sea front is not disturbed frequently however, periodically it can be affected by anglers who flush all birds present. The roost at Plover Scar near Cockerham is easily accessed as are roosts at West Plain by Humphrey Head and West Walney, these are some of the most regularly disturbed key roost sites in Morecambe Bay.</p>
<p>Ringed plover (<i>Charadrius hiaticula</i>), Non-breeding</p>	<p>There are two main roosting sites for ringed plover in Morecambe Bay; Western Shore on South Walney and Plover Scar. Morecambe Seafront is also important, in particular Sunnyslopes breakwater. Around the Duddon Estuary; Dunnerholme, North Walney and Roanhead are important sites. Ringed plover feed on sandy substrate which is prevalent close to many of the roost sites.</p> <p>Within the Morecambe Bay and Duddon Estuary SPA there is a reported five year peak mean of 1,049 individuals (2009/10 – 2013/14) and it is estimated that 1.4% of the biogeographic population (73,000 individuals) can be found in the SPA. In 1991, the original citation stated a non-breeding population of 604 ringed plover which represented 1% of the biogeographic and 3% of the GB population.</p> <p>There is evidence from surveying and monitoring to suggest that ringed plover are regularly disturbed at a number of roost sites by walkers, dogs and vehicles.</p> <p>Disturbance occurs at a number of sites and in a number of forms however at Walney Western Shore there is a high level of disturbance caused by vehicles, dogs and walkers. Plover Scar near Cockerham is also a highly disturbed roost site being one of the most regularly disturbed roost in the SPA.</p>
<p>Ruff (<i>Calidris pugnax</i>), Non-breeding</p>	<p>Ruff generally feed outside of the SPA designated area on wet grassland taking invertebrate prey, Leighton Moss RSPB reserve is a key site where the species feed on the fields behind the saltmarsh. It is common for ruff to roost on the Allen and Eric Morecambe pools at Leighton Moss.</p> <p>Ruff are a newly qualified species for the Morecambe Bay and Duddon Estuary SPA with 8 individuals (5 year peak mean 2009/10 – 2013/14), contributing to 1% of the GB population. The SPA is the only one in the west of the country providing protection for this species and there has been a 100% increase in the population since 1985.</p> <p>There is a lack of evidence about whether the feature is being impacted by any anthropogenic activities.</p>

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Qualifying Feature	<p style="text-align: center;"><b>Current status, influences, management and condition</b></p> <p style="text-align: center;">All information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]</p>
<p>Sanderling (<i>Calidris alba</i>), Non-breeding</p>	<p>The vast majority of over wintering birds tend to be found at the mouth of the Bay with Walney, in particular Western Shore and the Fylde Peninsular having the highest abundance levels. Roanhead, North Walney and Dunnerholme are key sites around the Duddon Estuary. Key feeding areas tend to be sandy open coast.</p> <p>At the time of classification in 1991, the citation states the non-breeding population of Sanderling was 3,600 individuals, which represented 3% of the biogeographic population. The SPA population has since declined to 849 individuals (5 year peak mean 2009/10-2013/14) representing 0.7% of the current biogeographic population. According to Holt et al however, the population within the SPA is doing significantly better than other sites both nationally and regionally however, if using wintering and passage numbers, the decline in the SPA is substantial. This suggests that there are less on passage than there used to be, sanderlings are less likely to stop at Morecambe Bay during migration, possibly because less of them are moving so far. Within the SPA there has been no apparent change in habitat or resource availability and it is therefore considered that offsite factors are influencing the changes in population numbers.</p> <p>The decline does not appear to be site-specific but is still of concern; the aspiration is to restore, however, tracking wider species trends, it is unclear if site-specific conservation measures will fully succeed.</p> <p>There is evidence from surveying and monitoring to suggest that sanderling are regularly disturbed at a number of roost sites by walkers, dogs and vehicles.</p> <p>Disturbance occurs at a number of sites and in a number of forms however at Walney Western Shore roost site there are high levels of disturbance caused by dogs, people walking and 4x4 vehicles, this is a site which supports nationally important numbers of the species. Rossall Point roost site at Fleetwood also holds nationally important numbers of sanderling in winter, this site is easily accessed by the public and suffers from high levels of disturbance primarily from dogs being walked off the lead on a very regular basis.</p>
<p>Shelduck (<i>Tadorna tadorna</i>), Non-breeding</p>	<p>This species is widely spread on all estuaries found within the SPA. Birds roost on saltmarsh which is not covered by the tide at Hest Bank and Bolton-le-Sands and Lane End to Bank End. Other identified winter roost sites include Meathop, Sandgate marsh, Plover Scar, Carnforth marsh, and Canal Foot. Around the Duddon, Millom, Kirkby and Dunnerholme are important sites for shelduck. Shelduck feed on intertidal mudflats which are extremely abundant throughout the SPA, therefore connectivity between roosting and feeding sites is considered to be good.</p> <p>The Morecambe Bay and Duddon Estuary SPA holds a population of 5,878 shelduck (5 year peak mean 2009/10- 2013/14) this contributes to 2% of the biogeographic population. Initially at the time of designation in 1991 there were 3,700 non-breeding shelduck which represented 5% of the GB and 1% of the biogeographic population.</p>

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Qualifying Feature	<p style="text-align: center;"><b>Current status, influences, management and condition</b></p> <p style="text-align: center;">All information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]</p>
	<p>Overall, since 1985, there has been a 17.18% increase in the population of Shelduck in the SPA.</p> <p>There is evidence from surveying and monitoring to suggest that shelduck are disturbed at roost sites.</p> <p>Disturbance occurs at a number of sites in a number of forms within the SPA. At Plover Scar near Cockerham, disturbance levels are high with this site being one of the most regularly disturbed in Morecambe Bay.</p>
<p>Turnstone (<i>Arenaria interpres</i>), Non-breeding</p>	<p>Areas of particular significance in winter include South Walney Island at the Western Shore roost, Plover Scar at Cockersands and Fleetwood Marine Lakes at Rossall Point which holds numbers that reach the Nationally Important threshold in winter. Turnstone utilise mussel beds and stony scars within the SPA and tend to roost in areas close to feeding sites.</p> <p>Morecambe Bay and Duddon Estuary SPA holds a significant number of turnstone, being the site of highest abundance in the UK between 2009/10 – 2013/14. With a five year peak mean of 1,359 individuals. The SPA represents 2.8% of the GB population and 1.0% of the 140,000 individuals that make up the biogeographic population. The original citation in 1991 stated a non-breeding population of 2,000 individuals, 3% of the biogeographic and 4% of the GB population.</p> <p>The population of turnstone in the SPA has declined by 33.94% since 1985. Although there are off site factors which may be partially contributing to this decline, there has been a UK wide decline in numbers, there are also on site factors which are also likely to be contributing to declines, therefore it is considered a ‘restore’ target is appropriate.</p> <p>There is evidence from surveying and monitoring to suggest that turnstone are regularly disturbed at a number of roost sites by walkers, dogs and vehicles.</p> <p>Walney Western Shore roost has a high level of disturbance mainly caused by dogs and walkers and vehicles. Plover Scar near Cockerham is another highly disturbed roost. Rossall Point at Fleetwood is a site which supports internationally important numbers of roosting turnstone and is a site with extremely high disturbance rates with large numbers of dogs being walked off the lead.</p>
<p>Whooper swan (<i>Cygnus cygnus</i>), Non-breeding</p>	<p>Frequent large aggregations of whooper swans have been recorded on marshes and functionally linked coastal grassland just south of Morecambe Bay. Large numbers are recorded at Jeremy, Moss Lane, Cockersands and Eskmeals. Transitional flocks are also seen on the Duddon Estuary.</p> <p>The SPA has a five year peak mean of 113 individuals (2009/10- 2013/14) which represents 1% of the GB population. Whooper swan is a newly qualifying species for the SPA and numbers have increased by 1460% since 1985.</p>

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Qualifying Feature	<p style="text-align: center;"><b>Current status, influences, management and condition</b></p> <p style="text-align: center;">All information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]</p>
	<p>There is a lack of evidence about whether the feature is being impacted by any anthropogenic activities.</p>
<p>Internationally important waterbird assemblage, Non-breeding</p>	<p>Morecambe Bay and Duddon Estuary SPA supports an assemblage of 266,751 waterbirds (5 year peak mean 2009/10 – 2013/14).</p> <p>There has been an increase in the waterbird assemblage since the original citation in 1991 when there were 180,800 individuals (5 year peak mean 1984/85 - 1988/89).</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p> <p>The Morecambe Bay disturbance and access management report 2015, involved a series of robust visitor surveys and disturbance event monitoring. It identified detrimental impacts at a range of sites as a result of recreational disturbance for SPA features. The report outlines a suite of management recommendations targeting specific users and activity types which have been shown to be most prevalent and highest risk for impact (dogs, vehicles, watercraft etc.). Some of the recommendations have been taken forward and are showing promising results. However, the resource burden on implementing these management recommendations in full is not currently feasible and not considered sustainable with current resources. Without meaningful large scale intervention and investment to tackle core issues surrounding recreational and human disturbance within the wider SPA and hinterland the current measures will not be successful long term and the SPA features risk further decline.</p> <p>A series of visitor surveys and disturbance event monitoring were undertaken and identified detrimental impacts at a range of sites as a result of disturbance caused by recreational activities.</p>



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**Table 7b – Current status, influences, management and condition for breeding seabirds**

Qualifying Feature	Current status, influences, management and condition
Common tern ( <i>Sterna hirundo</i> ), Breeding.	<p>Unless otherwise stated, information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]</p> <p>Morecambe Bay and Duddon Estuary SPA currently holds 47 pairs of breeding common tern (five year peak mean 2009/10 – 2013/14). The current value of 47 pairs represents a significant decline from the original citation in 1991 when there were 285 pairs within the Morecambe Bay SPA, representing 2% of the Northern and Eastern European breeding population. The original citation value of 285 pairs has been retained in order to afford protection for the species with the SPA offering protection to common terns moving between nesting sites.</p> <p>The target has been set due to a decline in the breeding population of the species by 83.5%</p> <p>Common tern breed in the SPA in summer and overwinter in south and West Africa. The common tern within the SPA have been recorded nesting at Hodbarrow and Foulney. Both of these sites are nature reserves managed by the RSPB and Wildlife Trust respectively, this restricts the amount of disturbance that can occur from anthropogenic sources. There is the potential that expansion of the species' breeding range to new nest sites within the SPA may be restricted by human disturbance although other factors may also play a part in this.</p> <p>Historically there was a large colony on the Lune Estuary at Colloway Marsh, however this declined and was subsequently lost.</p> <p>The Morecambe Bay and Duddon Estuary SPA incorporates an offshore extension with the primary purpose of including the foraging areas for tern species around the breeding sites and their associated flight between feeding and nesting sites.</p>
Herring gull ( <i>Larus argentatus</i> ), Breeding	<p>At the time of classification, the most recent data (2011-2015) showed a five year peak mean of 1,596 breeding pairs within Morecambe Bay and Duddon Estuary SPA. The current biogeographic population is estimated at 340,000 pairs, within the SPA the population makes up only 0.5% of this. Originally at the time of citation in 1991 there were 10,000 pairs representing 7% of the GB population and 1% of the biogeographic population at that time. The original baseline citation of 10,000 pairs (1991) has been retained for the new SPA.</p> <p>A restore target is set as the current population of breeding herring gull has declined from 10,000 pairs to 1,596 since the time of citation in 1991.</p> <p>The breeding colony of herring gulls at the South Walney and Piel Channel Flats SSSI is of national and international importance. Herring gulls breed within the Morecambe Bay and Duddon Estuary SPA between May and July at colonies on South Walney and Hodbarrow. Individuals tend to use the area immediately around the colony most frequently. During the breeding season individuals utilise terrestrial and intertidal habitats as well as nearby mussel beds. The species has been recorded feeding on</p>

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<b>Qualifying Feature</b>	<p style="text-align: center;"><b>Current status, influences, management and condition</b></p> <p style="text-align: center;">Unless otherwise stated, information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]</p>
	<p>mussel beds to the South of Barrow-in-Furness and the colony extensively use the South Walney and Piel Channel Flats SSSI. Birds can also frequently be found on intertidal mud flats, as well as nearby fields, rubbish dumps and bodies of freshwater.</p> <p>There is evidence from survey or monitoring that shows the feature to be currently un-impacted by anthropogenic activities.</p>
<p>Lesser black-backed gull (<i>Larus fuscus</i>), Breeding</p>	<p>Latest data (2011-2015) show the five year peak mean of breeding pairs at 4,860, which is 2.7% of the biogeographic population of 183,000 pairs. Lesser black-backed gulls were originally qualified at 10,000 pairs in 1991 which represented 12% of the Great British population at that time. Despite current declining trends in the lesser black-backed gull population both nationally and locally, the current peak mean value (2011-2015) of 4,860 breeding pairs is used to qualify the species for the SPA.</p> <p>A restore target is set as the current population of breeding lesser black-backed gull has declined by 51.4% to 4,860 pairs since the time of citation in 1991.</p> <p>Lesser Black-backed Gulls share many colonies with Herring Gulls, though the former tend to favour more vegetated breeding habitats. The breeding colony on South Walney and Piel Channel Flats is of national and international importance, a comparatively smaller number of birds also nest at Hodbarrow. Generally lesser black back gulls scavenge, feeding on intertidal areas and the strand line. They also make use of the local urban human population and its associated waste i.e. landfill sites.</p> <p>Currently the movements of lesser black-backed gulls into and out of the SPA is poorly understood. There is speculation that a proportion of gulls found in urban areas close to the SPA colonies may well be birds from the SPA. There is some evidence that this species do fly out to off shore windfarms however there is no evidence of windfarms posing a barrier to movement.</p> <p>Both colonies on South Walney where lesser black-backed gulls nest are within the nature reserve. There is no access to the spit for members of the public. The Gull Meadow site has a foot path running behind it, around 50 metres away, however disturbance is minimal. The only time the birds are disturbed to a greater degree is during repairs to the electric fence surrounding the colony, during surveys by reserve staff or over the last few years during tagging by BTO staff, all of which is monitored and logged.</p> <p>There is evidence from survey or monitoring that shows the feature to be in a good condition and/or currently un-impacted by anthropogenic activities.</p>
<p>Little tern (<i>Sternula albifrons</i>), Breeding.</p>	<p>Little terns in Morecambe Bay and Duddon Estuary SPA currently represent 2.2% of the GB population with a five year peak mean (2010-2014) of 42 pairs. There are 1,900 pairs in GB population representing 10.3% of the population breeding in the Eastern Atlantic. There has been an increase in the breeding population of little tern in</p>

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<b>Qualifying Feature</b>	<p style="text-align: center;"><b>Current status, influences, management and condition</b></p> <p style="text-align: center;">Unless otherwise stated, information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]</p>
	<p>the SPA since the original citation of 29 pairs (1991) which represented 1% of the GB population.</p> <p>Little terns have a small foraging range and therefore nesting and foraging sites are in close proximity to each other and well connected. Little terns nest at Foulney Island, Hodbarrow and Haverigg Haws and tend to remain close to the colony during the breeding season, travelling less than 10 km along shore and less than 4 km out to sea to forage. The SPA was extended to include an area offshore which the tern species forage in, in order to better protect the connectivity.</p> <p>Currently, at Foulney Island and Hodbarrow, there are management measures in place to reduce disturbance. At Haverigg Haws, where there are currently no management measures in place [pers comm.]. There is the potential that expansion of the species' breeding range to new nest sites within the SPA may be restricted by human disturbance although other factors may also play a part in this.</p>
<p>Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding.</p>	<p>The Morecambe Bay and Duddon Estuary SPA has a five year peak mean of 40 breeding pairs of sandwich tern. Originally the species was a qualifying feature of the Morecambe Bay SPA with 720 breeding pairs in 1991 and 422 pairs in 1997, representing 5% and 3% of the GB population. Sandwich terns were also a feature of the Duddon Estuary SPA with 210 pairs (1.5% of the GB population). The current figure of 40 breeding pairs encompasses both original SPA's, showing a substantial decline in the species locally.</p> <p>A restore target has been set due to a decline in the breeding population of the species by 95% from 804 pairs at the time of citation in 1991.</p> <p>The Morecambe Bay and Duddon Estuary SPA incorporates an offshore extension with the primary purpose of including the foraging areas for tern species around the breeding sites and their associated flight between feeding and nesting sites.</p> <p>On sites where the species already nest, management of disturbance is in place. There is however the potential that expansion of the species' breeding range to new nest sites within the SPA may be restricted by human disturbance although other factors may also play a part in this.</p>
<p>Seabird assemblage: breeding black-headed gull, lesser black-backed gull, herring gull, great black-backed</p>	<p>Morecambe Bay and Duddon Estuary SPA supports a regular aggregation of 13,250 breeding pairs of seabirds (5 year peak mean 2011-2015), a decline from the original citation in 1997 of 20,336 pairs. This decline has been largely attributed to the decrease in breeding gull numbers.</p> <p>There has been a 67.4% decline in the breeding seabird assemblage population since citation in 1997 from 20,336 breeding pairs to a five year peak mean of 6,625 pairs between 2011-2015.</p>

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<b>Qualifying Feature</b>	<p style="text-align: center;"><b>Current status, influences, management and condition</b></p> <p style="text-align: center;">Unless otherwise stated, information in this table comes from Natural England Conservation advice for Morecambe Bay and Duddon Estuary SPA [Ref. 3]</p>
<p>gull, little tern, Sandwich tern, common tern and Arctic tern.</p>	<p>The sites that currently support breeding seabirds within the SPA are largely unaffected by human disturbance due to effective management procedures. Particularly in tern species, one of the main limiting factors for further population growth and one of the possible causes for reduced numbers compared to the past is lack of suitable breeding sites. This is at least in part due to poor access management and disturbance particularly from highest risk activities such as dog walking and vehicles.</p> <p>There is evidence from surveying and monitoring to suggest that seabirds are disturbed at nest sites and that disturbance by humans is a major limiting factor in colonisation of new nesting sites.</p> <p>The assemblage has declined from the original citation value of 20,336 pairs in 1997 to 13,250 breeding pairs (5 year peak mean 2011-2015). This decline has been driven largely by declining gull and tern numbers which has been at least partly attributed to predation pressures. On South Walney badgers and foxes are the primary source of predation. Measures are in place to reduce levels of predation on South Walney including the use of electric fences around the gull colonies. Terns make up a large proportion of the seabird assemblage and at breeding sites at Hodbarrow measures have been put in place to restrict predation. An in water fence has been erected to prevent foxes from swimming to the shingle island and visual and noise disturbance is employed to discourage large gulls from using the nesting island. These measures and their effects need to be maintained as well as potential new nesting sites identified and predators managed at these locations in order to encourage colonisation.</p> <p>Predation has been highlighted as the main factor affecting seabird abundance within the SPA both at current breeding sites and in terms of restricting colonisation of new sites.</p>

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## Duddon Estuary Ramsar Site

Information on the bird features of the site and supporting habitats are given in the SAC and SPA sections above. There are three other features to consider.

### Natterjack toad; *Bufo calamita*

Natterjack toad occur around the Duddon Estuary. They are present between Silecroft and Barrow-in-Furness. The natterjack toad is a European protected species and is also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. Natterjack numbers declined dramatically during the 20th Century and populations at many sites went extinct over this period, mainly due to habitat loss. Natterjack toads are found in sand dunes, saltmarsh, grazing marsh and lowland heaths. Breeding ponds are ephemeral and often inundated by seawater in the winter months. The Duddon Estuary is one of the most important areas in Britain for this species and contains between 18- 25% of the U.K. population, and 50% of the Cumbrian natterjack toad population.

### Wetland invertebrate assemblage

Component species of this assemblage include:

*Hypocaccus rugiceps*

*Colletes cunicularius*

*Mimumesa littoralis*

These invertebrates are found in short turf and areas of bare sand in sand dunes. *Colletes cunicularius* and *Mimumesa littoralis* require dry substrates for nesting. *Hypocaccus rugiceps* requires a dung-carrion substrate.

### Wetland plant assemblage

Component species of this assemblage include:

*Epipactis dunensis*, *Centaurium littorale*, *Corallorhiza trifida*, *Epipactis phyllanthes*, *Equisetum variegatum*, *Limonium humile*, *Pyrola rotundifolia*, *Vulpia membranacea*, *Coincya monensis monensis*.

Most of these plants occur in sand dune habitats.

*Limonium humile* occurs on ungrazed saltmarshes.

Over 1,000 spikes of *Epipactis dunensis* are found at Sandscale.

*Centaurium littorale* is found at North Walney, Sandscale & Askam.

About 3,000 spikes of *Corallorhiza trifida* are found at Sandscale & few at North Walney.

Over 1,000 spikes of *Epipactis phyllanthes* are found at Sandscale & few at North Walney.

*Equisetum variegatum* is found at Sandscale, North Walney & Haverigg.

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*Limonium humile* is found on ungrazed saltmarshes.

*Pyrola rotundifolia* is found at Sandscale, North Walney & Haverigg.

*Vulpia membranacea* is found at Sandscale & North Walney.

*Coincya monensis monensis* is found at Sandscale, North Walney & scattered elsewhere.

Site specific target for the assemblage (in SSSI Favourable Condition Table): No more than 10% loss either in amount of area colonised or in the overall number of individual spikes for the above species.

### **Morecambe Bay Ramsar Site**

Information on the bird features of the site and supporting habitats are given in the SPA and SAC sections above.

### **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**

##### **Morecambe Bay SAC**

The route of the ECP largely avoids SAC habitats. In some places the ECP follows existing paths within the SAC, and at a few locations it is proposed to create new sections of path within the SAC. In all cases the impact of constructing a path and the impact of people using the path on the SAC habitats were carefully considered.

Large extents of SAC habitat fall within the Coastal margin and introducing coastal access rights may lead to changes in patterns and levels of access in this area.

A detailed assessment of the possible impacts of our proposals, including incorporated mitigation measures, on SAC habitats is given in section D.3.

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## **Morecambe Bay and Duddon Estuary SPA**

Non-breeding waterbirds occur throughout the SPA. In this section of the assessment we describe our overall approach to ensuring that non-breeding birds are not affected by our proposals, and the main mitigation measures proposed to address the impacts and risks.

Of particular concern are the high tide roost sites and breeding seabird sites, which are particularly susceptible to disturbance by walkers and dogs. The alignment of the England Coast Path was carefully considered to ensure that disturbance to roost sites and breeding sites would not increase as a result of the proposals. Care has been taken to avoid creating new routes in the vicinity of such locations and to help manage the existing disturbance pressure by improving the management of existing routes.

Where appropriate, new access management infrastructure including fences, screening and other physical barriers, will be installed alongside the trail to help reduce disturbance to roosting birds. In places, access restrictions in the Coastal margin are proposed to reduce the risk of people causing disturbance to roosting birds.

Increasing popularity of the Coast Path will not necessarily have a negative impact on the populations of birds using the SPA because the improvements we propose help to manage the disturbance pressure affecting the site. Development typically increases demand for access but without improving supply. Coastal access improves supply of access and so can be a tool for managing the disturbance pressure.

The project team sees an opportunity to positively influence the behaviour of people using the ECP by explaining the importance of the site to wintering and migratory birds, the risk of disturbance and how to avoid it. New on-site signage with appropriate messages to users will be installed at key locations.

Part of the mitigation proposed within this assessment document focuses on signage to influence and manage the behaviour of people with dogs. Natural England has developed a strong track record in this area through close work with partners such as the Kennel Club and through work on our own National Nature Reserve (NNR) estate.

In addition to this Natural England has commissioned specialist advice from a leading consultant who provides evidence-based advice, borne out of international research and experience, on the most appropriate approach to people and dog management and behavioural change.

This external advice, along with our own experience, has been used to design these dog management proposals. Our approach focuses on appropriate, specific, well-placed information to encourage the behaviour that is required in the location. The signage proposed is relevant and clear and the chosen locations carefully assessed for effectiveness. There will be on-going management (which will be subject to review as necessary) of any such arrangements by the Access Authority, once the new coastal access rights are commenced.

Seabirds breed at key locations within the SPA. Our proposals are designed to help manage access at these locations.

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There is a risk that non-breeding waterbirds could be disturbed during establishment works. This risk will be minimised by the use of mitigation measures during establishment works. Table 8 summarises mitigation measures to reduce disturbance to waterbirds during path construction works.

**Table 8: Establishment works - mitigation measures**

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

A detailed assessment of the impacts of our proposals on the SPA features is given in section D.3.



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

### Morecambe Bay SAC / Duddon Estuary Ramsar site

#### D3.2.1 Estuaries & Large Shallow Inlets and Bays

##### Distribution within the project area

There are six estuaries within the SAC; Duddon, Leven, Kent, Keer, Lune and Wyre.

The Estuary feature comprises the following subfeatures:

- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Intertidal biogenic reef: mussel beds
- Intertidal biogenic reef: *Sabellaria* spp.
- Intertidal coarse sediment
- Intertidal mixed sediments
- Intertidal mud
- Intertidal rock
- Intertidal sand and muddy sand
- Intertidal stony reef
- Salicornia and other annuals colonising mud and sand
- Subtidal coarse sediment
- Subtidal mixed sediment
- Subtidal mud
- Subtidal sand

A large proportion of the SAC area is comprised of habitat which is classified by the “large shallows inlets and bays” category, with only the areas up the river estuaries excluded.

The Large Shallow Inlets and Bays feature comprises the same subfeatures as the Estuary subfeature, plus:

- Intertidal seagrass beds

##### Sensitivities to changes in access

The subtidal subfeatures are not affected by the proposals as they are always underwater.

The subfeatures Intertidal coarse sediment, Intertidal mixed sediments, Intertidal mud, Intertidal sand and muddy sand and Intertidal seagrass beds are also subfeatures of H1140. Mudflats and sandflats not covered by seawater at low tide. This feature was assessed in **Table 5a**

**Assessment of likely significant effects alone for Morecambe Bay SAC** and it was concluded that our proposals will not have a likely significant effect on the feature H1140 Mudflats and sandflats not covered by seawater at low tide.

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The subfeatures Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) and *Salicornia* and other annuals colonising mud and sand are sensitive to changes in access. See the assessment of the impacts of our proposals on saltmarshes in section D3.2.2.

The subfeatures Intertidal biogenic reef: mussel beds, Intertidal biogenic reef: *Sabellaria* spp., Intertidal rock and Intertidal stony reef are sensitive to changes in access. See the assessment of the impacts of our proposals on reefs D3.2.5.

## D3.2.2 Saltmarshes and wetland plant assemblage

### Distribution within the SAC

Morecambe Bay SAC supports extensive saltmarsh habitat; it is present in all the major river estuaries and along the eastern side of Walney Island. There are also stretches around the bay, including large areas at Pilling and Cockerham Sands, between Carnforth and Bolton-le-Sands and at Humphrey Head Point. Extensive saltmarshes and glasswort (*Salicornia* spp.) beds are present in the Lune Estuary, contrasting with the fringing saltmarshes and more open intertidal flats of the Leven and Kent estuaries. The character of the different areas of saltmarsh can change as the river channels and physical process of the bay change and evolve.

The saltmarsh extent in the Morecambe Bay SAC is approximately 3744 ha.

This habitat makes a vital contribution to the structure and function of the Morecambe Bay SAC system; it is rich in invertebrates and is a feeding ground and habitat for large numbers of wading birds and wildfowl. Grazing by domestic stock has been particularly significant in determining the structure and species composition of the habitat. A wide range of saltmarsh community types is represented in Morecambe Bay SAC. In the upper levels of the saltmarsh there are also important transitional habitats from saltmarsh to freshwater and grassland vegetation.

The wetland plant assemblage (Duddon Estuary Ramsar site feature) contains the species *Limonium humile* (lax-flowered sea lavender) which is found on ungrazed saltmarshes in the Duddon Estuary. It is a species of muddy estuarine saltmarshes, where it generally grows close to mean high water. It has a preference for bare mud without other vegetation [REF. 17].

### Sensitivities to changes in access

The research available suggests that:

- Saltmarsh is sensitive to trampling
- Plant composition may change as a result of trampling
- Saltmarshes are partly self-protective because of the difficulties of traversing them [Ref. 7].

Access infrastructure such as footbridges may damage and reduce the area of saltmarsh, both in terms of construction impacts and permanent footprint and use of the structures. However, this is dependent on other factors, such as the level and pattern of any existing access or other use.

### General approach to alignment through saltmarsh

Where possible we avoid aligning the England Coast Path across saltmarsh. However, sometimes the best option for the England Coast Path (ECP) is to follow existing public rights of way or other walked routes on saltmarsh, or, very occasionally, by creating an entirely new route across saltmarsh.

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## **Impact of the access proposal**

### Consideration of existing public rights of way and permissive routes on saltmarsh

**Trail:** Around Morecambe Bay and the Duddon Estuary 7.5 km of the ECP will be aligned over saltmarsh. Of this, 4.9 km follows existing public rights of way (PRoW) or permissive routes.

Where the route follows existing PRoW and permissive routes, the level of existing access forms the baseline against which any additional impact will be assessed. The assessment will not consider there to be a loss in the extent of the SAC feature for those stretches which align on PRoW or permissive routes if the prediction is for no significant change in the level of use.

Where existing usage of a stretch of the ECP is already moderate to high and has been established for a number of years, it will be considered that the vegetation and soil structure along the stretch will likely have already been altered from a pristine condition by the passage of people over many years. The increase in walkers expected on the ECP will not create significantly more soil compaction, nor will it create significant changes in vegetation composition or structure compared to existing/baseline condition which is likely to be fairly resilient. Improving the surface of existing paths may have a beneficial effect, where it reduces the pressure on SAC features by constraining existing impacts. For example, the installation of a new bridge or stepping stones on existing rights of way in wetter areas will avoid the tendency for walkers to spread out and create multiple, braided paths.

See table 9a for more information on routes aligned on public rights of way and permissive routes on saltmarsh.

### Consideration of areas where ECP is not aligned on existing public rights of way or permissive routes

This leaves 1.6 km of the proposed ECP which follows existing walked routes which are not public rights of way or permissive routes, and a further 1 km following an entirely new route.

We have undertaken a detailed survey checking the suitability of paths to be used as part of the ECP. The ECP mainly follows existing paths on raised, firm ground and with vegetation that will withstand regular use appropriate to the context. In places the path crosses channels within the saltmarsh or short sections of wetter ground (wetter, due to more regular tidal inundation or drainage from adjacent land). At these locations intervention is necessary to improve the path surface.

Sleeper bridges will be installed where the route crosses wider channels. In places, existing paths have widened as people fan out to find a place to cross. The sleeper bridges will provide clear and easy crossing points, aiding restoration of the vegetation and helping to prevent further erosion. At a few places people have blocked channels with rubble to create a crossing point. This material will be removed from site when the sleeper bridges are installed, helping to restore natural functioning.

Where the route crosses patches of wetter ground, the saltmarsh is liable to become damaged by trampling. At these locations we propose to install flagstones to create stepping stones across the marsh. Gaps will be left between the stones so as not to hinder the flow of water during exceptionally high tides or flooding. This will reduce the area of saltmarsh subject to trampling at

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these locations and mitigate the risk that trampling might be increased once the route becomes part of the ECP.

See table 9b for more information on routes aligned on existing walked routes.

1 km of trail will be newly established at Hazelhurst Point and Warton. The route of the proposed trail at these locations has been carefully aligned to follow firm, raised ground at the back of the marsh where the vegetation is more resilient to trampling. At Warton, the path will be within a fenced corridor, which will prevent people from straying off the line of the path, and a grass surface will be encouraged to develop through occasional strimming and the regular passage of feet. More details of these new routes are given in table 9c.

### **Coastal margin**

Large areas of saltmarsh fall within the proposed Coastal margin. There would be no new coastal access rights over 92% of the saltmarsh in the project area, either because it is unsuitable for access (and new access rights would be excluded year-round under s25A), or because new access rights would be excluded to protect roosting, feeding and breeding birds.

There is spreading room (accessible parts of the Coastal margin) on 8% of the total saltmarsh area, at the following locations:

- The marshes between Kirkby-in-Furness and Dunnerholme in the Duddon Estuary.
- Upper saltmarsh at Scarth Bight in the Duddon Estuary
- Plumpton Marsh in the Leven Estuary
- Marsh between Greenodd Footbridge and Mearness Point
- Upper saltmarsh at Sandgate Marsh, near Cark
- Upper saltmarsh at Grange-over-Sands
- Marsh north of Quicksands Pool, near Jenny Brown's Point
- Marsh on the north bank of the River Keer
- Marsh between River Keer and Hest Bank (includes CROW s15 land)

Table 9d gives more details of the areas where saltmarsh is affected by spreading room.

## Scoping of likely impacts

Table 9a. Areas where the ECP is aligned on existing public rights of way and permissive paths on saltmarsh.

Location Cross reference to coastal access report	Length of trail aligned on PRoW / permissive routes on saltmarsh (km)	Proposed infrastructure on saltmarsh habitat	Area of habitat that will be covered by new infrastructure	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
				Predicted change in use of the site for recreation	
<b>Kirkby-in-Furness station to Lidgate level crossing.</b>  Coastal access report Silecroft to Silverdale SCS 2, map SCS 2c.	1.2	Replacement bridleway, bridge with new concrete abutments and surfacing (9m <sup>2</sup> ).  4 sections of flagstone surfacing (18m <sup>2</sup> ).	27m <sup>2</sup>	A bridleway runs along the saltmarsh seaward of the railway line. It has fairly high levels of use.	<u>Trampling:</u> The usage of the ECP will not be sufficiently different from existing path usage to alter vegetation or soil characteristics significantly from pre ECP condition.  <u>Habitat Loss:</u> There will be a loss of habitat under stone flags in areas where the vegetation is currently eroded and muddy. This will act to reduce the area affected by erosion as the eroded areas are currently wider than the proposed infrastructure. Consequently there will likely be an improvement in saltmarsh condition adjacent to the existing bridleway as walking is concentrated on the flags.
				The ECP is aligned on a bridleway on upper saltmarsh seaward of the railway line. Numbers of people using the trail will increase slightly as a result of the proposals. The vegetation is robust and the bridleway is not regularly inundated by the tide.	
<b>Lidgate level crossing to Dunnerholme.</b>  Coastal access report Silecroft to	1.2	2 sleeper bridges  Replacement 8m long bridge using existing abutments.	3m <sup>2</sup>	A public footpath runs along the saltmarsh seaward of the railway line. It has moderate levels of use.	<u>Trampling:</u> The usage of the ECP will not be sufficiently different from existing path usage to alter vegetation or soil characteristics significantly from pre ECP condition.
				The ECP is aligned on a public footpath on upper saltmarsh seaward of the railway line. Numbers of people	

Location Cross reference to coastal access report	Length of trail aligned on PRow / permissive routes on saltmarsh (km)	Proposed infrastructure on saltmarsh habitat	Area of habitat that will be covered by new infrastructure	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
				Predicted change in use of the site for recreation	
Silverdale SCS 2, maps SCS 2c and 2d.				using the trail will increase slightly as a result of the proposals. The vegetation is robust and the marsh is not regularly inundated by the tide.	<u>Habitat Loss:</u> Very small loss of habitat under sleeper bridges.
<b>Greenodd Footbridge to Mearness Point.</b>  Coastal access report Silecroft to Silverdale SCS 5, map SCS 5a.	0.8	Occasional flagstone surfacing on existing eroded areas  Sleeper bridge.	6m <sup>2</sup>	A permissive path runs along the saltmarsh. This path is very popular with local dog walkers.  The ECP is aligned on the permissive path. The existing permissive path will be promoted as a result of becoming the ECP, however there is limited car parking in the area, which will limit numbers. Therefore it is expected that there will be only a small increase in use of the path.	<u>Trampling:</u> The usage of the ECP will not be sufficiently different from existing path usage to alter vegetation or soil characteristics significantly from pre ECP condition.  <u>Habitat Loss:</u> Small loss of habitat under flag stones in areas where vegetation is currently eroded.
<b>River Keer to Wild Duck Hall.</b>  Coastal access report Silverdale to Cleveleys SDC 1, maps	1.7	Six 4m sleeper bridges near Marsh Farm. 25 sleeper bridges around Bay View Holiday Park (2 of 6m length, 8 of 5m length, 10 of 4m length and 5 of 3m).	40m <sup>2</sup>	The Lancashire Coastal Way is aligned on saltmarsh in this area. It has moderate levels of use.  The ECP is aligned mainly on the route of the Lancashire Coastal Way, on saltmarsh. A 300m section of new route has been aligned in fields, taking	<u>Trampling:</u> The usage of the ECP will not be sufficiently different from existing path usage to alter vegetation or soil characteristics significantly from pre ECP condition.  <u>Habitat Loss:</u> There will be a loss of habitat under sleeper bridges

<b>Location</b> Cross reference to coastal access report  SDC 1e and 1f.	<b>Length of trail aligned on PRow / permissive routes on saltmarsh (km)</b>	<b>Proposed infrastructure on saltmarsh habitat</b>	<b>Area of habitat that will be covered by new infrastructure</b>	<b>Existing recreational use in this area</b>	<b>Risk of impact of proposals on saltmarsh</b>
				<b>Predicted change in use of the site for recreation</b>	
				walkers off the existing route on saltmarsh. The Lancashire Coastal Way along this section of coast is sometimes difficult to walk due to surface flooding, particularly from Marsh Farm, and around Bay View Holiday Park to Wild Duck Hall. Sleeper bridges over the wet areas will make this a much easier path to walk on, and the proximity of car parking at Wild Duck Hall mean this section will see an increase in use.	
<b>Sub Total Habitat Loss.</b>			<b>76m<sup>2</sup></b>		<b>A total of 76m<sup>2</sup> of saltmarsh habitat will be lost under infrastructure on existing PRow and permissive routes.</b>
<b>Sub-total habitat degraded by trampling.</b>	<b>N/A</b>				<b>Stretches aligned on existing PRow and permissive paths will not cause a significant degradation in saltmarsh vegetation</b>

**Table 9b. Areas where the ECP is aligned on existing walked routes which are not public rights of way or permissive routes**

Location Cross reference to coastal access report	Length of trail aligned on existing walked routes (km)	Proposed infrastructure on saltmarsh habitat	Area of habitat that will be covered by new infrastructure	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
				Predicted change in use of the site for recreation	
<b>Kirkby Pool to Kirkby-in-Furness station.</b>  Coastal access report Silecroft to Silverdale, map SDC 2b.	0.6	Footbridge at Kirkby Pool.	6m <sup>2</sup>	An existing path runs seaward of the railway line. This path is popular with local dog walkers.	<u>Trampling:</u> For half of this length walkers will be confined to an existing regularly walked path (due to the presence of the river channel seaward of the path). For a 370m stretch walkers will follow an existing path on saltmarsh vegetation. The vegetation here is fairly robust and shows some resilience to trampling; however, long term usage of the ECP could cause a degradation of vegetation here. There could be some soil compaction and reduction in density of the saltmarsh vegetation. For the 370m stretch there will likely be a reduction in saltmarsh condition through a change in species composition. <u>Habitat Loss:</u> A small area of saltmarsh will be lost under the bridge abutments.
				The ECP is aligned on an existing path just seaward of the railway line. There will be an increase in use in this area, as a new bridge at Kirkby Pool will create a circular route from Kirkby-in-Furness. For 230m of this section the existing path is on spoil from the embankment or resilient saltmarsh vegetation. For 370m it is on short vegetation open to grazing and in some places it is wet. The vegetation in this area could be susceptible to trampling damage.	
<b>Lidgate level crossing to Soutergate level crossing.</b>  Coastal access	0.7	Stone aggregate surface at either end of existing bridge 24m x 2m. (currently	53m <sup>2</sup>	A path runs seaward of the railway line. It is aligned on a combination of saltmarsh vegetation, rocks from the embankment and modified habitat caused by spoil from the railway embankment.  The section currently has moderate levels of use. The former Cumbria Coastal Way was aligned on this route.	<u>Trampling:</u> There will be a small but not significant increase in trampling in this area which has been used by walkers for some time. The vegetation in the area is robust and in some areas already altered by trampling, meaning there is not likely to be a change in vegetation type of structure.



Location	Length of trail aligned on existing walked routes (km)	Proposed infrastructure on saltmarsh habitat	Area of habitat that will be covered by new infrastructure	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
				Predicted change in use of the site for recreation	
<p>Cross reference to coastal access report</p> <p>report Silecroft to Silverdale, map SCS 2c.</p>		<p>mud surface churned up by grazing animals using bridge)</p> <p>3 sleeper bridges.</p>		<p>The ECP is aligned on the existing path just seaward of the railway line. We expect use to increase slightly as a result of the proposals. The vegetation is robust and the marsh is not regularly inundated by the tide. The increased use is unlikely to lead to a significant increase in trampling and therefore the walked route is unlikely to become denuded of vegetation. The infrastructure, particularly the surfacing at either end of a bridge, will reduce the area that is currently affected by trampling (caused mainly by livestock), leading to a reduction in trampling pressure away from the path corridor.</p> <p>There is also 80m of stepping stones proposed on the rough stones and spoil next to the railway embankment, to create an easily walkable surface. This is not included in this assessment as they are not on saltmarsh habitat.</p>	<p><u>Habitat Loss:</u></p> <p>The proposed infrastructure will reduce the area that is currently affected by trampling potentially causing a beneficial effect on the saltmarsh.</p>
<p><b>Pigeon Cote Lane to Wyke Farm</b></p>	0.26	Flagstone surfacing.	10m <sup>2</sup>	<p>An existing path runs along the top of the saltmarsh between Pigeon Cote Lane and Wyke Farm. Use of this path is currently fairly low.</p>	<p>The area where the ECP will be aligned is not true saltmarsh, but is a grassland community that is associated with the upper transition boundary. The vegetation itself is not</p>

<b>Location</b> Cross reference to coastal access report  <b>(Humphrey Head).</b>  Coastal access report Silecroft to Silverdale, map SCS 5k.	<b>Length of trail aligned on existing walked routes (km)</b>	<b>Proposed infrastructure on saltmarsh habitat</b>	<b>Area of habitat that will be covered by new infrastructure</b>	<b>Existing recreational use in this area</b>	<b>Risk of impact of proposals on saltmarsh</b>  particularly ecologically significant. It is robust and will withstand an increase in trampling.
				<b>Predicted change in use of the site for recreation</b>	
				We expect use to increase as a result of the proposals. This could become a popular route, linking Humphrey Head to Kents Bank and Grange.	
<b>Sub Total area of new infrastructure</b>			<b>69m<sup>2</sup></b>		<b>A total of 69m<sup>2</sup> of saltmarsh habitat will be lost under infrastructure on existing walked routes.</b>
<b>Sub-total Habitat degraded by trampling.</b>					<b>A total of 0.074 ha may experience some degradation in saltmarsh vegetation structure due to an increase in numbers of people walking on a 370m stretch which is currently walked.</b>

**Table 9c. Areas where the ECP is aligned in areas with no existing path**

Location Cross reference to coastal access report	Length of new path created (km)	Proposed infrastructure on saltmarsh habitat	Area of habitat that will be covered by new infrastructure	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
				Predicted change in use of the site for recreation	
<b>Hazelhurst Point.</b> Coastal access report Silecroft to Silverdale, map SCS 5c. Trail section SCS-5-S026.	0.30	New kissing gate, with flagstones underneath.	2m <sup>2</sup>	There is little or no existing public access in this area.	<p><u>Trampling:</u> The ECP will only be aligned on marsh for a short distance, on dry robust vegetation which is more resilient to trampling. There is likely to be some change in the species composition along the walked line of the trail with some soil compaction and reduction in vegetation density, however the line of the path will be convenient and easy to follow on the ground and we do not expect trampling to increase in areas away from the path.</p> <p><u>Habitat Loss:</u> A very small amount of habitat will be lost - approximately 2m<sup>2</sup>.</p>
				<p>Access will increase as a result of our proposals, however, the remoteness of the area and limited parking will limit numbers. There is a caravan park at Old Park Wood, 1.7km away. Caravan residents would have to walk the 1.7km to Hazelhurst Point, as there is no parking between the caravan park and Hazelhurst Point. No circular routes will be created around Hazelhurst Point. There are other circular permissive routes from the caravan park that are currently used by residents.</p> <p>Hazelhurst Point is 3.5km from the nearest public parking to the south and 4.5 km from the nearest parking to the north. Use will be from day walkers and long distance walkers.</p>	
<b>Ings Point to Cotestones.</b> Coastal access report Silverdale to	0.7	Fencing at seaward edge of trail.	negligible	There is no path here at present, although the land is CROW open access. Use of this area is currently very low.	<p><u>Trampling:</u> The route of the proposed trail has been carefully aligned to follow firm, raised ground at the back of the marsh where</p>

Location	Length of new path created (km)	Proposed infrastructure on saltmarsh habitat	Area of habitat that will be covered by new infrastructure	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
				Predicted change in use of the site for recreation	
Cross reference to coastal access report  Cleveleys, map SDC 1d. Trail sections SDC-1-S056 to SDC-1-S057.				Access in this area will increase as a result of the proposals. The new route would open up the possibility of longer distance circular walks that would link Crag Road, Warton Crag, Warton village and Carnforth, where the main car parks and other facilities are located.	the vegetation is more resilient to trampling. The path is within a fenced corridor, which will prevent people from straying off the line of the path (in order to prevent disturbance to nearby breeding birds). A grass surface will be encouraged to develop through occasional mowing and the regular passage of feet. There is likely to be some change in the species composition along the walked line of the trail, however; this will cover a very small proportion of this area of marsh.
<b>Sub-total habitat loss.</b>			<b>2m<sup>2</sup></b>		<b>A total of 2m<sup>2</sup> of saltmarsh habitat will be lost under infrastructure in areas with no existing paths.</b>
<b>Sub-total habitat degraded by trampling.</b>	<b>1km</b>				<b>A total of 0.2 ha may experience some degradation in saltmarsh or saltmarsh transition vegetation structure due to an increase in numbers of people walking on a 1 km stretch where there are currently no paths. The route has been aligned to minimise the degradation in vegetation structure by aligning in dry areas with more robust vegetation.</b>

**Table 9d. Areas where saltmarsh becomes spreading room**

Location Cross reference to coastal access report	Details / Existing damage by walkers	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
		Predicted change in use of the site for recreation	
<p><b>Saltmarshes between Kirkby-in-Furness and Dunnerholme.</b></p> <p>Coastal access report Silecroft to Silverdale 2, map SCS 2b-2d</p>	<p>There is a thin strip of saltmarsh running along the coast in this part of the Duddon Estuary.</p>	<p>There are public rights of way and existing walked paths along the saltmarsh from Kirkby-in-Furness to Dunnerholme. Current use of the Coastal margin is fairly low, apart from the area around Kirkby, which is used by local dog walkers.</p>	<p>Low risk</p> <p>The access proposals will help to manage trampling pressure over the saltmarsh in this area by providing a well-defined path that is easy to follow and use.</p> <p>Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase.</p>
		<p>The ECP will be aligned along the existing paths on saltmarsh. We expect there will be some increase in use of the path as a result of its becoming a national trail. The ECP is aligned on the highest, driest parts of the marsh. Infrastructure will improve the route of the ECP and make it easier to cross creeks and walk on the rough spoil next to the railway embankment. It will be easier to walk on the ECP than on the surrounding saltmarsh.</p>	
<p><b>Upper saltmarsh at Scarth Bight.</b></p> <p>Coastal access report Silecroft to Silverdale 2, map SCS 2i and direction map SCS 2D. See also directions maps in Overview report.</p>	<p>The strip of saltmarsh nearest to the shore will become spreading room.</p>	<p>A vehicle track runs along the edge of the marsh. Local people park along the track and then walk dogs along the track. Use of the marsh by walkers is currently low.</p>	<p>Low risk</p> <p>Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase.</p>
		<p>The proposed ECP is aligned on the vehicle track. There is a 5m high earth bund between the track and the marsh, and a fence seaward of the track. These physical barriers mean that it is not easy for people or dogs to leave the track and walk on the salt marsh and we do not expect the current pattern of access will change as a result of the access proposals.</p>	
<p><b>Plumpton Marsh.</b></p> <p>Coastal access report Silecroft to Silverdale 4, map SCS 4g.</p>	<p>This small marsh in the Leven Estuary will become spreading room.</p>	<p>There is a public footpath which runs along a vehicle track landward of the marsh. Use of the marsh by walkers is currently very low.</p>	<p>Low risk</p> <p>Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase.</p>
		<p>The ECP will follow the existing public footpath. We expect there will be some increase in use of the path as a result of its becoming a national trail but the pattern of access on the saltmarsh is unlikely to change.</p>	

Location	Details / Existing damage by walkers	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
		Predicted change in use of the site for recreation	
<p>Cross reference to coastal access report</p>			
<p><b>Marsh between Greenodd Footbridge and Mearness Point.</b></p> <p>Coastal access report Silecroft to Silverdale 5, map SCS 5a.</p> <p>The saltmarsh is anyway resilient to occasional trampling.</p>	<p>This marsh in the Leven Estuary will become spreading room.</p>	<p>This marsh currently has high levels of access. There is currently a popular permissive path along the back of this saltmarsh, and circular routes on the marsh which are used by dog walkers.</p> <p>The ECP will follow the permissive path. Access along the ECP will increase slightly as a result of the proposals. There will be negligible change in access to the margin, which already has high levels of access.</p>	<p>Low risk</p> <p>Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase. The saltmarsh is anyway resilient to occasional trampling.</p>
<p><b>Upper saltmarsh at Sandgate Marsh.</b></p> <p>Coastal access report Silecroft to Silverdale 5, map SCS 5f and direction map SCS 5B. See also directions maps in Overview report.</p>	<p>A small area of saltmarsh near Cark will become spreading room.</p>	<p>There is a popular walked route along the embankment and the marsh is currently used by local dog walkers.</p> <p>The ECP will be aligned on the embankment. There will be a small increase in use of the line of the ECP. There could be a small increase in use of the margin.</p>	<p>Low risk</p> <p>There could be a small increase in level of use of the margin; however this is unlikely to lead to a significant increase in trampling</p>
<p><b>Upper saltmarsh at Grange-over-Sands.</b></p> <p>Coastal access report Silecroft to Silverdale 6, map SCS 6b and direction map SCS 6B. See also directions maps in Overview report.</p>	<p>A strip of saltmarsh adjacent to the promenade at Grange-over-Sands will become spreading room.</p>	<p>Grange promenade runs along the edge of the saltmarsh. The promenade is very busy, and small numbers of people walk from the promenade out onto the saltmarsh, following a small number of paths on the marsh.</p> <p>The ECP will follow the public footpath, and there will be negligible change in use of the route of the ECP or the margin in this area.</p>	<p>Low risk</p> <p>Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase.</p>
<p><b>Marsh north of Quicksands Pool.</b></p>	<p>There is a strip of saltmarsh near Brown's Houses, and a small</p>	<p>There is a popular public footpath on the narrow strip of saltmarsh north of Brown's Houses, and people walk all over the saltmarsh in this area. There is a popular path on an embankment at the edge of</p>	<p>Low risk</p>

Location	Details / Existing damage by walkers	Existing recreational use in this area	Risk of impact of proposals on saltmarsh
		Predicted change in use of the site for recreation	
Cross reference to coastal access report			
Coastal access report Silverdale to Cleveleys 1, map SDC 1b and direction map SDC 1C & 1D. See also directions maps in Overview report.	area of marsh near Quakers Stang, which will become spreading room.	<p>the saltmarsh near Quakers Stang, and access to the adjacent saltmarsh is currently low.</p> <p>The ECP will be aligned on the existing paths, and because this is a busy area, there will be negligible change in access to the line of the ECP and to the margin.</p>	Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase.
<p><b>Marsh on the north bank of the River Keer.</b></p> <p>Coastal access report Silverdale to Cleveleys 1, map SDC 1e.</p>	There is a thin strip of saltmarsh on the north bank of the River Keer which will become spreading room.	<p>This area is currently very busy with local dog walkers from Warton and Carnforth walking along the marsh.</p> <p>The ECP will be aligned inland of this marsh, and we will clearly waymark the ECP in this area to encourage ECP users to stick to the ECP and not venture onto this marsh. Local use will continue, but numbers of people using the marsh are not expected to increase as a result of the proposals.</p>	<p>Low risk</p> <p>Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase. The saltmarsh is anyway resilient to occasional trampling.</p>
<p><b>Marsh between River Keer and Hest Bank.</b></p> <p>Coastal access report Silverdale to Cleveleys 1, map SDC 1e-g.</p>	All of the saltmarsh in this area will become spreading room. A large part of it is already open access under S15 of the CRoW Act.	<p>The Lancashire Coastal Way is aligned on saltmarsh and embankments in this area. Sections of the marsh, particularly around Hest Bank, are very popular with local dog walkers, who follow circular paths around the marsh.</p> <p>The ECP is aligned on the route of the Lancashire Coastal Way. There will be an increase in use of the line of the trail between the River Keer and Wild Duck Hall, but use of the margin will not increase, as the marsh is not easy to walk on and there is a deep channel close to the ECP which prevents access further out onto the marsh. There will be a negligible change in use between Wild Duck Hall and Hest Bank. Local use in the margin will continue, there will be a negligible change in use as a result of the access proposals.</p>	<p>Low risk</p> <p>The access proposals will help to manage trampling pressure over the saltmarsh between the River Keer and Wild Duck Hall by providing a well-defined path that is easy to follow and use.</p> <p>Trampling of the salt marsh which falls within the Coastal margin is unlikely to increase. The saltmarsh is anyway resilient to occasional trampling.</p>

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## Conclusion

Existing paths have been used where possible to avoid increasing trampling of saltmarsh. Some increase in the use of these paths is expected as a result of their becoming part of a national trail. For the most part these paths are in good condition and able to withstand additional use.

Targeted improvements to existing paths are proposed, mainly bridges and stepping stones in waterlogged areas. These will help reduce damage to surrounding habitat beyond the established path corridor.

Two new sections of path are proposed (1 km length) and there will be an increase in trampling here. Alignment is over firm, dry ground where the saltmarsh is more resilient to trampling. There will be some localised compaction of substrate and changes in vegetation composition as a result but the structure and functioning of the saltmarsh will not be affected.

A total of 0.0073% of the saltmarsh area within the SAC may experience some degradation in saltmarsh vegetation structure or saltmarsh / grazing marsh / grassland transition vegetation structure due to alignment of the ECP on saltmarsh. The route has been aligned to minimise the degradation in vegetation structure by aligning in dry areas with more robust vegetation.

A total of 147m<sup>2</sup> of saltmarsh habitat within the SAC will be lost under infrastructure. This equates to 0.0004% of the saltmarsh area.

The scale of these impacts is small and widely distributed across the SAC. Therefore the effect on the ecological functions and distribution of habitats and species will be minor.

Saltmarsh is generally unsuitable for public access and no new coastal access rights will be created over the majority (92%) of salt marsh affected by the proposals. In other areas, route alignment, improvements to the signage and surfacing of paths will help manage trampling pressure over the saltmarsh.

In conclusion, taking into account all the careful route alignment, the establishment of the ECP around Morecambe Bay will not significantly alter the distribution or ecological functioning of the saltmarsh in Morecambe Bay SAC. Therefore there will not be an adverse effect on the integrity of the Atlantic salt meadow, Salicornia and other annuals colonising mud annex 1 features or the wetland plant assemblage. **See appendix 1** for detailed assessment of saltmarsh integrity attributes and **Section D.3.3 Table 16a. Assessment of adverse effect on site integrity alone** for more details.



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## **D3.2.3 Sand Dunes / Wetland invertebrate assemblage / Wetland plant assemblage**

### **Distribution within the project area**

The sand dune systems are at Haverigg, Hodbarrow, and between Dunnerholme and Sandscale Haws in the Duddon Estuary, and at Middleton Sands, near Heysham, in Morecambe Bay.

The habitat requirements for the Wetland invertebrate assemblage (Duddon Estuary Ramsar site feature) are areas of bare, consolidated sand and abundant flowering plants in bare sand and transitions to dune slack. The assemblage is found at Haverigg Dunes and Sandscale Haws.

The wetland plant assemblage is found at Haverigg Dunes, Sandscale Haws and Roanhead.

### **Sensitivities to changes in access**

Sand dunes and the associated assemblages can be sensitive to changes in access, although the impacts of access can vary according to the specific sand dune habitat.

The following can affect sand dune habitats:

- Trampling, leading to a loss of fragile vegetation
- Habitat loss due to path construction and other associated infrastructure,
- Changes in conservation grazing patterns.

#### Trampling

Coastal sand dunes have experienced the impacts of over-stabilisation and there is potential for trampling to be used as a means of re-invigorating surface movement of sand to restore some of the necessary dynamism of this habitat for some of the more diverse vegetation types. However, fore dune habitats (H2120 and H2110) are particularly sensitive to increased trampling. The pioneer plants in these habitats are very vulnerable to trampling damage with a loose substrate being all that anchors them [Ref. 7].

#### Habitat loss due to path construction and other associated infrastructure

Vegetation may be lost under path surfacing or infrastructure.

#### Changes in conservation grazing patterns

There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing. This could then affect the species composition of the grazed area.

### **General approach to alignment through sand dunes**

Where the path is aligned through dunes, we avoid aligning in fore dune habitats (H2120 and H2110), as these are more sensitive to trampling. We align through vegetated, stable dunes towards the back of the dune system where possible. Where we align through mobile dunes, infrastructure is kept to a minimum.

**Impact of the access proposal are discussed in the following tables.**

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**Table 10a. Impact of the access proposal on sand dunes at Haverigg**

<b>Haverigg: Coastal access report SCS 1, maps SCS 1a – 1d.</b>
Haverigg is an extensive dune system at the mouth of the Duddon Estuary.
<b>Existing recreational use</b>
<p>Large numbers of walkers use the beach and dunes between Haverigg car park and Haverigg Point.</p> <p>There are existing walked routes through the sand dunes between Haverigg Point and Kirksanton Haws. Access to the grazed enclosures in this area is discouraged (there is no legal right of access here currently) and, although this area is used by walkers, levels of use are much lower than in other parts of the dunes nearer to the car park and village.</p> <p>The Lakeland Outdoor Club have a campsite in the dunes. Public access is currently discouraged in this area, by means of a notice at the main entrance, in summer due to the campsite and in winter due to grazing.</p>
<b>Current environmental conditions</b>
Current levels of trampling are not thought to be detrimental to site condition. However, the presence of dogs off-lead in fenced enclosures is interfering with the conservation grazing regime.
<b>Access proposal (excluding mitigation)</b>
<p><b>England Coast Path</b></p> <p>The proposed route for the England Coast Path mainly follows existing walked routes through the sand dunes, with some sections of new path. It passes through grazed enclosures at Haverigg Bent Hills and Black Dub. Two short sections of new path are proposed at Kirksanton Haws.</p> <p><b>Infrastructure and footpath construction works proposed on sand dune habitat</b></p> <p>Waymarkers, signage, kissing gates, and sleeper bridges, 200m length of grass tussock cutting and 6m of path levelling are required.</p> <p><b>Coastal margin</b></p> <p>The dunes on both sides of the trail will be included in the Coastal margin (dunes are a default coastal land type, as described at 4.8.8 of the approved Coastal Access Scheme (Ref 1)).</p> <p><b>Directions to exclude / restrict access</b></p> <p>Coastal access rights will be excluded from Black Dub, which contains the Lakeland Outdoor Club campsite, under section 24 (land management) of CRoW, from Maundy Thursday to 30th September annually. See Silecroft to Silverdale map SCS 1A.</p>
<b>Predicted change in use of the site for recreation</b>
<p><b>England Coast Path</b></p> <p>There will be an increase in use of the path from Kirksanton Haws to the eastern exit of the Haverigg Bent Hills grazing enclosure as a result of promoting it as a national trail. This area currently does not have high levels of access.</p> <p>The proposed route of the ECP from the Haverigg Bent Hills grazing enclosure to Haverigg car park is already heavily used; we have therefore concluded that access will not increase in this specific area as a result of our proposals.</p> <p><b>Coastal margin</b></p> <p>Much of the proposed Coastal margin (apart from the grazed enclosures) is already a popular area for public recreation. Access patterns and numbers of people in these areas are therefore not expected to change as a result of our proposals.</p> <p>Use of the proposed trail through the grazed enclosures is expected to increase. There is a vehicle track through the middle of the Haverigg Bent Hills enclosure which could be used with a section of the proposed trail to create an informal circular walk.</p>

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<b>Haverigg: Coastal access report SCS 1, maps SCS 1a – 1d.</b>
In summer, an access exclusion is proposed to the Coastal margin in Black Dub on land management (campsite) grounds. During the winter, it is possible that there would be an increase in walkers using the proposed Coastal margin here.
<b>Likely effects without mitigation</b>
Large areas of sand dune would fall within the Coastal margin, both seaward and landward of the proposed trail. It is expected that there will be an increase in access on the trail and in the Coastal margin in areas of sand dunes within the grazed enclosures. An increase in the number of dogs off-lead in these areas could cause an increase in disturbance of grazing animals, leading to changed patterns of conservation grazing management, which could detrimentally affect the habitat.
<b>Mitigation incorporated into this proposal to manage risk</b>
Additional measures are required to manage access in the grazed enclosures so that grazing is not disrupted by dogs. The enclosures are grazed all year round to manage the dune grassland habitats.  It is proposed that access is restricted or excluded in the following areas under section 24 (land management):  i. Inside enclosures at Haverigg Bent Hills and Black Dub – dogs on leads on the line of the trail, all year round. See report Silecroft to Silverdale 1, map SCS 1B.  ii. Haverigg Bent Hills and Black Dub – No dogs in the Coastal margin, all year round. See report Silecroft to Silverdale 1, direction map SCS 1B.  Signs will be placed at the entrances to the enclosures to tell people about the restrictions / exclusions.
<b>Risk of impact of the proposals (including mitigation) on the habitat.</b>
<b>Low risk</b>  With the mitigation in place, the risk of dogs interfering with the conservation grazing regime is low. The risk of damage to the habitat through an increase in trampling is also low, as the path is not aligned through fragile fore-dune habitats.  The infrastructure required to establish the trail will result in the loss of 30m <sup>2</sup> of sand dune habitat. Grass tussocks will be cut on a 200m <sup>2</sup> section where a new path will be created. This will result in a change of vegetation on 200m <sup>2</sup> of habitat. The cumulative impact of footpath creation and the installation of infrastructure on sand dune habitats is considered in the conclusion at the end of this section.

**Table 10b. Impact of the access proposal on sand dunes at Hodbarrow Mains**

<b>Hodbarrow Mains: Coastal Access Report SCS1, map SCS 1g.</b>
There is a small area of sand dunes at Hodbarrow Mains, in the Duddon Estuary.
<b>Existing recreational use</b>
Hodbarrow Mains is a long, linear field running along the coast between Hodbarrow Lagoon and Salthouse Pool, with a small area of sand dunes seaward of the field. A number of public footpaths and walked routes run through the field. One public footpath in places passes out of the field and into embryonic dunes. These routes are regularly used. Local people also use the foreshore in this area.
<b>Existing physical damage caused by walkers / dogs</b>
The existing walked line around the coast, which does not quite follow the definitive route of the public right of way, takes people into embryonic dune habitat. Embryonic dune vegetation is particularly susceptible to trampling damage, and access in this area is leading to loss of vegetation.

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<b>Hodbarrow Mains: Coastal Access Report SCS1, map SCS 1g.</b>
<b>Access proposal (excluding mitigation)</b>
<p><b>England Coast Path</b></p> <p>The ECP is aligned on the public right of way and existing walked route landward of the sand dunes. There is a fence line between the path and the dunes. No infrastructure is required on sand dune habitat.</p> <p><b>Coastal margin</b></p> <p>The sand dunes will fall within the seaward Coastal margin.</p>
<b>Predicted change in use of the site for recreation</b>
<p><b>England Coast Path</b></p> <p>There will be negligible change in access. This section’s proximity to inhabited areas means it is already well used by local walkers and dog owners. No new circular routes or significant improvements to surfaces are being created on this section, so use by local people is not likely to increase significantly. This area of Cumbria is fairly isolated and it is not expected that the route will attract large numbers of walkers from further afield.</p> <p><b>Coastal margin</b></p> <p>People are already accessing the sand dunes that will fall within the Coastal margin. As the trail is aligned to avoid the sand dune habitat, and as there will be negligible change in access to the line of the trail, access to the Coastal margin is not expected to increase.</p>
<b>Likely effects without mitigation</b>
<p>The trail is aligned to encourage walkers to remain in the field, so as to prevent further disturbance to sensitive dune habitats in the margin. Therefore the proposals will not have a significant impact on the sand dunes, and may actually act to channel existing users onto the new route instead of using paths in the dunes.</p>
<b>Mitigation incorporated into this proposal to manage risk</b>
<p>No mitigation required.</p>
<b>Risk of impact of the proposals (including mitigation) on the habitat.</b>
<p><b>Low risk.</b> There will be negligible change in use of the trail and Coastal margin in this area; the trail has been aligned to avoid the sensitive habitats, and the existing fence will discourage walkers from accessing the Coastal margin. Therefore the proposals will not have a significant effect on the sand dune features and associated assemblages.</p>

**Table 10c. Impact of the access proposal on sand dunes between Dunnerholme and Roanhead Crag**

<b>Between Dunnerholme and Roanhead Crag: Coastal Access Report SCS2 maps SCS 2e – 2g.</b>
<p>Sand dunes run along the coast between Dunnerholme and Roanhead Crag in the Duddon Estuary.</p>
<b>Existing recreational use</b>
<p>This part of the coast has high levels of existing use by walkers.</p> <p>There are busy public rights of way and other walked routes through dunes from Dunnerholme to Roanhead. People exercise and walk their dogs throughout the dune system and slacks.</p>
<b>Existing physical damage caused by walkers / dogs</b>
<p>There is little existing damage to the sand dune habitats.</p>

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<b>Between Dunnerholme and Roanhead Crag: Coastal Access Report SCS2 maps SCS 2e – 2g.</b>
<b>Access proposal (excluding mitigation)</b>
<p><b>England Coast Path</b></p> <p>The proposed ECP is aligned through sand dunes on existing walked routes</p> <p><b>Infrastructure and footpath construction works proposed on sand dune habitat</b></p> <ul style="list-style-type: none"> <li>• waymarking</li> <li>• 14 long back-filled steps.</li> <li>• 6 sleeper bridges</li> <li>• 26m section of surface improvements (replace existing aggregate surface)</li> </ul> <p><b>Coastal margin</b></p> <p>Large areas of sand dune fall within the proposed Coastal margin.</p>
<b>Predicted change in use of the site for recreation</b>
<p><b>England Coast Path</b></p> <p>It is expected that there will be negligible change in use between Dunnerholme and Roanhead Crag, as the paths in this area are already very popular.</p> <p><b>Coastal margin</b></p> <p>The proposed Coastal margin from Dunnerholme to Roanhead Crag is already very popular for recreation. It is expected that there will be negligible increase in access as a result of the proposals.</p>
<b>Likely effects without mitigation</b>
<p>The proposed ECP follows existing walked lines through sand dunes between Dunnerholme and Roanhead. There will be negligible change in access in this area, and therefore negligible increase in trampling or changes to grazing patterns as a result of the proposals.</p> <p>Surface improvements are proposed in this area. A new aggregate surface will be installed on a 26m section of path. We believe that this will facilitate habitat restoration by removing any current trend to avoid excessively wet parts of the existing path. The width of the path will decrease once it has been surfaced; currently it is muddy and people are spreading out to get around the wet areas, causing further loss of vegetation.</p> <p>Up to 30m<sup>2</sup> of habitat could be lost under infrastructure, in areas where there are already paths. In most of the places where infrastructure will be installed people have placed scaffold planks, bits of wood, bricks, corrugated iron sheets etc. to allow access across the wet areas of path. Therefore, in reality, little habitat will be lost as a result of the infrastructure within our proposals.</p>
<b>Mitigation incorporated into this proposal to manage risk</b>
None required.
<b>Risk of impact of the proposals (including mitigation) on the habitat.</b>
<p><b>Low risk</b></p> <p>Trampling of the habitat and disturbance of the conservation grazing regimes are unlikely to increase as a result of the proposals.</p>

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### Between Dunnerholme and Roanhead Crag: Coastal Access Report SCS2 maps SCS 2e – 2g.

The proposed infrastructure will help to keep people on the line of the ECP. The cumulative impact of footpath creation and the installation of infrastructure on sand dune habitats is considered in the conclusion at the end of this section.

**Table 10d. Impact of the access proposal on sand dunes between Roanhead Crag and Scarth Bight (including Sandscale Haws NNR)**

### Between Roanhead Crag and Scarth Bight (including Sandscale Haws NNR): Coastal Access Report SCS2, maps 2g – 2i.

Sand dunes run along the coast between Roanhead Crag and Scarth Bight in the Duddon Estuary. This includes Sandscale Haws National Nature Reserve, which is an extensive dune system.

#### Existing recreational use

This part of the coast has high levels of existing use by walkers. Sandscale Haws NNR is currently managed by the National Trust as access land and is popular with locals, visitors and dog-walkers throughout the year.

#### Existing physical damage caused by walkers / dogs

There is little existing damage to the sand dune habitats.

#### Access proposal (excluding mitigation)

##### England Coast Path

The proposed ECP is aligned through sand dunes mainly on existing walked routes, with a 200m section of new path through the dunes at Sandscale Haws NNR.

##### Infrastructure and footpath construction works proposed on sand dune habitat:

- Waymarking and signage
- 4 kissing gates
- 70m section of scrub clearance.

##### Coastal margin

Large areas of sand dune fall within the proposed Coastal margin.

#### Predicted change in use of the site for recreation

##### England Coast Path

There will be an increase in access between Roanhead Crag and Sandscale Cottages as a result of connecting these areas with new sections of path (which are not aligned through sand dunes), and promoting the route as a national trail.

There will be an increase in access through Sandscale Haws NNR as a result of promoting the route as a national trail.

##### Coastal margin

The proposed Coastal margin from Roanhead Crag to Sandscale Cottages is already very popular for recreation. It is expected that there will be negligible increase in access as a result of the proposals.

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<b>Between Roanhead Crag and Scarth Bight (including Sandscale Haws NNR): Coastal Access Report SCS2, maps 2g – 2i.</b>
The dune system of Sandscale Haws is currently managed as open access land; it is not expected that there will be noticeable change in use as a result of our proposals as it is a difficult area in which to traverse away from established paths.
<b>Likely effects without mitigation</b>
The proposed ECP is aligned through sand dunes largely on existing walked routes, but also includes a 200m section of new route. It is expected that there will be an increase in use of the route, and negligible change in use of the Coastal margin. Any additional trampling along the line of the ECP is unlikely to cause significant changes to the vegetation. The additional use is unlikely to affect the conservation grazing of the habitat because most of the route is already walked and the livestock are tolerant of people. 8.5m <sup>2</sup> of habitat will be lost under infrastructure.
<b>Mitigation incorporated into this proposal to manage risk</b>
None required.
<b>Risk of impact of the proposals (including mitigation) on the habitat.</b>
<b>Low risk</b> Trampling of the habitat and disturbance of the conservation grazing regimes are unlikely to increase as a result of the proposals. The proposed infrastructure will help to keep people on the line of the ECP. The cumulative impact of footpath creation and the installation of infrastructure on sand dune habitats is considered in the conclusion at the end of this section.

**Table 10e. Impact of the access proposal on sand dunes at Middleton Sands**

<b>Middleton Sands: Coastal Access Report SDC3, map SDC 3a.</b>
There is a very small area of sand dunes near Middleton Towers, south of Heysham.
<b>Existing recreational use</b>
People use the foreshore in this area for recreation. Access in the dunes behind the beach is very low / none existent.
<b>Existing physical damage caused by walkers / dogs</b>
None. People are not currently using this area.
<b>Access proposal (excluding mitigation)</b>
<b>England Coast Path</b> The ECP is aligned at the seaward edge of fields, on a new path. The fields are landward of the sand dunes.
<b>Coastal margin</b> The area of sand dune will fall within the Coastal margin.
<b>Predicted change in use of the site for recreation</b>
<b>England Coast Path:</b>

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<b>Middleton Sands: Coastal Access Report SDC3, map SDC 3a.</b>
There will be a large increase in the use of the ECP in this area as it is a new path which will connect Heysham to Potts Corner.
<b>Coastal margin</b> It is not expected that access in the sand dunes which fall within the Coastal margin will change as a result of the proposals. This is because the sand dunes are not easily accessible from the new sections of trail, due to small cliffs and fences seaward of the path.
<b>Likely effects without mitigation</b>
It is expected that there will be negligible change in access to the sand dunes as a result of our proposals, and therefore the sand dunes will not be affected by the proposals.
<b>Mitigation incorporated into this proposal to manage risk</b>
No mitigation required.
<b>Risk of impact of the proposals (including mitigation) on the habitat.</b>
<b>Low risk</b> The route alignment is such that access to the sand dunes is unlikely to increase as a result of the proposals.

### Conclusion

Up to 68.5m<sup>2</sup> of sand dune habitat could be lost under infrastructure as a result of establishing the England Coast Path. Tussocks will be cut on a further 200m<sup>2</sup> of habitat, meaning that vegetation composition will alter in this area. The scale of these impacts is small and widely distributed across the sand dune systems within the SAC. Therefore the effect on the ecological functions and distribution of habitats and species will be minor.

In conclusion, taking into account the careful route alignment, the establishment of the ECP between Silecroft and Cleveleys will not significantly alter the distribution or ecological functioning of the sand dune features in Morecambe Bay SAC. Therefore there will not be an adverse effect on the integrity of the sand dune features or wetland plant assemblage. **See appendix 1** for detailed assessment of sand dune integrity attributes and **Section D.3.3 Table 16b. Assessment of adverse effect on site integrity alone** for more details.

### D3.2.4 Perennial vegetation of stony banks

#### Distribution within the SAC

This feature is found in several locations across Morecambe Bay SAC. Within the project area it is found at the following locations:

Within the Duddon estuary this feature occurs at Sandscale Haws and Haverigg.

Within Morecambe Bay it is found on Foulney Island, Rampside and the lower reaches of the river Lune around Glasson and Sunderland. As the river fans out into the wider Lune estuary it occurs on the seaward side of the Sunderland bank and the north of Cockerham sands. It also occurs north of Fleetwood.



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## **Sensitivities to changes in access**

This feature is sensitive to the physical effects of direct damage from trampling leading to changes in vegetation composition and direct loss of habitat.

## **General approach to alignment through perennial vegetation of stony banks**

The ECP is generally not aligned on shingle as it is difficult to walk on. This habitat usually falls within the Coastal margin by default, as a result of being to the seaward side of the proposed trail (see 4.8.8 of the approved Coastal Access Scheme [Ref. 1]).

## **Impact of the access proposal**

The following tables explain the potential impacts arising from the access proposals on this habitat.

**Table 11a. Areas where there is a low risk of impact on perennial vegetation of stony banks**

<b>Location</b> Cross reference to coastal access report	<b>Current habitat condition</b>	<b>Existing recreational use in this area</b>	<b>Risk of impact of proposals on perennial vegetation of stony banks</b>
		<b>Predicted change in use of the site for recreation</b>	
<b>Haverigg</b> See Coastal Access report Silecroft to Silverdale SCS 1, maps SCS 1b – 1d	Good shingle vegetation in this area. The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.	<p>Large numbers of walkers visit the foreshore in this area, including walking along the shingle ridges where this habitat occurs.</p> <p>The ECP is aligned on existing paths through dunes at this location, taking coast path walkers inland and away from areas of shingle.</p> <p><b>Trail:</b> We expect an increase in frequency of use of the proposed route as a result of its becoming a national trail.</p> <p><b>Coastal margin:</b> We expect that there will be negligible change in access to the foreshore as a result of the proposals. The site is already a well-known and popular place for recreational activities. Signposting the ECP will tend to encourage any new visitors to use the promoted route over other local paths.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be a negligible change in access on the foreshore as a result of the proposals. Signage will encourage people to follow the route of the ECP, taking them away from the areas of shingle. The SSSI unit is considered to be in favourable condition alongside established patterns of use for recreation.</p> <p>The foreshore is already recognised as a place for public recreation and such activities that take place will not be affected by its becoming part of the Coastal margin.</p>
<b>Sandscale Haws</b> See Coastal Access report Silecroft to Silverdale SCS 2, maps SCS 2g – 2h.	The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.	<p>Sandscale Haws NNR is currently managed by the National Trust as access land and the foreshore in this area is very popular with local people, visitors and dog-walkers throughout the year.</p> <p>The ECP is aligned inland through dunes, in this location, taking coast path walkers inland and away from areas of shingle.</p> <p><b>Trail:</b> We expect an increase in frequency of use of the proposed route as a result of its becoming a national trail.</p> <p><b>Coastal margin:</b> We expect that there will be negligible increase in access to the foreshore as a result of the proposals. The site is already a well-known and popular place for recreational activities.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be a negligible change in access on the foreshore as a result of the proposals. Signage will encourage people to follow the route of the ECP, taking them away from the areas of shingle. The SSSI unit is considered to be in favourable condition alongside</p>

Location	Current habitat condition	Existing recreational use in this area	Risk of impact of proposals on perennial vegetation of stony banks
		Predicted change in use of the site for recreation	
Cross reference to coastal access report		Signposting the ECP will tend to encourage any new visitors to use the promoted route over other local paths.	established patterns of use for recreation.  The foreshore is already recognised as a place for public recreation and such activities that take place will not be affected by its becoming part of the Coastal margin.
<b>Foulney Island</b> Area only visible on direction maps SCS 3B & 3D – 3F.	A species-rich example of coastal vegetated shingle. The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.	Cumbria Wildlife Trust, who manage Foulney Island, currently allow visitors on marked routes only during the summer, to protect the nesting birds.  The proposed ECP follows the coast at Rampside and does not go onto Foulney Island. This means that Foulney Island and the causeway fall into the Coastal margin.  However, access in the Coastal margin is not expected to increase as a result of the proposals, the access restrictions for breeding and roosting birds mean that no new access rights will be created in this area.	<b>Low risk</b>  Access restrictions are proposed to protect breeding and roosting birds. These restrictions mirror the current access management regime at the nature reserve. As a result of the restrictions there will be no new access rights created, and therefore no increase in trampling of vegetated shingle.
<b>Rampside</b> See Coastal Access report Silecroft to Silverdale 3 SCS 3, map SCS 3e.	The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.	Walkers use the pavements through Rampside. The areas of beach and shingle are popular with walkers (particularly local dog walkers).  The proposed ECP is mainly aligned on pavements at Rampside, with a small section aligned on the well-used section of foreshore west of Roa Island.  <b>Trail:</b> As this is already a busy area, we expect that there will be negligible change in access to the trail.	<b>Low risk</b>  It is expected that there will be a negligible change in access on the foreshore as a result of the proposals.  The SSSI unit is considered to be in favourable condition alongside established patterns of use for recreation.

Location	Current habitat condition	Existing recreational use in this area	Risk of impact of proposals on perennial vegetation of stony banks
		Predicted change in use of the site for recreation	
		Coastal margin: We expect that there will be negligible increase in access to the foreshore as a result of the proposals. The site is already a well-known and popular place for recreational activities.	
<p>Cross reference to coastal access report</p>			<p>The foreshore is already recognised as a place for public recreation and such activities that take place will not be affected by its becoming part of the Coastal margin.</p>
<p><b>Lower reaches of the river Lune, around Glasson and Sunderland Point</b></p> <p>See Coastal Access reports 3&amp;4 for Silverdale to Cleveleys, maps SDC 3c, 4e and 5a.</p>	<p>Areas of vegetated shingle around Sunderland Point, on the foreshore at Chapel Hill remain undisturbed and continue to support characteristic plant communities.</p> <p>The SSSI units are in favourable condition, suggesting that current access is not impacting this habitat.</p>	<p>There is some existing access to the foreshore around Sunderland Point and Glasson.</p> <p>At Sunderland Point the ECP is aligned in fields. There are no new access rights in the margin, access is excluded year round, to protect foraging birds.</p> <p>At Glasson the ECP is aligned on a cycle route and pavements. This is already a busy area and we expect that there will be negligible change in access on the trail and Coastal margin.</p>	<p><b>Low risk</b></p> <p>Access exclusions proposed at Sunderland Point to protect foraging areas for birds will also act to protect vegetated shingle habitats.</p> <p>It is expected that there will be negligible change in access to the foreshore at Glasson, and therefore there will not be a significant increase in trampling of the vegetated shingle.</p>
<p><b>North of Cockerham Sands</b></p> <p>See Coastal Access report Silverdale to Cleveleys SDC 5, maps SDC 5a to 5c.</p>	<p>Areas of vegetated shingle at Abbey Lighthouse remain undisturbed and continue to support characteristic plant communities.</p> <p>The SSSI units are in favourable condition, suggesting that current</p>	<p>An area of shingle runs along the coast north of Cockerham Sands, including Plover Scar. The Lancashire Coastal Way is aligned on a public footpath on a public road, embankment and field edges just landward of this area of shingle. The route is currently very popular. Some people walk on the foreshore in this area, especially to access the lighthouse at Plover Scar.</p> <p>The ECP is aligned on the Lancashire Coastal Way.</p> <p><b>Trail:</b> There will be negligible change in use of the route of the ECP, as it is so popular currently.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be a negligible change in access on the foreshore as a result of the proposals.</p> <p>The SSSI unit is considered to be in favourable condition alongside established patterns of use for recreation.</p>

<b>Location</b>	<b>Current habitat condition</b>	<b>Existing recreational use in this area</b>	<b>Risk of impact of proposals on perennial vegetation of stony banks</b>
Cross reference to coastal access report	access is not impacting this habitat.	<b>Predicted change in use of the site for recreation</b>	
		<b>Fleetwood</b> See Coastal Access report Silverdale to Cleveleys SDC 6, maps SDC 6d – 6f.	Sloping banks of shingle are found immediately in front of a series of embryo and mobile dunes. These no longer appear to be seriously affected by trampling. The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.
The ECP is aligned on the promenade. <b>Trail:</b> We expect that there will be negligible change in use of the route of the ECP, as it is currently very popular. <b>Coastal margin:</b> we expect that there will be negligible change in levels and patterns of use in the Coastal margin as a result of the proposals. The site is already a well-known and popular place for recreational activities.			

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**Table 11b. Areas where there is a risk of impact on perennial vegetation of stony banks and where mitigation is required to reduce the risk**

<b>Bazil Point:</b> Coastal Access report Silverdale to Cleveleys, map SDC 3e.
This feature is found on the shingle at Bazil Point.
<b>Existing recreational use</b>
There is currently a public footpath running along the coast at Bazil Point. This path has moderate use, mainly by local users.
<b>Current habitat condition</b>
The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.
<b>Access proposal (excluding mitigation)</b>
<b>England Coast Path</b> The ECP is aligned on the public footpath.
<b>Coastal margin</b> An area of vegetated shingle will fall within the Coastal margin.
<b>Predicted change in use of the site for recreation</b>
<b>England Coast Path</b> Access improvements on the route between Overton and Fiskes Quarry plus signposting the route as the ECP will lead to an increase in use in this area.
<b>Coastal margin</b> The ECP runs close to the area of vegetated shingle in the margin. The route is likely to become more popular as a result of improvements to the path on the ground and its becoming part of a national trail. The site is open and easy to walk over, leading to a possible increase in use of the proposed Coastal margin.
<b>Likely effects without mitigation</b>
People walking through the site may not be aware of the impact trampling can have on vegetated shingle. This is not obvious on site, and there is a risk trampling pressure on the shingle will increase. Shingle vegetation is easily damaged by trampling and slow to recover.
<b>Mitigation incorporated into this proposal to manage risk</b>
A total year round access exclusion is proposed under Section 26 (nature conservation) on the area of vegetated shingle habitat, plus signage to inform people of the exclusion. See report Silverdale to Cleveleys 3, map SDC 3H.
<b>Risk of impact of the proposals (including mitigation) on the habitat.</b>
<b>Low risk.</b> The route of the ECP will be clearly marked and visitors will be discouraged from leaving the path where shingle vegetation is growing.

In conclusion, taking into account the route alignment and mitigation, the establishment of the ECP between Silecroft and Cleveleys will not significantly alter the distribution or

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ecological functioning of the perennial vegetation of stony banks feature in Morecambe Bay SAC. Therefore there will not be an adverse effect on the integrity of the perennial vegetation feature. See **Section D.3.3 Table 16c. Assessment of adverse effect on site integrity alone** for more details.

### **D3.2.5 Reefs**

#### **Distribution within the SAC**

The Morecambe Bay SAC is mainly comprised of soft-sediment habitats, therefore exposed rocky boulder and cobble reefs, termed locally as 'skears', represent an important habitat contributing to the structure and complexity of the SAC. The rocky skears are often colonised by the blue mussel *Mytilus edulis* and associated organisms. There are also extensive biogenic reefs formed from dense populations of the polychaete *Sabellaria alveolata*, a U.K. Biodiversity Action Plan (BAP) priority habitat.

Morecambe Bay SAC reefs are patchily distributed, although notable extents occur in the outer part of the bay and to the east of Walney Island. Subtidal stony reefs occur to the south-east of Walney Island in the Walney Channel, north of the Lune Deep and in central areas of Morecambe Bay. The total extent and distribution of stony reef varies significantly with time as seabed sediments move, covering and uncovering areas of reef. The main intertidal mussel dominated skears can be found at the mouth of the Wyre, Heysham, to the south of Foulney Island and in the Duddon Estuary. Intertidal *Sabellaria alveolata* reefs are an important feature of the SAC but are highly variable in location, they can often be found at Foot Skear off Heysham but can be found in many other locations in the SAC such as the skears north west of Fleetwood.

#### **Sensitivities to changes in access**

Reefs supporting intertidal mussels and biogenic reef structures such as honeycomb worm reef are sensitive to trampling damage.

#### **General approach to alignment**

Because reefs falls within the intertidal and are difficult to walk on, the ECP is never aligned on them. However, this habitat falls within the Coastal margin as it is seaward of the ECP.

#### **Impact of the access proposal**

Table 12 explains the potential impacts arising from the access proposals on this habitat.

**Table 12. Areas where there is a low risk of impact on reefs**

Location Cross reference to the Coastal Access Report	Details / Current habitat condition	Existing recreational use in this area	Risk of impact of proposals on reefs
		Predicted change in use of the site for recreation	
<b>Duddon Estuary</b>  See Coastal Access report Silecroft to Silverdale 1, maps SCS 1e, 1f, 2f.	The main areas of reefs in Duddon Estuary are at Hodbarrow and around Askam Pier.  There are no known activities occurring on the site that are likely to affect the condition of these, other than natural processes and fluctuations. The SSSI units are in favourable condition, suggesting that current access is not impacting this habitat.	Both these areas have high levels of existing recreational use on the foreshore, however this high use does not extend across all of the area of reefs.	Low risk  It is expected that there will be negligible change in use of the Coastal margin as a result of the proposals, and therefore of the areas of margin supporting reef habitat.  The SSSI units are considered to be in favourable condition alongside established patterns of use for recreation.
		The ECP in these areas follows existing popular routes and is aligned on the land, away from areas of reef. Due to the existing popularity of this area, it is expected that there will be negligible change in use of the route of the ECP as a result of the proposals. The levels and patterns of use in the margin are not expected to change as a result of the proposals.	
<b>Foulney Island</b>  Area only visible on direction maps SCS 3B & 3D-3F in Silecroft to Silverdale report 3 and direction maps in Overview.	Foulney island is surrounded by intertidal biogenic reefs. The condition of this feature was not assessed during the SSSI favourable condition assessments.	Foulney Island is a nature reserve managed by Cumbria Wildlife Trust. It is attached to the mainland by a man-made causeway. Access is restricted to marked routes only in the summer to prevent disturbance to ground-nesting birds. Between 16th August and 31st March walkers with dogs on leads can access Foulney Island.	Low risk  There will be no new access rights in the areas of margin supporting intertidal biogenic reefs.
		The island falls within the Coastal margin. In order to protect breeding and roosting birds, access will be restricted. This includes a year round access exclusion on the rocky skears.	
<b>North of the Lune Deep and central</b>	Subtidal stony reefs occur to the north of the Lune Deep and in central areas of Morecambe Bay.	These areas are far out in Morecambe Bay and current levels of recreational access is very low, possibly non-existent.	Low risk



<b>Location</b> Cross reference to the Coastal Access Report <b>areas of Morecambe Bay</b> Visible only on direction maps in Overview reports and in direction maps in Silecroft to Silverdale reports and Silverdale to Cleveleys reports.	<b>Details / Current habitat condition</b>  The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.	<b>Existing recreational use in this area</b>	<b>Risk of impact of proposals on reefs</b>  There will be no new access rights created in most of these areas. In those areas which become spreading room it is expected that there will be negligible change in use as a result of the proposals as they are so far from shore. Therefore there will not be an increase in trampling of the reef habitat.
		<b>Predicted change in use of the site for recreation</b>	
		Some of these areas will not be covered by Coastal margin as they are outside the project area, most will have access excluded as they are unsuitable for access, and any that do fall within spreading room are so far from the shore that there will be no change in access as a result of the proposals.	
<b>Heysham / Morecambe</b> See Coastal Access report Silverdale to Cleveleys, maps 2d – 2h.	Intertidal <i>Sabellaria alveolata</i> reefs are found on the skears around Heysham and Morecambe. The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.	Parts of the intertidal in this area are very popular. There are bathing beaches with firm sand which are well used, and areas of mud and rock which are less popular for recreation.	Low risk It is expected that there will be negligible change in use of the Coastal margin as a result of the proposals, and therefore of the areas of margin supporting reef habitat. Therefore there will not be a significant increase in trampling of the reef habitat. The SSSI unit is considered to be in favourable condition alongside established patterns of use for recreation.
<b>Crook Farm to Bank</b>	An area of rocky reefs along the coast just south of Glasson Dock.	This is a popular section of the Lancashire Coastal Way, which follows a public footpath along the seaward	Low risk

Location	Details / Current habitat condition	Existing recreational use in this area	Risk of impact of proposals on reefs
		Predicted change in use of the site for recreation	
<p>Cross reference to the Coastal Access Report</p>			
<p><b>Houses, including Plover Scar.</b></p> <p>See Coastal Access report Silverdale to Cleveleys, maps 5a to 5c.</p>	<p>Between Bank House Farm and Plover Scar are several areas of cobble scars and mussel beds on the upper shore. A Natural England review of activities has not identified any pressure or evidence which would indicate a change in condition. The SSSI units are in favourable condition, suggesting that current access is not impacting this habitat.</p>	<p>edge of fields and on an embankment. Some people do walk over the rocky skears, especially to access the lighthouse at Plover Scar.</p> <p>Access to the rocky skears will be excluded year round under s26 to protect roosting, feeding and breeding birds. Therefore there will not be a change in access on the rocky skears as a result of the proposals.</p>	<p>There will be no new access rights created on the rocky skears.</p>
<p><b>Fleetwood</b></p> <p>See Coastal Access report Silverdale to Cleveleys, map 6d to 6f.</p>	<p>Intertidal <i>Sabellaria alveolata</i> reefs are found on the skears north west of Fleetwood.</p> <p>The SSSI unit is in favourable condition, suggesting that current access is not impacting this habitat.</p>	<p>The beaches around Fleetwood are very popular, use declines with distance from the shore.</p> <p>The ECP is aligned on the promenade. There will be negligible change in use of the route of the ECP, as it is already well used, and negligible change in levels and patterns of use in the Coastal margin as a result of the proposals.</p>	<p>Low risk</p> <p>It is expected that there will be negligible change in use of the Coastal margin as a result of the proposals, and therefore of the areas of margin supporting reef habitat.</p> <p>The SSSI unit is considered to be in favourable condition alongside established patterns of use for recreation.</p>

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In conclusion, taking into account the route alignment and mitigation, the establishment of the ECP between Silecroft and Cleveleys will not significantly alter the distribution or ecological functioning of the reefs feature in Morecambe Bay SAC. Therefore there will not be an adverse effect on the integrity of the reefs feature. See **Section D.3.3 Table 16d. Assessment of adverse effect on site integrity alone** for more details.

### **D3.2.6 Great crested newt**

#### **Distribution within the SAC**

Great crested newts are present at Sandscale Haws NNR in the Duddon Estuary.

#### **Sensitivities to changes in access**

##### Recreational activities in or close to pools used by breeding great crested newts

Dogs running around the shallow edges of ponds where great crested newts are present could cause injury to the adult newts or newt larvae.

##### Path construction and other associated infrastructure

Installation of infrastructure near to the ponds could result in newts being injured or killed. Leaving holes exposed could lead to newts being trapped, and newts could be squashed while sheltering in stacked materials. These risks can be minimized by following the correct procedures while carrying out infrastructure installation.

##### Footpath maintenance

During their terrestrial phase newts could be disturbed, injured or killed during vegetation clearance and other on-going maintenance work.

##### Changes in conservation grazing patterns

There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing. This could then affect the species composition of the grazed area.

##### Spread of disease by people and dogs

There is the potential for chytrid fungus and other diseases to be spread by people and dogs.

##### Loss of supporting habitat due to construction of a path

If significant amounts of infrastructure or surfacing is required to create the ECP, this could lead to a loss of supporting habitat for great crested newts.

#### **Impact of the access proposal**

The following table explains the potential impact of the access proposals on great crested newts at Sandscale Haws.

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**Table 13: Impact of the access proposal on great crested newts at Sandscale Haws**

<p><b>Sandscale Haws:</b> Coastal Access report Silecroft to Silverdale SCS 2, maps SCS 2g – 2h.</p>
<p>Great crested newts are present throughout the NNR and breed in the dune slacks and ponds right across the site, including in the fields known as Wet Meadow.</p>
<p><b>Existing recreational use</b></p>
<p>Sandscale Haws NNR is currently managed by the National Trust as access land and is popular with locals, visitors and dog-walkers throughout the year.</p>
<p><b>Existing impacts of recreation on great crested newts</b></p>
<p>Some of the ponds in which great crested newts breed are in places used by people with dogs. Dogs do enter the pools but it is not known whether this is affecting newt population. The National Trust is planning to install signage asking people to keep dogs out of the ponds.</p>
<p><b>Access proposal (excluding mitigation)</b></p>
<p><b>England Coast Path</b></p> <p>The proposed ECP is aligned through sand dunes on an existing walked route which is close to two areas used by breeding great crested newts – Wet Meadow and Red Gutter.</p> <p><b>Infrastructure proposed on sand dune habitat to improve the existing walked route</b></p> <ul style="list-style-type: none"> <li>• Waymarking and signage, 3 kissing gates with stone flags beneath, 70m section of scrub clearance.</li> </ul> <p><b>Coastal margin</b></p> <p>Large areas of sand dune fall within the Coastal margin.</p>
<p><b>Predicted change in use of the site for recreation</b></p>
<p><b>England Coast Path</b></p> <p>There will be an increase in access on the route of the ECP.</p> <p><b>Coastal margin</b></p> <p>Sandscale Haws will become spreading room as a result of the proposals. The dune system of Sandscale Haws is currently managed as open access, with seasonal signage requesting that visitors keep dogs on a short lead or under control across the entire site (except for the beach) due to the presence of livestock and ground-nesting birds. It is expected that there will be negligible change in access to the Coastal margin as a result of the proposals as it is a difficult area to traverse.</p>
<p><b>Likely effects without mitigation</b></p>
<p><b>Recreational activities in or close to pools used by breeding great crested newts</b></p> <p>The ECP is aligned close to two areas used by breeding great crested newts – Wet Meadow and Red Gutter. An increase in numbers of dogs accessing breeding ponds in these areas could lead to an increase in injury, disturbance or death of newts.</p> <p><b>Path construction and other associated infrastructure / Footpath maintenance</b></p> <p>Minimal infrastructure and establishment work is required to establish the route of the ECP. To prevent injury, disturbance or death of great crested newts during establishment and maintenance works, reasonable avoidance measures will be used. Cumbria County</p>

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**Sandscale Haws:** Coastal Access report Silecroft to Silverdale SCS 2, maps SCS 2g – 2h.

Council will submit method statements outlining how they will carry out the work, getting advice from a suitably qualified ecologist where appropriate.

### **Changes in conservation grazing patterns**

The increase in access on the line of ECP is unlikely to affect the conservation grazing of the habitat because the area is already walked and the livestock are tolerant of people.

### **Spread of disease by people and dogs**

Amphibians at Sandscale Haws are known to test positive for chytrid fungus *Batrachochytrium dendrobatidis*. Elsewhere in the world, the chytrid fungus has caused huge declines in amphibian populations. However; these losses have not been seen in the UK, where the risks appear to be low.

Studies in the UK have found that spread of the fungus is most likely linked to where people have deliberately introduced non-native alpine newts into pools with native amphibians, or transferred infected animals between pools. Bio-security measures have been introduced for people that work with native amphibians e.g. capturing animals to collect biological data or involved in translocation schemes.

Beyond these specific activities, the risks of spreading the chytrid fungus in UK appear to be low. Dogs entering pools are not thought any more likely to transfer the fungus than other possible agents, such as wild birds. Therefore, no special measures are currently considered necessary in connection with general recreational activities.

### **Loss of supporting habitat due to construction of a path**

As minimal infrastructure and establishment work is required to establish the path through Sandscale Haws (scrub clearance and 3 kissing gates), the impact of establishing the path on the area of supporting habitat for great crested newts is negligible.

### **Mitigation incorporated into this proposal to manage risk**

Signage will be placed along the route of the ECP, requesting that visitors keep dogs on a short lead or under control, and to not allow dogs to enter ponds. We will coordinate content and design of these signs with the National Trust, who are currently developing messaging about this issue across the site (including at the car park and visitor centre).

### **Risk of impact of the proposals (including mitigation) on great crested newts.**

#### **Low risk**

It is expected that there will be negligible change in access within the Coastal margin as a result of the proposals. Along the route of the ECP there will be an increase in access, and signage will be used to encourage dog owners to keep dogs out of the breeding ponds.

As minimal infrastructure and establishment work is required to establish the path through Sandscale Haws (scrub clearance and 3 kissing gates), the impact of establishing the path on the area of supporting habitat for great crested newts is negligible.

## **Conclusion**

In conclusion, taking into account the route alignment and mitigation, the establishment of the ECP between Silecroft and Cleveleys will not significantly alter the population abundance

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or supporting habitat of great crested newts in Morecambe Bay SAC. Therefore there will not be an adverse effect on the population of the great crested newts. **See Section D.3.3 Table 16f. Assessment of adverse effect on site integrity alone for more details.**

## D3.2.7 Natterjack Toads

### Distribution within the Ramsar site

Natterjack toads are found in sand dunes, saltmarsh and grazing marsh around the Duddon Estuary.

### Sensitivities to changes in access

#### Recreational activities in or close to pools used by breeding natterjack toads

Adult natterjack toads are nocturnal and spend the day within burrows (often >20cm deep), so impacts from human disturbance, even from trampling by humans or grazing animals, is likely to be minimal. However they are vulnerable in the breeding season. At this time they prefer temporary ponds and the shallow water meaning their spawn is vulnerable, especially to dogs running through the ponds. Dogs entering the pools disturb the silt which then rests on the spawn strings leading to the development of a fungus *Saprolegnia* spp. People walking near breeding ponds can tread on emerging toadlets in early summer (toadlets are active during the daytime).

#### Path construction and other associated infrastructure

Infrastructure installation may have a detrimental effect on the natterjack population through disturbance or accidental killing. Leaving holes exposed could lead to toads being trapped, and toads could be squashed while sheltering in stacked materials.

#### Footpath maintenance

Natterjack toads could be disturbed, injured or killed during vegetation clearance and other on-going maintenance work.

#### Changes in conservation grazing patterns

There is the potential for disturbance of grazing animals by dogs, leading to changes in the pattern of conservation grazing. This could then affect the species composition of the grazed area.

#### Spread of disease by people and dogs

There is the potential for chytrid fungus and other diseases to be spread by people and dogs.

#### Loss of supporting habitat due to construction of a path

If significant amounts of infrastructure or surfacing is required to create the ECP, this could lead to a loss of supporting habitat for natterjacks.

### General approach to alignment

The ECP is not normally aligned at the edge of Natterjack breeding ponds, in order to prevent people from walking close to breeding ponds when toadlets are emerging.

The ECP route stays on drier ground and avoids places where seasonal pools might form.

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## Impact of the access proposal on natterjack toads

### Recreational activities in or close to pools used by breeding toads

See tables 14a – c for a discussion of the impacts of recreational activities close to pools at sites where natterjacks breed.

### Path construction and other associated infrastructure & footpath maintenance

To prevent injury, disturbance or death of natterjack toads during establishment and maintenance works, reasonable avoidance measures will be used. Cumbria County Council will submit method statements as part of the SSSI consent process during establishment and maintenance works, outlining how they will carry out the work, getting advice from a suitably qualified ecologist where appropriate.

### Changes in conservation grazing patterns

See tables 14a - c for a discussion of the impacts of changes in conservation grazing patterns at sites where natterjacks breed.

### Spread of disease by people and dogs

Some of the natterjack populations in Cumbria are known to have the chytrid fungus *Batrachochytrium dendrobatidis*. Elsewhere in the world, the chytrid fungus has caused huge declines in amphibian populations. However; these losses have not been seen in the UK, where the risks appear to be low.

Studies in the UK have found that spread of the fungus is most likely linked to where people have deliberately introduced non-native alpine newts into pools with native amphibians, or transferred infected animals between pools. Bio security measures have been introduced for people that work with native amphibians e.g. capturing animals to collect biological data or involved in translocation schemes.

Beyond these specific activities, the risks of spreading the chytrid fungus in UK appear to be low. Dogs entering pools are not thought any more likely to transfer the fungus than other possible agents, such as wild birds. In addition, the fungus is known to be present in some wild populations of natterjack toad without seeming to have caused populations to decline. Therefore, no special measures are currently considered necessary in connection with general recreational activities.

### Loss of supporting habitat due to construction of a path

See tables 14a - c for a discussion of the impacts of loss of supporting habitat at sites where natterjacks breed.

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**Table 14a. Impact of an increase in people and dogs near breeding ponds on natterjack toads at Haverigg**

<b>Haverigg:</b> Coastal Access report Silecroft to Silverdale SCS 1, maps 1a – 1d.
Haverigg is an extensive dune system at the mouth of the Duddon Estuary, which supports a population of natterjack toads.
<b>Existing recreational use</b>
Large numbers of walkers use the beach and dunes between Haverigg car park and Haverigg Point.  There are existing walked routes through the sand dunes between Haverigg Point and Kirksanton Haws. Although this area is used by walkers, levels of use are much lower than in other parts of the dunes nearer to the car park and village. There are grazed enclosures within the dunes between Haverigg Point and Kirksanton Haws. Access to the grazed enclosures is discouraged through the use of signage, although local people do currently walk in the enclosures. There is no legal right of access within the grazed enclosures currently.
<b>Existing impacts of recreation on natterjack toads</b>
Natterjack toads occur throughout the site. Access routes are not currently thought to be having a negative effect on the suitability of breeding pools, as natterjack toads are breeding successfully in ponds very close to busy paths. Grazing is important to improve the quality of the habitat for natterjacks.
<b>Access proposal (excluding additional mitigation)</b>
<b>England Coast Path</b> The proposed route for the England Coast Path mainly follows existing walked routes through the sand dunes, with some sections of new path. It passes through grazed enclosures at Haverigg Bent Hills and Black Dub. Two short sections of new path are proposed at Kirksanton Haws.  <b>Infrastructure and footpath construction works proposed on sand dune habitat</b> Waymarkers, signage, kissing gates, sleeper bridges, 200m length of grass tussock cutting and 6m of path levelling are required.  <b>Coastal margin</b> The dunes on both sides of the trail will be included in the Coastal margin (dunes are a default coastal land type, as described at 4.8.8 of the approved Coastal Access Scheme (Ref 1)).  <b>Directions to exclude / restrict access</b> Coastal access rights will be excluded from Black Dub, which contains the Lakeland Outdoor Club campsite, under section 24 (land management) of CRoW, from Maundy Thursday to 30th September annually. See Silecroft to Silverdale report 1, map SCS 1A.
<b>Predicted change in use of the site for recreation</b>
<b>England Coast Path</b> There will be an increase in use of the path from Kirksanton Haws to the eastern exit of the Haverigg Bent Hills grazing enclosure as a result of promoting it as a national trail. This area currently does not have high levels of access.



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<p><b>Haverigg:</b> Coastal Access report Silecroft to Silverdale SCS 1, maps 1a – 1d.</p>
<p>The proposed route of the ECP from the Haverigg Bent Hills grazing enclosure to Haverigg car park is already heavily used; we have therefore concluded that access will not increase in this specific area as a result of our proposals.</p>
<p><b>Coastal margin</b></p> <p>Much of the proposed Coastal margin (apart from the grazed enclosures) is already a well-known area for public recreation. Access patterns and numbers of people in these areas are therefore not expected to change as a result of our proposals.</p> <p>Use of the proposed trail through the grazed enclosures is expected to increase. There is a vehicle track through the middle of the Haverigg Bent Hills enclosure which could be used with a section of the proposed trail to create an informal circular walk.</p> <p>In summer, an access exclusion is proposed to the Coastal margin in Black Dub on land management (campsite) grounds. During the winter, it is possible that there would be an increase in walkers using the proposed Coastal margin here.</p>
<p><b>Likely effects without mitigation</b></p>
<p>Large areas of sand dune would fall within the Coastal margin, both seaward and landward of the proposed trail. It is expected that there will be an increase in access on the trail and in the Coastal margin in areas of sand dunes within the grazed enclosures. An increase in the number of dogs off-lead in these areas could cause an increase in disturbance of grazing animals, leading to changed patterns of conservation grazing management, which could detrimentally affect the habitat.</p> <p>The proposed ECP goes very close to natterjack breeding ponds between Haverigg car park and Haverigg Bent Hills, in a location where it is aligned on an existing walked route which already has high levels of access. It is not expected that access will increase significantly in this area as a result of the proposals. As natterjack toads are already breeding successfully in these ponds, this is not expected to change as a result of the proposals.</p> <p>At Kirksanton Haws, a new section of path will be created to direct walkers away from an eroding dune edge. The new section of path is near to natterjack breeding ponds.</p>
<p><b>Mitigation incorporated into this proposal to manage risk</b></p>
<p>Additional measures are required to manage access in the grazed enclosures so that grazing is not disrupted by dogs. The enclosures are grazed all year round to manage the dune grassland habitats.</p> <p>It is proposed that access is restricted or excluded in the following areas under section 24 (land management):</p> <ul style="list-style-type: none"> <li>i. Inside enclosures at Haverigg Bent Hills and Black Dub – dogs on leads on the line of the trail, all year round. See report Silecroft to Silverdale 1, map SCS 1B.</li> <li>ii. Haverigg Bent Hills and Black Dub – No dogs in the Coastal margin, all year round. See report Silecroft to Silverdale 1, map SCS 1CB.</li> </ul> <p>Signs will be placed at the entrances to the enclosures to tell people about the restrictions / exclusions.</p> <p>Signs will be installed at the start and finish of the new section of path proposed at Kirkstanton Haws. The signs will raise awareness with visitors about the importance of pools near to the path for natterjack toads and how they can help to conserve the toads by staying on the path and not letting dogs enter the pools when toads may be present.</p>

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<b>Haverigg:</b> Coastal Access report Silecroft to Silverdale SCS 1, maps 1a – 1d.
<b>Risk of impact of the proposals (including mitigation) on natterjack toads.</b>
<p><b>Low risk</b></p> <p><b>Recreational activities in or close to pools used by breeding toads</b></p> <p>The proposals will help to manage established and future public access over the dunes at Haverigg by encouraging visitors to use the trail provided, clarifying arrangements for access within enclosed areas and raising awareness about how visitors can help protect sensitive wildlife.</p> <p>The proposals will not increase the numbers of dogs in most of the areas where natterjacks are breeding, except at Kirksanton Haws, where signage will be used to reduce the risk of dogs entering breeding ponds. Therefore there is unlikely to be an increase in injury or death of natterjack tadpoles caused by dogs entering breeding ponds, as a result of our proposals.</p> <p><b>Changes in conservation grazing patterns</b></p> <p>With the mitigation in place, the risk of dogs interfering with the conservation grazing regime is low.</p> <p><b>Loss of supporting habitat</b></p> <p>The infrastructure required to establish the trail will result in the loss of 30m<sup>2</sup> of sand dune habitat. Grass tussocks will be cut on a 200m<sup>2</sup> section where a new path will be created. This will result in a change of vegetation on 200m<sup>2</sup> of habitat. The risk of damage to the habitat through an increase in trampling is low, as the path is not aligned through fragile fore-dune habitats. The scale of these impacts is small and widely distributed across the sand dune system, and will not cause a significant loss of supporting habitat.</p>

**Table 14b. Impact of an increase in people and dogs near breeding ponds on natterjack toads between Kirkby Pool and Roanhead**

<b>Kirkby Pool to Roanhead:</b> Coastal Access report Silecroft to Silverdale SCS 2, maps 2b – 2g.
Natterjack toads may be present throughout this subsection. There are breeding ponds at Kirkby-in-Furness, Soutergate, Dunnerholme and in Askam-in-Furness village, and the saltmarsh and dune habitats are managed for natterjack toads.
<b>Existing recreational use</b>
<p>A combination of public rights of way and walked routes run on saltmarshes seaward of the railway line between Kirkby Pool and Dunnerholme. These routes have high use near Kirkby-in-Furness with moderate use between Kirkby and Dunnerholme.</p> <p>Between Dunnerholme and Roanhead there are high levels of existing use by walkers on public rights of way and other walked routes through dunes.</p> <p>Current use of the foreshore is fairly low between Kirkby Pool and Dunnerholme, apart from the area around Kirkby-in-Furness, which is used by local dog walkers. Use of the margin is much higher between Dunnerholme and Roanhead.</p>

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<b>Kirkby Pool to Roanhead:</b> Coastal Access report Silecroft to Silverdale SCS 2, maps 2b – 2g.
<b>Existing impacts of recreation on natterjack toads</b>
<p>Between Kirkby-in-Furness and Askam-in-Furness the natterjack toad population has continued to breed successfully with 20-30 spawn strings over recent years. There are a good number of pools and ditches available so toadlets are successfully produced in most years from at least some of them. Vegetation growth needs to be cleared from some pools to maintain them in a suitable condition.</p> <p>The fixed dune area around Askam-in-Furness is well used by members of the public, the footpaths providing areas of bare sand for natterjack toads.</p> <p>There is no evidence that the presence of recreation in these areas is having a detrimental impact on natterjack toad populations.</p>
<b>Access proposal (excluding mitigation)</b>
<p><b>England Coast Path</b></p> <p>The ECP is aligned on the public rights of ways and existing walked routes through dunes between Kirkby-in-Furness and Roanhead.</p> <p><b>Coastal margin</b></p> <p>Areas of saltmarsh, sand dune and flats fall within the Coastal margin.</p>
<b>Predicted change in use of the site for recreation</b>
<p><b>England Coast Path</b></p> <p>In between Kirkby-in-Furness and Dunnerholme, it is expected that there will be an increase in use of the trail.</p> <p>It is expected that there will be negligible change in use of the trail and margin in the sand dunes between Dunnerholme and Roanhead as a result of the proposals</p> <p><b>Coastal margin</b></p> <p>In between Kirkby and Dunnerholme, it is not expected that there will be an increase in use of the margin by walkers, due to the inaccessible nature of the margin. However there could potentially be an increase in dogs off-lead in the margin.</p> <p>It is expected that there will be negligible change in use of margin in the sand dunes between Dunnerholme and Roanhead as a result of the proposals, as these areas are currently popular.</p>
<b>Likely effects without mitigation</b>
<p>In between Kirkby-in-Furness and Dunnerholme, it is expected that there will be an increase in use of the trail, and potentially an increase in dogs off lead in the margin. Although the trail is not aligned next to any obvious breeding pools, this could increase the risk of dogs entering natterjack breeding ponds further away from the line of the trail.</p>
<b>Mitigation incorporated into this proposal to manage risk</b>
<p>Between Kirkby-in-Furness and Dunnerholme signage will be installed at access points to the trail, asking walkers to keep dogs under control, plus explanatory information about natterjack toads.</p>
<b>Risk of impact of the proposals (including mitigation) on natterjack toads.</b>
<b>Low risk</b>
<b>Recreational activities in or close to pools used by breeding toads</b>

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<b>Kirkby Pool to Roanhead:</b> Coastal Access report Silecroft to Silverdale SCS 2, maps 2b – 2g.
The proposals will help to manage established and future public access by encouraging visitors to use the trail provided and raising awareness about how visitors can help protect sensitive wildlife.
The proposals will not increase the numbers of dogs in most of the areas where natterjacks are breeding, except between Kirkby-in-Furness and Dunnerholme, where signage will be used to reduce the risk of dogs entering breeding ponds. Therefore there is unlikely to be an increase in injury or death of natterjack tadpoles caused by dogs entering breeding ponds, as a result of our proposals.
<b>Changes in conservation grazing patterns</b>
With the mitigation in place, the risk of dogs interfering with the conservation grazing regime is low.
<b>Loss of supporting habitat</b>
The infrastructure required to establish the trail will result in the loss of 119m <sup>2</sup> of sand dune and saltmarsh habitat. The scale of these impacts is small and widely distributed across the sand dune systems and saltmarshes, and will not cause a significant loss of supporting habitat.

**Table 14c. Impact of an increase in people and dogs near breeding ponds on natterjack toads at Sandscale Haws**

<b>Sandscale Haws:</b> Coastal Access report Silecroft to Silverdale SCS 2, maps SCS 2g – 2h.
Sandscale has one of the biggest populations of natterjack toads in the UK. They breed in all the pools in the dune slacks, in the two scrapes by the car park/boardwalk, in Red Gutter and on the upper saltmarsh adjoining, and on the top of the beach to the north of the car park in shallow seepages.
<b>Existing recreational use</b>
Sandscale Haws NNR is currently managed by the National Trust as open access land and is popular with locals, visitors and dog-walkers throughout the year.
<b>Existing impacts of recreation on natterjack toads</b>
Natterjack toads continue to breed successfully in various ponds across the site. Dogs have been seen entering breeding ponds but it is not known if this is affecting natterjack population size. The National Trust is planning to install signage asking people to keep dogs out of the ponds.
<b>Access proposal (excluding mitigation)</b>
<b>England Coast Path</b>
The proposed ECP is aligned through sand dunes on an existing walked route which is close to two areas used by breeding natterjack toads – Wet Meadow and Red Gutter
<b>Infrastructure proposed on sand dune habitat to improve the existing walked route</b>

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<p><b>Sandscale Haws:</b> Coastal Access report Silecroft to Silverdale SCS 2, maps SCS 2g – 2h.</p>
<ul style="list-style-type: none"> <li>Waymarking and signage, 3 kissing gates with stone flags beneath, 70m section of scrub clearance.</li> </ul> <p><b>Coastal margin</b> Large areas of sand dune fall within the Coastal margin.</p>
<p><b>Predicted change in use of the site for recreation</b></p>
<p><b>England Coast Path</b> There will be an increase in access on the route of the ECP.</p> <p><b>Coastal margin</b> Sandscale Haws will become spreading room as a result of the proposals. The dune system of Sandscale Haws is currently managed as open access land, with seasonal signage requesting that visitors keep dogs on a short lead or under control across the entire site (except for the beach) due to the presence of livestock and ground-nesting birds. There will be negligible change in access to the Coastal margin as a result of the proposals as it is a difficult area to traverse.</p>
<p><b>Likely effects without mitigation</b></p> <p>There is a low risk of people trampling emerging toadlets as the ECP is not aligned right next to any breeding ponds.</p> <p>The ECP is aligned close to two areas used by breeding Natterjacks – Wet Meadow and Red Gutter. An increase in numbers of dogs accessing breeding ponds in these areas could lead to an increase in injury, disturbance or death of toads.</p> <p>The increase in access on the line of ECP is unlikely to affect the conservation grazing of the habitat because the area is already walked and the livestock are tolerant of people.</p>
<p><b>Mitigation incorporated into this proposal to manage risk</b></p> <p>Signage will be placed along the route of the ECP at Wet Meadow and Red Gutter, requesting that visitors keep dogs on a short lead or under control, and do not allow dogs to enter ponds. We will discuss wording and design of these signs with the National Trust, who are currently developing messaging about this issue across the site (including at the car park and visitor centre).</p>
<p><b>Risk of impact of the proposals (including mitigation) on natterjack toads.</b></p>
<p><b>Low risk</b></p> <p><b>Recreational activities in or close to pools used by breeding toads</b></p> <p>It is expected that there will be negligible change in access within the Coastal margin as a result of the proposals. Along the route of the ECP there will be an increase in access, and signage will be used to encourage dog owners to keep dogs out of the breeding ponds. Therefore there is unlikely to be an increase in injury or death of natterjack tadpoles caused by dogs entering breeding ponds, as a result of our proposals.</p> <p><b>Changes in conservation grazing patterns</b></p> <p>The increase in access on the line of ECP is unlikely to affect the conservation grazing of the habitat because the area is already walked and the livestock are tolerant of people.</p>

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**Sandscale Haws:** Coastal Access report Silecroft to Silverdale SCS 2, maps SCS 2g – 2h.

**Loss of supporting habitat**

As minimal infrastructure and establishment work is required to establish the path through Sandscale Haws (scrub clearance and 3 kissing gates), the impact of establishing the path on the area of supporting habitat for natterjack toads is negligible.

In conclusion, taking into account the route alignment and mitigation, the establishment of the ECP between Silecroft and Cleveleys will not significantly alter the population abundance or supporting habitat of natterjack toads in Duddon Estuary Ramsar site. Therefore there will not be an adverse effect on the population of the natterjack toads. See **Section D.3.3 Table 16g. Assessment of adverse effect on site integrity alone** for more details.

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## **Morecambe Bay & Duddon Estuary SPA / Morecambe Bay Ramsar site / Duddon Estuary Ramsar site**

In this part of the assessment we consider locations along the coast between Silecroft and Cleveleys where establishing the England Coast Path and associated coastal access rights might impact on Qualifying Features of Morecambe Bay & Duddon Estuary SPA, Morecambe Bay Ramsar site & Duddon Estuary Ramsar site. We explain how the detailed design of our proposals at these locations takes account of possible risks.

This assessment is carried out for each of the following feature groups:

D3.2.8 Breeding seabirds

D3.2.9 Non-breeding waterbirds

### **D3.2.8 Breeding Seabirds**

#### **Distribution within the SPA**

Breeding seabirds are found in discrete locations around Morecambe Bay and the Duddon Estuary. These are Hodbarrow, South Walney, Foulney, and Inner Marsh (RSPB Leighton Moss). South Walney is outside of the project area and therefore birds breeding there will not be affected by the proposals. Implementation of coastal access at South Walney was assessed at an earlier stage of the programme.

#### **Sensitivities to changes in access**

During the breeding season terns are dependent on limited areas of shingle habitat. Breeding gulls also have limited breeding habitat available, although they will use coastal grasslands as well as shingle. During the breeding season (mid-March to mid-August) terns and gulls are at risk from disturbance by people and dogs. Disturbance can lead to eggs or chicks chilling, trampling of nests, eggs and chicks, desertion, or direct predation of nest or young by dogs. There is also a risk of increased predation of eggs and chicks, due to adults being disturbed from the nest leaving the nest more vulnerable to predation.

Terns and gulls are colonial nesting species where one disturbance event may lead to multiple breeding failures.

#### **General approach to alignment**

Where possible we avoid aligning the ECP near or through breeding bird colonies.

#### **Impact of the access proposals**

Table 15 considers the impact of our proposals on breeding seabirds.

**Table 15. Areas where there is a risk of impact on breeding seabirds**

Location Cross reference to the Coastal Access Report	Species present  Baseline environmental conditions	Baseline access situation  Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	Likely effects without mitigation	Proposed mitigation	Risk of impact of proposals (including mitigation) on breeding seabirds.
<b>Haverigg</b>	<p>Little tern</p> <p>Little tern are present in the area and nest at nearby Hodbarrow. Birds are known to breed at Haverigg (a pair of little tern nested on an area of shingle ridges at Bullstone Bed in 2017 and 2018 [Ref.21]) however; breeding success and chick productivity is very low, in part due to disturbance from recreational activities.</p>	<p>Much of Haverigg beach and dunes, including Bullstone Bed where these birds nest, is already heavily used. There is a free car park, toilets, and a café at Haverigg, which is the main entrance point to the beach and dunes. The beach is advertised as dog-friendly and was recently a blue flag bathing beach. As well as people from Haverigg village and the nearby town of Millom using the area for recreation, there's also a busy holiday park with watersports centre, caravan park, and one of the few coastal campsites in the area, in close proximity.</p> <p>There is a network of paths along the top of the beach and through the dunes.</p> <p>The proposed ECP follows an existing popular path along the beach near the Haverigg car park and then through sand dunes.</p> <p><b>Trail:</b></p> <p>We expect numbers using the ECP to increase as a result of waymarking the existing route and promoting it as a National Trail. However this is unlikely to have an impact on breeding little terns. This is because the path directs people away from the areas where these birds breed. In order to make the coast path clear to walkers, and to encourage them to stay on the line of the path, regular waymarking, including stone waymarkers, is proposed.</p> <p><b>Coastal margin:</b></p> <p>The area used by nesting little terns will fall within the Coastal margin and will become spreading room.</p> <p>The public already have access to the foreshore, including the area used by nesting terns, for general leisure activities. Because such recreational use is already established and encouraged by existing facilities and their promotion, the creation of coastal access rights is unlikely to affect how the area is used.</p> <p>Any increase in access to Haverigg as a result of our proposals is likely to be from people who do not live locally. This is because the area is already well-known to local people. Most new visitors would be day walkers and long distance walkers who want to walk the coast path, and who are more likely to follow the waymarked ECP than use the foreshore.</p> <p>Therefore levels and patterns of access in the areas where little terns nest is not expected to change as a result of the proposals.</p> <p>To help raise awareness about wildlife at this location, as part of implementing coastal access it is proposed to install a new A1 information board. The additional board will be located at the main access point to the sites at Haverigg Car Park and include messages about sensitive species at Haverigg and how people can help to protect them.</p>	None, as access is not expected to increase in the areas used by nesting terns.	None	<p><b>Low risk</b></p> <p>It is not expected that there will be an increase in access in the areas used by nesting little terns as a result of the proposals. Therefore there is unlikely to be an increase in disturbance of nesting terns as a result of the proposals.</p>
<b>Hodbarrow</b> See Coastal Access	Common tern, Arctic tern, little tern, sandwich tern, great black backed gull,	The seabirds at Hodbarrow RSPB reserve nest on islands in the lagoon. There is a popular public footpath seaward of the lagoon, which has high levels of use by walkers and is also occasionally used by vehicles.	None. The lagoon is landward of the ECP, so it will not	None	<p><b>Low risk</b></p> <p>The islands on which these birds</p>



Location	Species present	Baseline access situation	Likely effects without mitigation	Proposed mitigation	Risk of impact of proposals (including mitigation) on breeding seabirds.
<p>Cross reference to the Coastal Access Report report Silecroft to Silverdale, maps SCS 1e to 1f.</p>	<p><b>Baseline environmental conditions</b></p> <p>herring gull and lesser black backed gull nest on islands in Hodbarrow Lagoon (Lagoon landward of the proposed ECP at Hodbarrow Nature Reserve).</p> <p>Disturbance by walkers and their dogs of birds nesting on the islands is not currently an issue. [Ref. 15].</p>	<p><b>Access proposal (excluding mitigation)</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p>The proposed ECP runs along the seaward edge of Hodbarrow lagoon on the public footpath. Because this area is already so popular, it is expected that there will be a negligible change in access as a result of the proposals.</p>	<p>fall into the Coastal margin. Access to and around the lagoon will be unaffected by the proposals.</p>		<p>nest are landward of the ECP and outside of the project area.</p>
<p><b>Foulney Island</b></p> <p>Area only visible on directions maps in Silecroft to Silverdale report 3, maps SCS 3B &amp; 3D – 3F.</p>	<p>Foulney Island is a shingle island which is joined to the mainland by a causeway. It is one of only two sites in the Morecambe Bay and Duddon Estuary SPA where Arctic, common and little terns breed. There has not been a Sandwich tern colony since 1995, although more recent records of attempted breeding exist. Black headed gull also breed here.</p> <p>Access is managed to reduce the risk of disturbance by walkers and dogs. [Ref. 15].</p>	<p>Cumbria Wildlife Trust, who manage Foulney Island, currently allow visitors without dogs on marked routes only during the summer, to protect the nesting birds.</p> <p>The proposed ECP follows the coast at Rampside and does not go onto Foulney Island. This means that Foulney Island and the causeway fall into the Coastal margin. Access would potentially increase if the area became spreading room.</p>	<p>Access on Foulney Island is currently managed and there are areas in summer where access is excluded.</p> <p>Any relaxation of this restriction would increase the likelihood of the birds being disturbed, and of breeding failures.</p>	<p>It is proposed that access is restricted or excluded in the following areas on nature conservation grounds:</p> <ul style="list-style-type: none"> <li>- Shingle and rocky skears around Foulney embankment and Foulney Island. No public access all year. To prevent disturbance to roosting and breeding birds.</li> <li>- Foulney embankment and Foulney Island. No public access 1st April to 15th August each year. To prevent disturbance to breeding birds.</li> <li>- Foulney embankment and Foulney Island. Dogs on leads 16th August to 31st March each year. To prevent disturbance to roosting birds.</li> </ul>	<p><b>Low risk</b></p> <p>These access restrictions will mirror the current situation, allowing Cumbria Wildlife Trust to continue to manage the reserve for breeding shingle nesting birds.</p> <p>There is confidence that the design of the proposals, including the proposed mitigation, can be relied upon to ensure no increase in disturbance to this feature.</p>
<p><b>Inner Marsh (Warton)</b></p> <p>See Coastal Access report map SDC 1c and direction maps 1A, 1C &amp; 1E. See also directions</p>	<p>There is a black headed gull colony of approx. 450 birds at Inner Marsh [Ref. 15]. Access in this area is currently very low, and an increase in access could lead to significant disturbance of these birds while they are breeding.</p>	<p>There is currently no public access to Inner Marsh, which is managed by RSPB as a nature reserve. The only viable access is via the RPSB's track to the bird hides close to Quaker's Stang.</p> <p>The proposed ECP runs landward of Inner Marsh, with a reed bed and railway line between the path and the marsh. It then crosses the railway line at Ings Point where it is proposed to establish a new section of path seaward of the railway line from Ings Points to Cote Stones. Where the ECP enters fields at Ings Point it is within 155m of Inner Marsh. Inner Marsh will fall within the Coastal margin. There will be an increase in access on the line of the ECP between Ings Point and Cote Stones. Access to Inner Marsh would potentially increase if the marsh and the fields at Ings Point were to become spreading room.</p>	<p>People using the path will be screened from the reserve by high ground at Ings Point, however; the fields and saltmarsh at Ings Point are easy to walk over and there is a risk that new desire lines might develop around Inner Marsh.</p>	<p>Access will be excluded under s25A (unsuitable for access) and s26 (3)(a) (nature conservation) to Inner Marsh and adjacent parts of Carnforth Marsh and fields at Ings Point. This means that there will be no new access rights in the areas where black headed gulls nest.</p> <p>In order to ensure that people stick to the route of the ECP between Ings Point and Cote</p>	<p><b>Low risk</b></p> <p>Access will be excluded from Inner Marsh, and the route alignment and mitigation directs walkers away from the marsh and ensures that walkers and dogs stay on the line of the ECP.</p> <p>There is confidence that the design of</p>

Location	Species present	Baseline access situation	Likely effects without mitigation	Proposed mitigation	Risk of impact of proposals (including mitigation) on breeding seabirds.
Cross reference to the Coastal Access Report maps in Overview report.	Baseline environmental conditions	Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	The presence of people or dogs close to Inner Marsh would increase the amount of disturbance to breeding birds.	Stones and do not walk on towards Inner Marsh, a new fence will be erected to the seaward side of the ECP between Ings Point and Cotestones.	the proposals, including the proposed mitigation, can be relied upon to ensure no increase in disturbance to this feature.

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Overall conclusions of the impact of the proposals on the conservation objectives for breeding seabirds are shown in section D3.3.

## **D3.2.9 Non-breeding waterbirds**

### **Distribution within the SPA**

Non-breeding waterbirds roost all around the shoreline of Morecambe Bay and Duddon Estuary, some species also roost on the sand and mudflats and in coastal fields. They feed on the extensive mudflats and saltmarshes within the SPA and in coastal fields adjacent to the SPA. More details are given in section D2, table 7a.

The breeding population of redshank, shelduck, ringed plover and Mediterranean gull within Morecambe Bay and the Duddon Estuary SPA / Ramsar site are considered to contribute significantly to the non-breeding population. Redshank, shelduck and ringed plover breed at many locations around the SPA / Ramsar site. Mediterranean gull has been recorded breeding within the black headed gull colony at Hodbarrow.

### **Sensitivities to changes in access**

All of the features except red breasted merganser may be sensitive to changes in access that interrupt them whilst feeding on the exposed tidal mudflats, saltmarshes, or coastal fields, or when at roost along the foreshore or on saltmarshes. They are at particular risk of disturbance for several hours around high tide, when the birds are forced into close proximity with the public and dogs using the foreshore, marshes and flats.

Disturbance at main roost sites is likely to be especially significant because the birds' energy expenditure may be increased both directly (particularly if they are repeatedly flushed) and indirectly (if disturbance forces birds to roost further from their preferred feeding areas).

The distribution of these roosts is determined by factors which include lack of disturbance, low vegetation and good visibility. Because the roosts act as a focal point for birds from a large foraging area they are particularly sensitive.

Disturbance in these species may affect ability to feed and rest, and may be most damaging at times of hard frost when food resources are limited and energy requirements are highest.

Disturbance distances vary between species, and according to activity, with species such as turnstone tolerating people at distances of less than 30m while roosting and tolerating closer approach when feeding, and up to 450m or more for species like curlew, effectively restricting their distribution to the least disturbed areas. [Ref. 20]

Shelduck and pintail are generally sensitive to the presence of people and dogs as a consequence of being a quarry species.

Maintaining low levels of disturbance is likely to be an important determinant both of population health and species distribution around Morecambe Bay and the Duddon Estuary.

The gull species, cormorant, eider and goldeneye are removed from areas of interaction with the Coastal Access proposals while feeding, however, while resting and preening these

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species are found on areas of foreshore where they are at risk of disturbance and displacement by people and their dogs.

While under some conditions black-headed and herring gulls are very tolerant of people, particularly where exploiting anthropogenic food supplies, when preening and roosting they are less tolerant of disturbance and as with the other species may be displaced from roosting and preening sites at considerable distance. Of these species Cormorant are the most disturbance sensitive and can be displaced by people or dogs at distances of over 150m.

Non-breeding eider are particularly sensitive during June-end August when in moult or flightless. During this period their foraging efficiency is reduced and much resource is directed to feather growth.

Disturbance from roost areas reduces time spent maintaining feather condition and resting, and results in increased energy expenditure as birds relocate to alternative areas. Coastal access provision therefore has the potential to impact on both habitat extent and availability for these species both while preening and roosting.

Disturbance of breeding birds risks an impact where the breeding population of a species significantly contributes to the non-breeding population. This is the case for non-breeding populations of redshank, ringed plover, shelduck and Mediterranean gull. Disturbance of breeding birds can lead to eggs or chicks chilling, trampling of nests, eggs and chicks, desertion, or direct predation of nest or young by dogs. There is also a risk of increased predation of eggs and chicks, due to adults being disturbed from the nest leaving the nest more vulnerable to predation.

### **Impact of the access proposal**

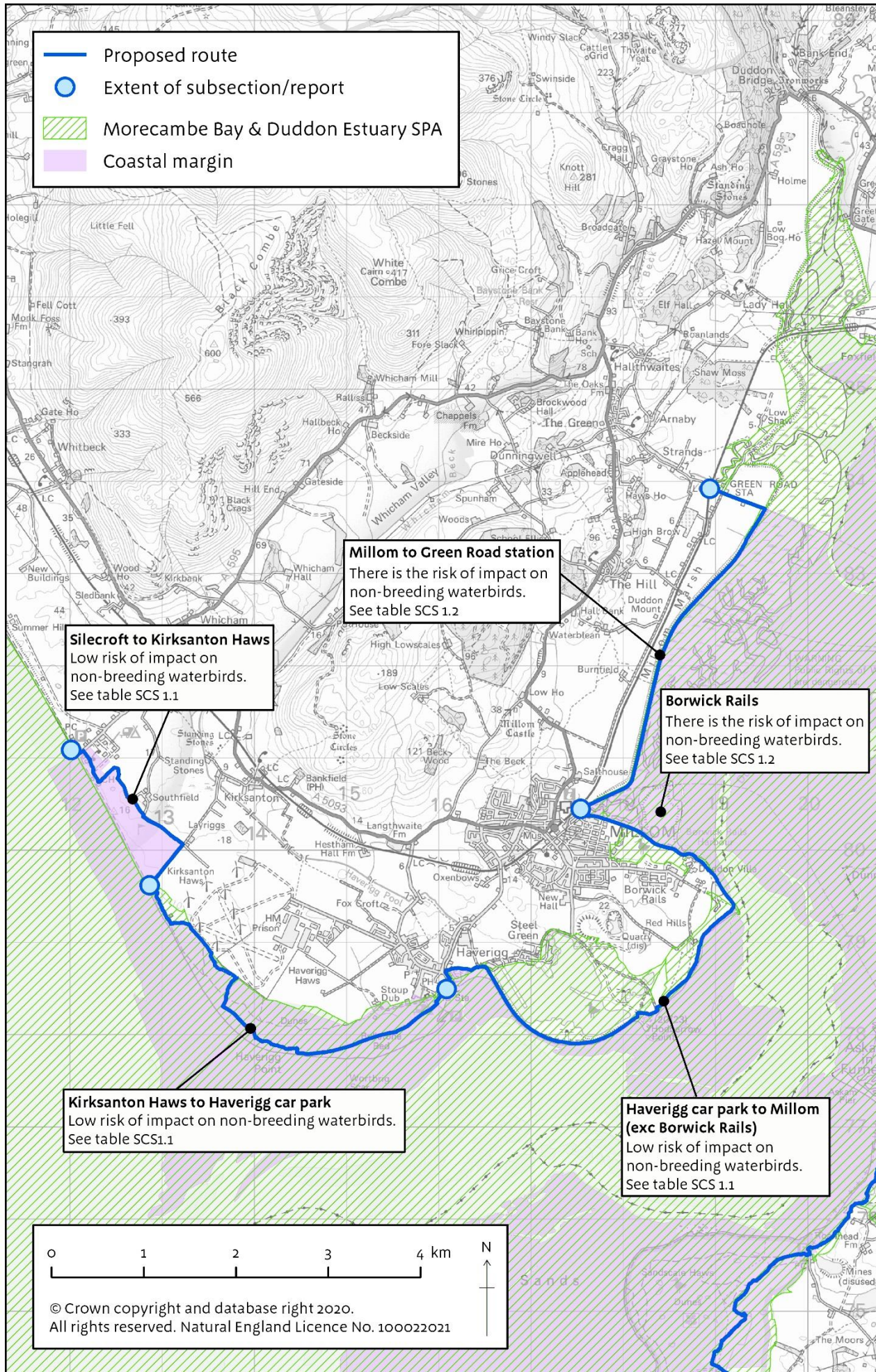
This assessment of the impact of our proposals on non-breeding waterbirds is laid out as follows:

- i) This HRA assesses the impact of 12 Coastal Access Reports covering the area between Silecroft in Cumbria and Cleveleys in Lancashire. A map is included for the area covered by each Coastal Access Report.
- ii) Each map is followed by two tables. The tables describe:
  - areas where the risk to non-breeding waterbirds is low
  - areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk

The information on bird roosts, breeding areas and existing levels of recreational disturbance in the following tables come from the Morecambe Bay Wader Roost Study (2012) [Ref.10], Duddon Estuary Wader Roost Study [Ref. 12], the Morecambe Bay Recreational Disturbance Study (2015) [Ref 11] and the NW Coast of England Recreational Disturbance Study (2017) [Ref. 13], and the North West estuaries breeding wader and seabird review (2016) [Ref. 19].

**Overall conclusions of the impact of the proposals on the conservation objectives for each feature are shown in section D3.3.**

# Coastal Access Report SCS 1 Silecroft to Green Road Station



**Table SCS 1.1 Areas where there is a low risk of impact on non-breeding waterbirds:**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites.</b></p> <p>[Ref. 12, 19, 21]</p> <p><b>Existing disturbance to non-breeding waterbirds (if known) [Ref. 12, 13,19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p>
<p><b>Silecroft to Kirksanton Haws.</b></p> <p>See Coastal Access report Silecroft to Silverdale, maps SCS 1a.</p>	<p>This subsection is on the open coast and as such is less important than the estuaries in terms of roost sites and feeding for the majority of the SPA bird features. The exception is sanderling, which likes to feed on the open coast. The highest sanderling numbers are found during migration, particularly in spring. Sanderling are fairly tolerant to people while feeding.</p> <p>There are no records of breeding redshank, ringed plover or shelduck in this subsection.</p>	<p>There is a large, popular car park by the beach at Silecroft. Levels of access on the beach in this subsection are already high.</p> <p>The proposed ECP is aligned inland, on a combination of walked routes and new sections of path. It is between 40m and 300m away from the coast, with houses, fields and golf course between the trail and the SPA boundary.</p> <p><b>Trail:</b> Access is expected to increase on the trail.</p> <p><b>Coastal margin:</b> Levels of access on the beach are expected to increase slightly as a new circular route will be created from Silecroft car park, using the ECP and the beach.</p>	<p><b>Low risk</b></p> <p>The trail alignment takes walkers inland and away from the coast.</p> <p>Levels of access on the beach may increase slightly if visitors choose to walk a circular route from the car park at Silecroft using the ECP and beach. Given that the beach already has high levels of access, any additional access is unlikely to cause a significant increase in disturbance to sanderling feeding on the coast or to any birds that may be roosting along the foreshore.</p>
<p><b>Kirksanton Haws to Haverigg car park</b></p> <p>See Coastal Access report Silecroft to Silverdale, maps SCS 1b - d. Haverigg car park is next to Haverigg Lifeboat station.</p>	<p><b>Roost sites:</b></p> <p>Dunlin, oystercatcher, redshank and ringed plover roost along the foreshore in this subsection.</p> <p>There are existing issues with disturbance of roosting birds by people and dogs using the foreshore.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the flats and saltmarshes in this subsection for feeding.</p> <p><b>Breeding sites:</b></p> <p>5 pairs of ringed plover nested on shingle / embryonic dunes at Bullstone Beds and the shingle / embryonic dunes on the seaward edge of Black Dub and Haverigg Bent Hills in 2016. 8 pairs of ringed plover nested on shingle and embryonic dune habitat at Bullstone Bed in 2018.</p> <p>The nesting success and chick productivity at Bullstone Bed is known to be very low, likely due to disturbance from people and dogs walking on the shingle.</p> <p>There are no current management measures in place to reduce the risk of disturbance to breeding birds on Bullstone Bed.</p>	<p>Much of this area, including the foreshore, is already heavily used by locals. Access levels are highest at the Haverigg car park end of the subsection, and decrease towards the western end. There is a free car park, toilets, and a café at Haverigg, which is the main entrance point to the beach and dunes. The beach is advertised as dog-friendly and was recently a blue flag bathing beach. As well as people from Haverigg village and the nearby town of Millom using the area for recreation, there's also a busy holiday park with watersports centre, caravan park, and one of the few coastal campsites in the area, in close proximity.</p> <p>There is a network of paths along the top of the beach and through the dunes.</p> <p>From Kirksanton Haws, the proposed ECP mainly follows existing paths through sand dunes, with a few new sections of path, before joining an existing popular path along the beach to Haverigg car park.</p> <p><b>Trail:</b> We expect numbers using the ECP to increase as a result of waymarking the existing route and promoting it as a National Trail.</p> <p>However this is unlikely to have an impact on roosting, feeding and breeding waterbirds. This is because the path directs people away from the areas of foreshore where the non-breeding waterbirds roost and feed, and from the embryonic dunes and shingle ridges where ringed plover breed. In order to make the coast path clear to walkers, and to encourage them to stay on the line of the path, regular waymarking, including stone waymarkers, is proposed.</p> <p><b>Coastal margin:</b> The areas used by roosting and feeding non-breeding waterbirds and by nesting ringed plover will fall within the Coastal margin and will become spreading room.</p> <p>The public already have access to the foreshore, including bullstone beds (an important area for nesting ringed plover), for general leisure activities. The establishment of coastal access rights will not affect how the area is used.</p> <p>Any increase in access to this subsection as a result of our proposals is likely to be from people who do not live locally. This is because the area is already well-known to local people. Most new visitors would be day walkers and long distance walkers who want to walk the coast path, and who are more likely to follow the waymarked ECP than use the foreshore. Therefore levels and patterns of access in the areas where non-breeding waterbirds roost and feed and where ringed plover nest is not expected to change as a result of the proposals.</p>	<p><b>Low risk</b></p> <p>It is not expected that there will be an increase in access in the areas used by roosting, breeding and feeding non-breeding waterbirds as a result of the proposals. Therefore there is unlikely to be an increase in disturbance of roosting, breeding and feeding non-breeding waterbirds as a result of the proposals.</p>

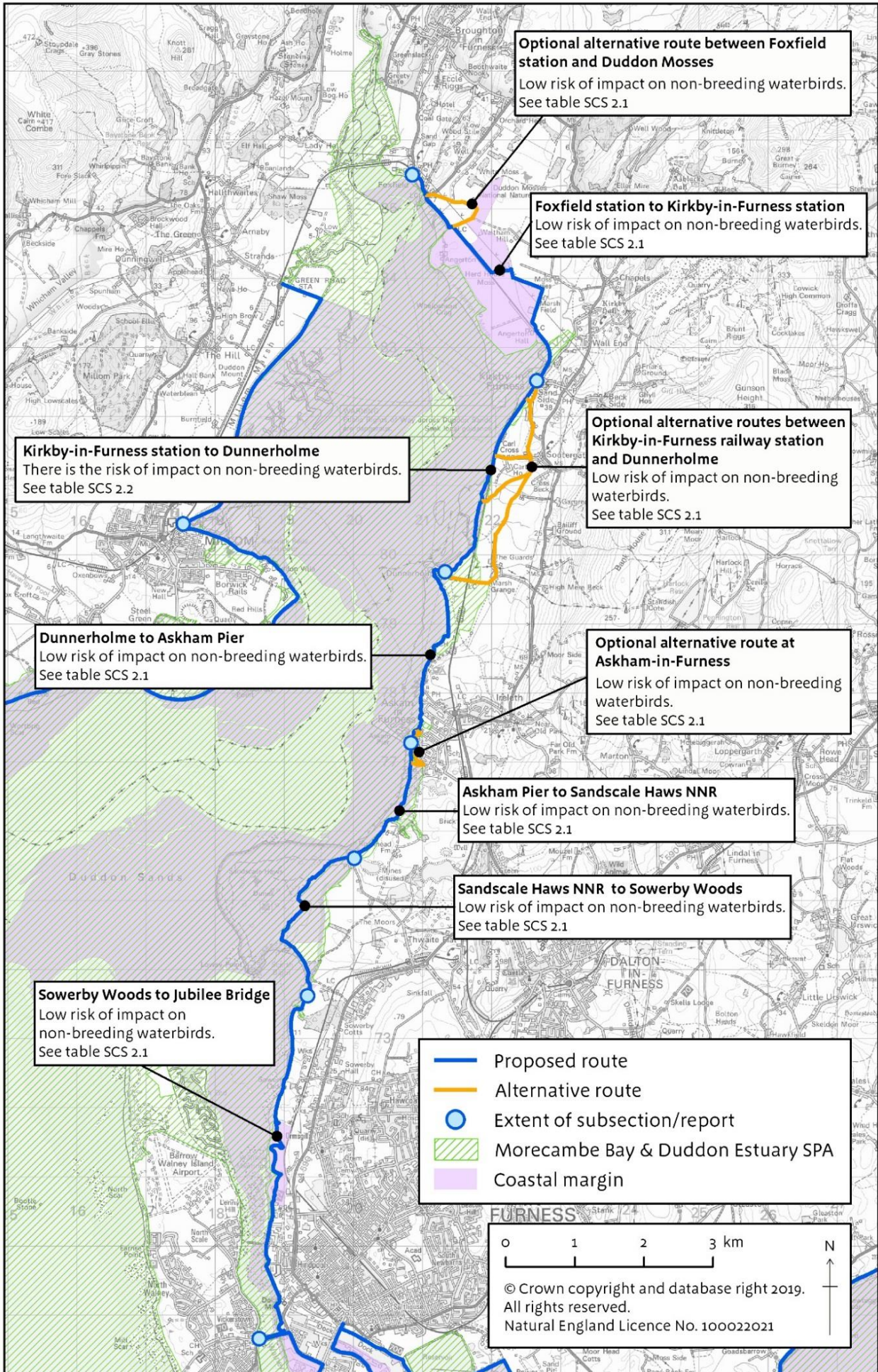
<b>Location</b> Cross reference to the Coastal Access Report	<b>Species present and location of roosts sites, feeding areas and breeding sites.</b> [Ref. 12, 19, 21]  <b>Existing disturbance to non-breeding waterbirds (if known) [Ref. 12, 13,19]</b>	<b>Existing recreational use in the areas used by these species</b>  <b>Access proposal</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b>  To help manage the existing pressure on sensitive features at this location, as part of implementing coastal access it is proposed to install a new A1 information board. The additional board will be located at the main access point to the sites at Haverigg Car Park and include messages about sensitive species at Haverigg and how people can help to protect them.	<b>Risk of impact of proposals on non-breeding waterbirds.</b>
<b>Haverigg car park to Millom (excluding Borwick Rails).</b>  See Coastal Access report Silecroft to Silverdale, maps SCS 1e – 1h. Haverigg car park is next to Haverigg Lifeboat station.	<b>Roost sites:</b> 5 roosts are recorded around Hodbarrow Lagoon (Lagoon landward of the proposed ECP at Hodbarrow Nature Reserve).  <b>Feeding areas:</b> Non-breeding waterbirds use the flats and saltmarshes in this subsection for feeding.  <b>Breeding sites:</b> 2 pairs of ringed plover were recorded as breeding at Hodbarrow Lagoon in 2016. Mediterranean gull has been recorded breeding among black headed gulls on islands in Hodbarrow Lagoon.  Current disturbance by walkers and dogs of birds roosting and breeding at Hodbarrow Lagoon is low.	This section's proximity to Millom and Haverigg, with a network of public rights of way and existing walked routes between the two, means it is already well used by local walkers and dog owners.  Accessible parts of the margin are already in use (e.g. beaches near Haverigg and Hodbarrow Mains) but other sections are difficult or dangerous to access and awareness locally of the risks tends to minimise use of these areas.  The proposed ECP follows PRowWs and existing walked routes. No new circular routes or significant improvements to surfaces are being created on this section, so use by locals is not likely to increase significantly. This area of Cumbria is relatively isolated so it is not expected that the route will attract large numbers of walkers from far afield. Therefore we expect there to be negligible change in use on the line of the ECP and the margin.	<b>Low risk</b>  The areas where the birds are roosting and breeding at Hodbarrow Lagoon are landward of the proposed ECP and do not fall within the project area. Therefore there will be no coastal access rights in the area used by roosting and breeding birds.  The proposed ECP will not bring people any closer to the areas at Hodbarrow Lagoon which are used by roosting and breeding birds. In this area the ECP is aligned seaward of a busy public byway, and the sensitive areas are landward of the public byway.  Walkers and dogs are not currently disturbing birds roosting and breeding in this area. We expect a negligible increase in use of the proposed ECP and therefore there will be no impacts on the roosting and breeding birds from the proposal.  The risk of disturbance to birds feeding on the flats and saltmarshes is low, as levels and patterns of access are not expected to change in these areas as a result of the proposals.

**Table SCS 1.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 12, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 12, 13, 14, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p>	<p><b>Likely effects without mitigation</b></p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds.</b></p>
		<p><b>Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>			
<p><b>Borwick Rails</b></p> <p>See Coastal Access report Silecroft to Silverdale 1, map SCS 1h and direction map SCS 1D. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p>There is a substantial curlew and gull roost (c.1000 curlew) on saltmarsh near to Borwick Rails Harbour.</p> <p>Large numbers of waders also roost on exposed banks of Borwick Rails slag bank at certain tide conditions during the winter (pers comms, local WeBS counter).</p> <p><b>Breeding sites:</b></p> <p>6 pairs of ringed plover were recorded as breeding on Borwick Rails slag bank in 2016.</p> <p>Existing disturbance of roosting and breeding birds is fairly low.</p>	<p>Borwick Rails is a large slag bank which protrudes into the marsh near Millom Ironworks. It is fenced off and does not readily invite public access, however the occasional local dog walker does visit the site.</p> <p>The proposed ECP runs on an existing Public Right of Way inland of Borwick Rails slag bank and harbour, which means that Borwick Rails will fall within the Coastal margin.</p> <p><b>Trail:</b> Because the existing PRoW is already very popular with local walkers, it is expected that there will be a negligible change in access on the line of the ECP.</p> <p><b>Coastal margin:</b> Access into Borwick Rails is currently discouraged, and could potentially increase if the area became spreading room.</p>	<p>The roosting and breeding birds could be disturbed by people walking on and around the slag bank and saltmarsh at Borwick Rails, and by dogs off lead.</p> <p>Therefore an increase in access at Borwick Rails could lead to increased disturbance of waterbirds using the site for roosting and breeding.</p>	<p>It is proposed that access is excluded from Borwick Rails all year round. Three signs at potential access points will tell people about the exclusion.</p>	<p><b>Low risk</b></p> <p>The combination of access exclusion, existing fence and new signage about the access exclusion means that access in this area is unlikely to increase as a result of coastal access.</p>
<p><b>Millom to Green Road Station</b></p> <p>See Coastal Access report Silecroft to Silverdale 1, maps SCS 1h – 1j and direction map SCS 1C. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Millom Marsh:</b> Exact roost locations are not mapped, the sector holds large numbers of curlew, pintail and shelduck.</p> <p>The roost report states ‘It was noted by the WeBS counter that although a number of walkers both with and without dogs use the embankment regularly, the disturbance appears to be minimal. The distance between the embankment and the edge of the estuary varies between 100 – 800m along the length of the sector. If birds tend to roost closer to the tide edge out on the saltmarsh, rather than closer to the embankment, they are presumably less likely to receive any disturbance.’</p> <p><b>Feeding areas:</b></p> <p>Birds feed on the saltmarsh and extensive tidal flats in this subsection.</p> <p><b>Breeding sites:</b></p> <p>1 pair of redshank were recorded as breeding on Millom Marsh in 2016.</p>	<p>A public footpath follows the embankment between Millom and Green Road Station. It is in regular use at the Millom end, by locals and dog walkers taking a short out-and-back walk on the sea wall. At the Green Road end, use is lower.</p> <p>Local walkers already tend to avoid the salt marsh due to its locally known hazards.</p> <p>The ECP will be aligned on the existing public footpath on an embankment at the edge of the saltmarsh.</p> <p><b>Trail:</b> Access along the embankment is expected to increase due to the proposals, particularly at the Green Road end, where current levels of use are low.</p> <p><b>Coastal margin:</b> The whole of Millom Marsh will fall into the Coastal margin. It is not expected that numbers of people on the marsh will increase, as access to the marsh will be excluded under S25A. However, it is possible that the number of dogs off-lead on the marsh will increase in the area near the embankment.</p>	<p>There is the potential for an increase in disturbance to roosting and breeding birds due to skylining and dogs off lead on the marsh, particularly at the Green Road end of the embankment.</p>	<p>In order to reduce the likelihood of dogs off- lead straying onto the marsh, and causing disturbance to roosting and feeding birds, the following mitigation will be put in place:</p> <ul style="list-style-type: none"> <li>• Signage at each end of the embankment (at Millom and Green Road), requesting people to keep dogs under control, and not to allow dogs to run onto the marsh.</li> <li>• Signage at points where other paths or tracks join the embankment, requesting people to keep dogs under control, and not to allow dogs to run onto the marsh.</li> </ul> <p>It is not possible to put a dogs on-lead restriction on the embankment, as the ECP will be aligned on a public footpath. Livestock (sheep) are usually present on the saltmarsh however so dogs should already be under close control, in line with national restrictions.</p>	<p><b>Low risk</b></p> <p>There will be no new access rights to Millom Marsh. Signage will encourage dog walkers to keep their dogs under control.</p> <p>With this mitigation in place, the risk of disturbance of these birds will be reduced. However, there is still a small risk of increased disturbance events due to sky-lining as a result of the proposals. It is not expected that this small increase in disturbance will have a significant effect on roosting or breeding birds.</p>



# Coastal Access Report SCS 2 Green road railway station to Jubilee Bridge (north)



**Table SCS 2.1 Areas where there is a low risk of impact on non-breeding waterbirds:**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites. [Ref. 12, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
	Existing disturbance to non-breeding waterbirds (if known) [Ref. 12, 13,19]	Access proposal Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<b>Green Road Railway Station – Duddon Bridge – Foxfield Railway Station (Upper Duddon Estuary).</b>	The SPA and Ramsar site extends up the estuary almost to Duddon Bridge. Non-breeding waterbirds are likely to be roosting and feeding in this area of the SPA. Redshank, ringed plover and shelduck could be breeding in this subsection although there is no survey data to support this.	There are low levels of existing access in this area.  The proposed ECP ends at Green Road station and restarts at Foxfield station, and ECP users will cross the Duddon Estuary using the train between Green Road and Foxfield.  There will be no change in access in the part of the SPA / Ramsar site as a result of the proposals. It is not adjacent to the proposed ECP and does not form part of the Coastal margin.	<b>Not affected by the proposals</b>  This part of the SPA is not in the project area. It is not affected by the coastal access proposals as it is not adjacent to the proposed ECP and does not form part of the Coastal margin.
<b>Foxfield Railway Station to Kirkby-in-Furness.</b>  See Coastal Access report Silecroft to Silverdale 2, maps SCS 2a, 2b and direction maps 2A, 2B. See also directions maps in Overview report.	<p><b>Roost sites:</b> <b>Foxfield Marsh &amp; Galloper Marsh:</b> there is no survey information for these marshes; however they are likely to be important for roosting birds.</p> <p><b>Angerton Marsh &amp; adjacent fields:</b> oystercatcher, pintail (internationally important numbers), curlew, wigeon, shelduck, pink footed geese, barnacle geese.</p> <p><b>Feeding areas:</b> Birds feed on the saltmarsh and extensive tidal flats in this subsection.</p> <p><b>Breeding sites:</b> <b>Angerton Marsh &amp; adjacent fields</b> Breeding redshank were recorded in 2012, although the survey area included Duddon Mosses as well as the marsh. The tidal range and lack of access on Angerton Marsh and the coastal fields would appear to make the marsh and fields ideal for breeding waders.</p> <p><b>Galloper Marsh / Foxfield Marsh</b> There are low levels of breeding birds on these marshes.</p> <p>Current levels of access and disturbance in these areas are low.</p>	<p>This section has fairly low levels of use by walkers, apart from the area close to Foxfield, and the area close to Kirkby-in-Furness, which are used by local dog walkers.</p> <p><b>Foxfield Marsh &amp; Galloper Marsh:</b> The proposed ECP will be aligned on a public highway at the edge of the marsh. The road is already used by local walkers and patterns and levels of use are not expected to change in this area.</p> <p><b>Angerton Marsh &amp; adjacent fields:</b> The proposed ECP in this area is aligned landward of the railway line for a length of 1.9km (which effectively screens the marsh from the trail), and then for 250m on a public right of way seaward of the railway from Angerton Hall to Kirkby Pool. We expect to see an increase in use of the public right of way between Angerton Hall and Kirkby Pool, however it is unlikely that this will impact on birds roosting in this area. There are no records of birds roosting in this particular field. The small field which the ECP is aligned in is very wet, and surface improvements to the route will mean that people are likely to stick to the line of the trail. The railway embankment landward of the route will provide a backdrop, so that skylining is not a concern. The path is at least 100m from the areas where roosting birds have been recorded, and separated from the fields used by roosting birds by a fence, a creek and a second fence. Birds roost across a large area of marsh and adjacent fields (approx. 1km long), and the path is aligned within 100m of this area for only 250m. There is a very low risk of an increase in access on this right of way causing an increase in disturbance to roosting birds.</p> <p>It is expected that there will be a negligible change in use of the margin. The saltmarshes and intertidal flats are unsuitable for access and we will propose that access be excluded under s25A.</p>	<p><b>Low Risk</b> There is a low risk of an increase in disturbance in this area as a result of the Coastal Access proposals, because:</p> <ul style="list-style-type: none"> <li>• It is expected that there will be negligible change in access in the areas where the birds roost and feed.</li> <li>• For most of the subsection, the marsh and fields used by roosting birds are screened from the proposed trail by a railway line.</li> <li>• For 250m the proposed trail is aligned on a public right of way which runs through a small field immediately seaward of the railway line. Wet ground conditions in the field and stock fences around the field mean that it is unlikely that walkers will leave the trail and access the fields and marsh where birds are roosting.</li> <li>• Ground conditions suggest there is unlikely to be change in use of the margin</li> </ul>
<b>Optional alternative route (OAR) between Foxfield and Duddon Mosses</b>  See Coastal Access report Silecroft to	<p>There may be high tide roosts at Foxfield and Galloper Marsh.</p> <p>The OAR is aligned outside of the boundary of the SPA / Ramsar site.</p> <p>The fields between the OAR and the SPA / Ramsar site could be supporting habitat for non-breeding waterbirds, however we have no survey data to support this.</p>	<p>This area is used by local walkers and dog walkers, however there is not a large population in this area so levels of use are not particularly high.</p> <p>The proposed OAR is aligned on roads and a public right of way landward of the railway line.</p>	<p><b>Low risk</b> There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR. People and dogs will stick to the line of the OAR due to the presence of hedges, walls and scrub along its entire length.</p>

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p> <p>Silverdale 2, map SCS 2a.</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites.</b></p> <p>[Ref. 12, 19]</p> <p><b>Existing disturbance to non-breeding waterbirds (if known) [Ref. 12, 13,19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <hr/> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p>The roads have hedges or walls at either side. The public right of way runs through woodland and scrub at the edge of Duddon Mosses NNR. There is a wall to the seaward side of the PRoW.</p> <p>It is expected that there will be a small increase in the use of this route, most likely at high tide, when the main route of the ECP could be inaccessible.</p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p> <p>The OAR is between 50m and 430m inland of the boundary of the SPA and is separated from the SPA by a road, railway line and fields.</p> <p>The route is separated from roosts at Foxfield Marsh &amp; Galloper Marsh by a railway line.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p> <p>Because of this, and because hedges, walls and scrub will keep people and dogs on the line of the OAR, there is a low risk of disturbance of birds using these fields.</p>
<p><b>Optional alternative routes (OARs) between Kirkby-in-Furness railway station and Dunnerholme</b></p> <p>See Coastal Access report Silecroft to Silverdale 2, maps SCS 2c &amp; 2d.</p>	<p>The coast between Kirkby-in-Furness and Dunnerholme is likely to support high tide roosts, but exact locations are unavailable. 865 non-breeding oystercatcher were recorded roosting on Dunnerholme Marsh, with 20 more on Soutergate marsh, during the 2016 breeding bird survey.</p> <p>At very high tides, when the sea comes up to the railway embankment, it is possible that the birds may move onto surrounding land, particularly the marshy farmland north of Dunnerholme point.</p>	<p>There is a network of public rights of way in this area. These routes are not heavily used, but do get used by local dog walkers.</p> <hr/> <p>There is a main OAR which runs on a north – south alignment inland of the railway line between Kirkby-in Furness and Dunnerholme. This route, for most of its length, is between 200m and 500m from the boundary of the SPA.</p> <p>Three other OARs connect this main OAR to the proposed ECP, crossing the railway line and joining the ECP at Sand Side, Lidgate and Soutergate level crossings.</p> <p>All of these OARs are aligned on public footpaths and roads.</p> <p>We expect that there will be an increase in access on the OARs, especially at high tides when the main ECP is inaccessible. This is because signing these routes as OARs will make them more visible to visiting walkers.</p> <p>At other times, there may well be a reduction in use of these routes, as walkers instead use the main ECP route (tide permitting).</p>	<p><b>Low risk</b></p> <p>These OARs will be used at high tide, when the main ECP will be impassable. At such times walkers will be directed away from the marshes seaward of the railway line which may be used by roosting birds.</p> <p>It is possible that the fields between the OARs and the SPA boundary could be used by roosting non-breeding waterbirds at very high tides. They could also be used by feeding geese, although we have no survey data to support this.</p> <p>The area between the OARs and the SPA boundary is a patchwork of small fields, and in most places there are 2 – 5 fields between the main north – south alignment of the OAR and the SPA. The OARs only runs through a small percentage of these fields.</p> <p>In many places the OARs have boundary walls, hedges or fences, preventing access onto the fields which the OARs run through.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p> <p>Birds are likely to roost in the fields closest to the estuary. Most of the fields closest to the estuary do not have an OAR running through them, and so are unaffected by the proposals.</p> <p>For these reasons, there is a low risk of increased disturbance of birds using the fields on either side of the OARs, and the fields between the OARs and the SPA.</p>

Location	Species present and location of roosts sites, feeding areas and breeding sites.	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
	[Ref. 12, 19]	Access proposal	
	Existing disturbance to non-breeding waterbirds (if known) [Ref. 12, 13,19]	Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<p><b>Dunnerholme Point to Askam Pier.</b></p> <p>See Coastal Access report Silecroft to Silverdale 2, maps SCS 2e – 2f and direction map SCS 2C. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p>Exact locations of high tide roosts are unavailable for this sector. From the WeBS data, it can be seen that Dunnerholme has consistently high counts of birds. The density of birds in this sector is higher than elsewhere in the estuary. There are high numbers of dunlin, oystercatcher, pintail and sanderling present here during the winter. These birds will roost along the shoreline in this area, although the exact location of the roosts are unknown. At very high tides, when the sea comes up to the railway embankment, it is possible that the birds may move onto surrounding land, particularly the marshy farmland north of Dunnerholme point.</p> <p><b>Feeding areas:</b></p> <p>Birds feed on the saltmarsh and extensive tidal flats in this subsection.</p> <p><b>Breeding sites:</b></p> <p>Ringed plover may breed at Dunnerholme Golf Course.</p>	<p>There are various Public Rights of Way and other walked routes along the shore between Dunnerholme and Askam Pier; this is a popular place for people to access the shore for recreation, including dog walking.</p> <p>The proposed ECP between Dunnerholme and Askam Pier is aligned on an existing walked line which is currently very popular with walkers.</p> <p><b>Trail:</b> It is expected that there will be a negligible change in access on the line of the ECP.</p> <p><b>Coastal margin:</b> Access will be excluded under s25A from areas of sand/mudflat below mean high water, as they are considered to be unsuitable for access. The beach above mean high water from Dunnerholme Point to Askam Pier is well used for recreation and to exercise dogs off-lead. There is not expected to be an increase in access as a result of the proposals.</p>	<p><b>Low risk</b></p> <p>It is expected that between Dunnerholme and Askam Pier there will be negligible change in use of the trail, and negligible change in access to the Coastal margin as a result of the proposals. The path is aligned mainly through sand dunes, so walkers on the ECP will not come into close proximity with roosting birds. Ringed plover may breed on the golf course, however access to the golf course will not change as a result of the proposals. The golf course is landward of the ECP and no new access rights will be created on the golf course. Therefore the proposals are not likely to increase disturbance to roosting or breeding birds in this area.</p>
<p><b>Optional alternative route (OAR) at Askam in Furness</b></p> <p>See Coastal Access report Silecroft to Silverdale 2, map SCS 2f.</p>	<p>Exact locations of high tide roosts are unavailable for this sector.</p> <p>The OAR passes through a mainly urban area which is unlikely to be used by non-breeding waterbirds.</p>	<p>There are various existing walked routes in this area; this is a popular place for people to walk and also to access the beach for recreation, including dog walking.</p> <p>The OAR is aligned on existing walked routes and pavements landward of the main route of the ECP, mainly in the urban area of Askam in Furness. There are periods on most tides when the main ECP is unavailable. As this is an area of housing, and a popular beach destination, there is a high level of usage in this particular area, meaning the OAR route is likely to see a negligible change in use over existing levels.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The OAR passes through a mainly urban area which is unlikely to be used by non-breeding waterbirds on existing walked routes and pavements. It is expected that there will be negligible change in access on these routes as a result of the proposals.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p>
<p><b>Askam Pier to Sandscale Haws NNR Car Park.</b></p> <p>See Coastal Access report Silecroft to Silverdale 2, maps SCS 2f &amp; 2g.</p>	<p><b>Roost sites:</b></p> <p><b>Roanhead Crag</b> used primarily by oystercatchers in winter.</p> <p>According to the Duddon Estuary Roost report, birds roosting at Roanhead do not currently suffer from disturbance because the high tide cuts off access to the rocks.</p> <p><b>Feeding areas:</b></p>	<p>From Askam-in-Furness to the Sandscale Haws NNR National Trust car park there are high levels of existing access. From Askam-in-Furness as far as High Wood at Roanhead there are paths through the dune system. People exercise and walk their dogs (on and off lead) throughout the dune system and slacks. From this point, people walk to the National Trust site along the foreshore (roughly following the line of an existing bridleway) but are unable to pass beyond Roanhead Crag at high tide. At high tide it can be impassable for prolonged periods with the steep banks and cliffs inclining from farm land on top preventing people taking a higher, drier line.</p> <p>The intertidal from Askam Pier to Sandscale Haws NNR car park is a popular area for informal recreation and exercising dogs off lead.</p>	<p><b>Low risk</b></p> <p>Birds roosting at Roanhead do not currently suffer from disturbance because the high tide cuts off access to the rocks. This situation will not change after the introduction of coastal access.</p> <p>The proposed ECP will follow a new route on the top of the cliff. The cliffs are about 8m high, the new route is set back from the edge of the cliff and there is scrub</p>

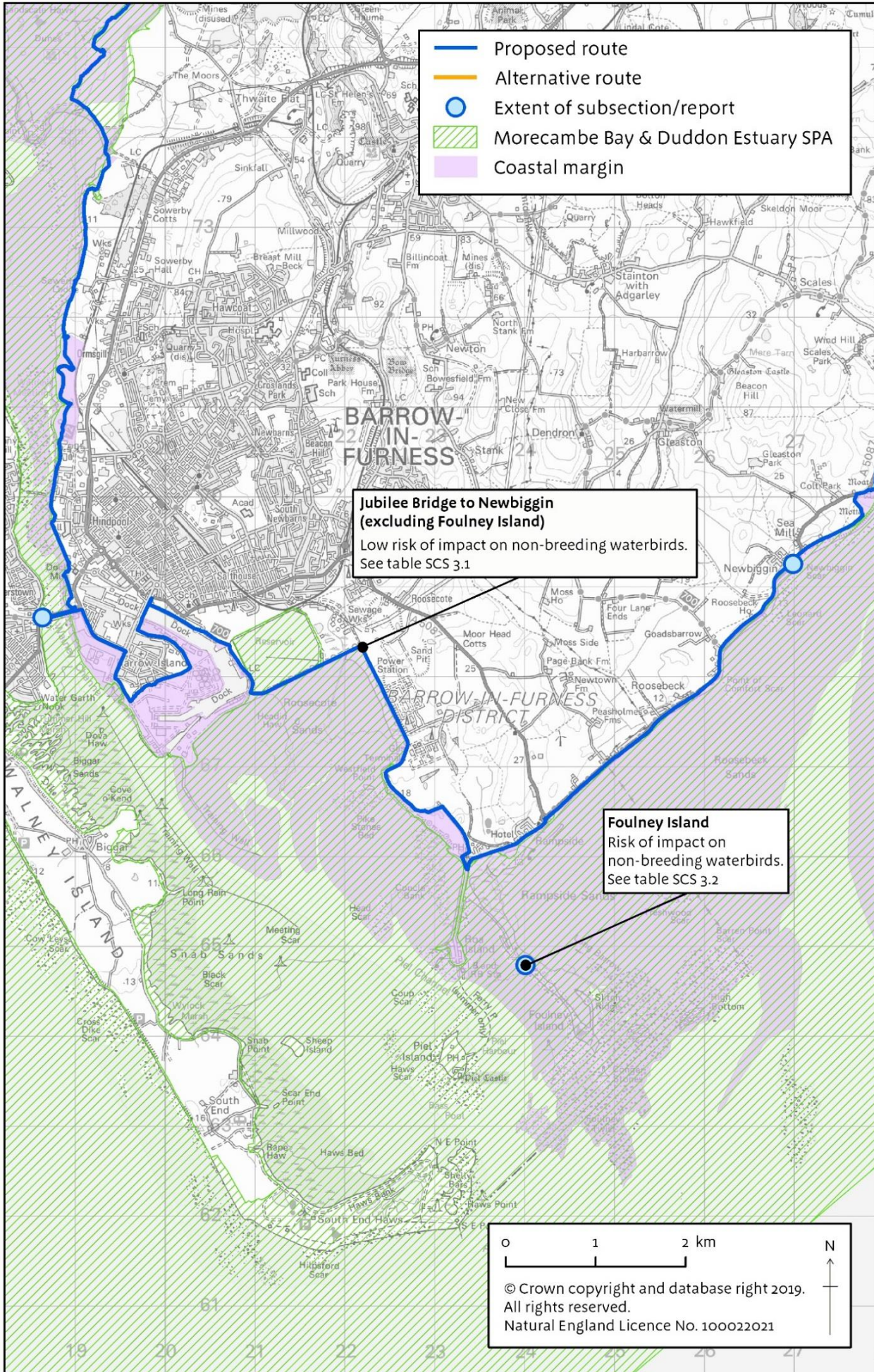
<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites.</b></p> <p>[Ref. 12, 19]</p> <p><b>Existing disturbance to non-breeding waterbirds (if known) [Ref. 12, 13,19]</b></p> <p>Birds feed on the saltmarsh and extensive tidal flats in this subsection.</p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p>The proposed ECP will follow a new route on the cliff above Roanhead Crag.</p> <p><b>Trail:</b> There will be a large increase in access along the ECP, as it takes people off the beach and allows them to walk along the coast at high tide.</p> <p><b>Coastal margin:</b> The intertidal in this subsection is currently very popular, especially for exercising dogs off lead. There will be negligible change in use in this area as a result of the coastal access proposals.</p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p> <p>between the trail and the cliff edge. Therefore it is very unlikely that roosting birds will be disturbed by people or dogs on the clifftop route.</p>
<p><b>Sandscale Haws NNR Car Park to Sowerby Woods.</b></p> <p>See Coastal Access report Silecroft to Silverdale 2, maps SCS 2h, 2i and direction map 2D. See also directions maps in Overview report.</p>	<p><b>High tide roosts:</b></p> <p><b>Area of sand and shingle to the west of the car park.</b> Dunlin, redshank, only present in winter.</p> <p><b>Area of sand and shingle north of Lowsy Point.</b> Dunlin, oystercatcher, sanderling, knot. This roost experiences regular disturbance from dog walkers.</p> <p><b>Stone spit just north of Lowsy Point.</b> Dunlin, oystercatcher, sanderling, knot.</p> <p><b>Scarth Bight Bay.</b> Redshank, ringed plover, curlew.</p> <p><b>Oak Head.</b> Surveys that are currently being carried out for a new development at Sandscale Park have shown the presence of a bird roost at Oak Head.</p> <p><b>Feeding areas:</b></p> <p>Birds feed on the saltmarsh and extensive tidal flats in this subsection.</p> <p><b>Breeding sites:</b></p> <p>Shelduck and ringed plover breed in the following areas within Sandscale Haws NNR:</p> <p><b>Wet Meadow</b> 1 pair of breeding shelduck.</p> <p><b>Sandscale Dunes</b> 10+ pairs of shelduck throughout area</p> <p><b>Lowsy Point</b> 1 pair ringed plover.</p>	<p>Sandscale Haws NNR is currently managed by the National Trust as open access land and is popular with locals, visitors and dog-walkers throughout the year. The site has car parking and toilets. The vast majority of visitors stick to the beach and area of dunes close to the car park.</p> <p>The intertidal around Sandscale Haws NNR is very attractive, comprising sandy beaches, and is popular with locals, visitors and dog-walkers.</p> <p>There are walked lines on the ground between Sandscale Haws and Sowerby Woods. This area is quieter and used by local dog walkers.</p> <p>The proposed ECP is aligned through sand dunes on an existing walked route.</p> <p><b>Trail:</b> Infrastructure improvements, waymarking and promoting the route as the ECP could lead to an increase in use of the trail.</p> <p><b>Coastal margin:</b> Sandscale Haws is currently managed as open access, with seasonal signage requesting that visitors keep dogs on a short lead or under control across the entire site (except for the beach) due to the presence of livestock and ground-nesting birds. Much of the Coastal margin is made up of sand dunes, which are difficult to traverse. Therefore it is expected that there will be negligible change in use of the margin as a result of the proposals. The intertidal area around Sandscale Haws is already very popular for recreation, including walking and dog-walking. This is not expected to change as a result of the proposals.</p>	<p><b>Low risk</b></p> <p>The high tide roosts and breeding areas fall within the Coastal margin. The proposed ECP is at least ½ mile from all the roost sites except the roost in Scarth Bight Bay.</p> <p>In this area, the proposed ECP is aligned on a vehicle track. There is a 5m high earth bund between the track and the marsh, and a fence seaward of the track. This will help to prevent people or dogs from leaving the track and walking on the marsh, and it is not expected that there will be an increase in access in the margin as a result of the proposals.</p> <p>The trail is aligned inland of the bird roost at Oak Head, and the roost cannot be seen from the trail.</p> <p>The trail is ½ mile inland from the ringed plover breeding site at Lowsy Point.</p> <p>It is also expected that there will be negligible change in access to the dunes system and Wet Meadow, where shelduck breed. The area is currently managed as open access with seasonal signage requesting that visitors keep dogs on a short lead or under control across the entire site (except for the beach) due to the presence of livestock and ground-nesting birds. This signage will remain in place after coastal access rights come into force. Signage will also be placed along the route of the ECP at Wet Meadow and Red Gutter, requesting that visitors keep dogs on a short lead or under control.</p> <p>As it is expected that there will be negligible change in access to the margin as a result of the proposals, the risk</p>

Location	Species present and location of roosts sites, feeding areas and breeding sites. [Ref. 12, 19]  Existing disturbance to non-breeding waterbirds (if known) [Ref. 12, 13,19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.  of an increase in disturbance of the roosting or breeding birds is low.
		Access proposal	
		Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<p><b>Sowerby Wood to Jubilee Bridge.</b></p> <p>See Coastal Access report Silecroft to Silverdale 2, maps SCS 2i to 2l and direction map 2D. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b> There are no mapped roosts in the Duddon Estuary Roost Report for this section, although birds may roost along this stretch.</p> <p><b>Feeding areas:</b> Birds feed on the saltmarsh and extensive tidal flats in this subsection.</p> <p><b>Breeding sites:</b> There are no records of breeding redshank, ringed plover or shelduck in this subsection.</p>	<p>There is some existing use of the top of the foreshore, along the Walney Channel from Sowerby Woods towards Barrow, following the line of the former Cumbria Coastal Way, but the beach is rather uneven and sticky underfoot and prone to inundation at high tide.</p> <p>The slag banks from Palace Nook to Ormsgill Lane are currently open to public access and are used by local people for dog walking and recreation. There is a well-used and surfaced permissive footpath over the southernmost slag bank, dropping down onto the promenade.</p> <p>Between Sandscale Haws and Jubilee Bridge the majority of the intertidal margin is unpleasant underfoot and as a consequence it is not often accessed. There is some limited use by sailors and fishermen.</p> <p>From Sowerby Wood to the slag banks a new path will be created at the seaward edge of fields. There will be a large increase in the use of the trail in this area.</p> <p>There will be negligible change in use of the trail on the slag banks and promenade to Barrow as this route is popular with walkers, dog walkers, cyclists and students accessing Furness College.</p> <p>Access is excluded from most of the Coastal margin under s25A as it is unsuitable for access. There will be a strip of spreading room along the top of the foreshore. Access may increase in this area.</p>	<p><b>Low Risk</b></p> <p>Most of the new route, where a large increase in access is expected, is aligned at the top of low boulder clay cliffs which will prevent people from getting onto the foreshore, and with some areas of gorse between the path and the cliff edge providing screening. However in one section, approx. 200m long, the path is aligned on the foreshore.</p> <p>The former Cumbria Coastal Way was aligned along the foreshore in this location, and people still walk the route. It is a shingle beach, with mud further out, and is not a particularly pleasant or easy walk. Therefore the new route in the fields is likely to be used instead of the foreshore. There may be some increase in access to the margin in the short section where the path is on the foreshore, but probably a drop in the number of people walking the whole length of foreshore here. Therefore overall use of the foreshore is likely to decrease as a result of the proposals.</p>

**Table SCS 2.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

<b>Location</b> Cross reference to the Coastal Access Report	<b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 12, 19]</b>  <b>Existing disturbance to non-breeding waterbirds [Ref. 12, 13, 14, 19]</b>	<b>Existing recreational use in the areas used by these species</b>	<b>Likely effects without mitigation</b>	<b>Mitigation incorporated into this proposal to manage risk</b>	<b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds.</b>
		<b>Access proposal (excluding mitigation)</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b>			
<b>Kirkby-in-Furness to Dunnerholme</b>  See Coastal Access report Silecroft to Silverdale 2, maps SCS 2b to 2d and direction map 2B. See also directions maps in Overview report.	<b>Roost sites:</b> The coast between Kirkby-in-Furness and Dunnerholme is likely to support high tide roosts, but exact locations are unavailable. 865 non-breeding oystercatcher were recorded roosting on Dunnerholme Marsh, with 20 more on Soutergate marsh, during the 2016 breeding bird survey.  <b>Feeding areas:</b> Birds feed on the saltmarsh and extensive tidal flats in this subsection.  <b>Breeding sites:</b> The potential for full marsh zonation in this area is restricted by the railway. This limits the potential habitat for breeding waders and makes any attempt far more susceptible to being washed out from large tides.	In general this subsection has fairly high levels of use by walkers.  A railway line runs parallel to the coast here, and there are Public Rights of Way or existing walked routes seaward of the railway line for most of this subsection. The former Cumbria Coastal Way was aligned on these routes seaward of the railway. Some of the routes are inundated at high tide.  A local footpath group waymark a route from Soutergate Crossing to Dunnerholme with poles at intervals across the higher part of the marsh.  The ECP will be aligned on the existing paths seaward of the railway line. <b>Trail:</b> It is expected that there will be a small increase in access as a result of promotion of the ECP.  <b>Coastal margin:</b> There could be a change in use of the margin. In this area it is expected that use of the ECP will increase. The proposed ECP is aligned over the driest part of the saltmarsh, and it is likely that walkers will keep to the line as proposed. Current use confirms this assumption, as most people remain on the waymarked path. It is not expected that access to the margin by people will increase as a result of the proposals; however it is likely that there will be more dogs off-lead in the margin.	There could be an increase in the number of dogs in the margin as a result of the proposals. This could lead to increased disturbance to roosting birds.	Signage, to ask walkers to keep dogs under control.  It is not possible to put a 'dogs on leads to line of the trail' restriction on this section because it is a Public Right of Way. Therefore it is proposed that signs will be placed at access points to the trail, asking people to keep dogs under control in order to prevent disturbance to birds.	<b>Low Risk</b>  This route is already walked and promoted locally, any small increase in disturbance to roosting birds as a result of our proposals will not have a significant impact on populations of non-breeding birds.

**Coastal Access Report SCS 3 Jubilee Bridge (south) to Newbiggin**





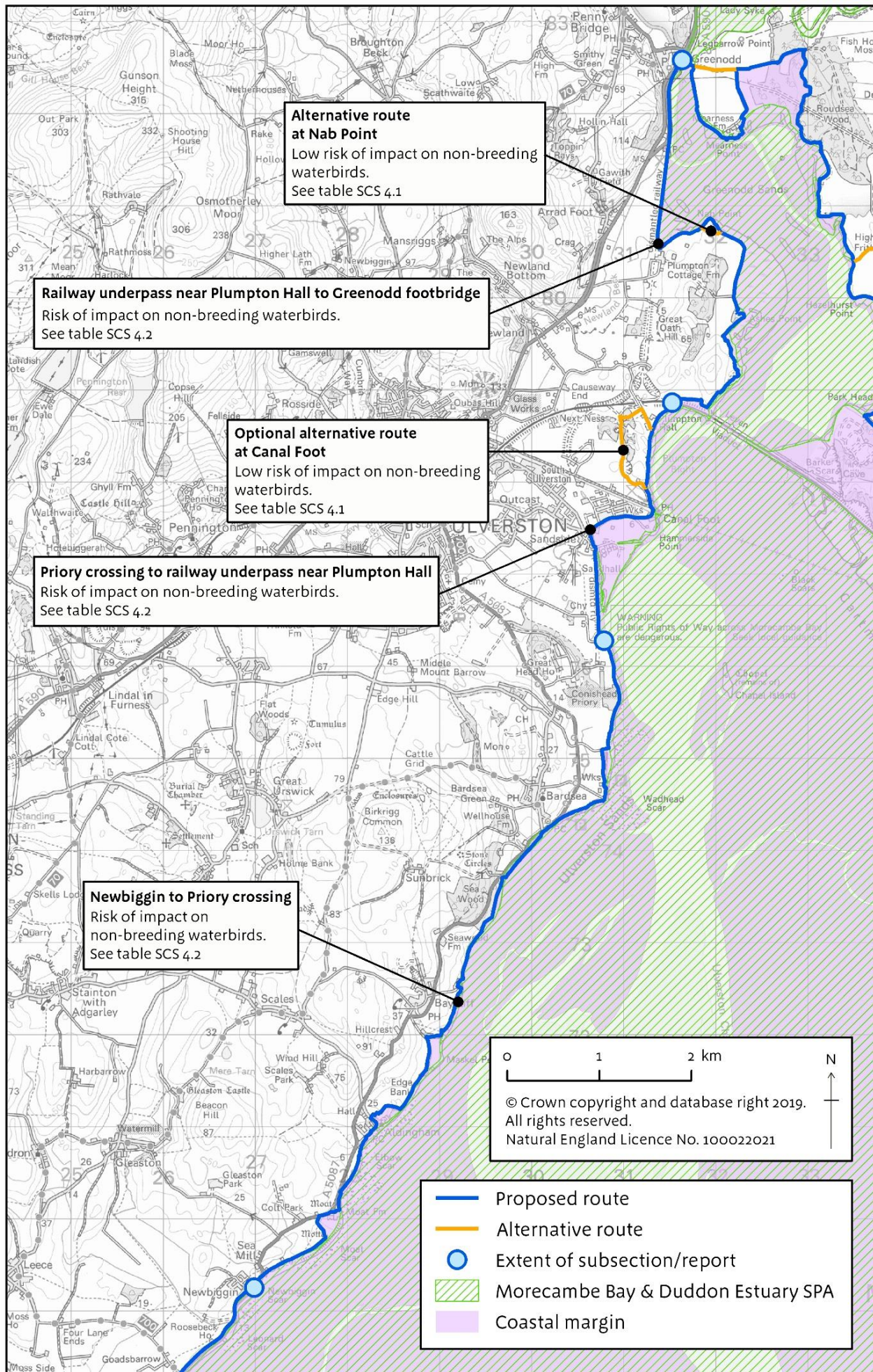
**Table SCS 3.1 Areas where there is a low risk of impact on non-breeding waterbirds:**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<p><b>Jubilee Bridge to Newbiggin (Excluding Foulney Island).</b></p> <p>See Coastal Access report Silecroft to Silverdale 3, maps SCS 3a - 3h and direction maps SCS 3A-3C. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Cavendish Dock</b> – Dunlin, knot, redshank, turnstone.</p> <p><b>Headin Haw</b> (Roosecote Sands) – Dunlin, eider, knot, lapwing, oystercatcher, redshank, shelduck, turnstone.</p> <p><b>Training Wall</b> – knot.</p> <p><b>Gas Terminal saltmarsh</b> – curlew, redshank, wigeon.</p> <p><b>Rampside</b> – Brent goose (nationally important numbers), curlew, dunlin, eider, knot, lapwing, redshank, shelduck, wigeon.</p> <p><b>Newbiggin</b> Dunlin, eider, lapwing, oystercatcher, pintail, ringed plover, sanderling, shelduck, wigeon.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the intertidal flats, rocky skears and saltmarshes for feeding.</p> <p><b>Breeding sites:</b></p> <p><b>Pike stones bed</b> 1 pair ringed plover</p>	<p>There is widespread access provision in this subsection.</p> <p>A surfaced cycleway runs between Barrow and Rampside. The majority of existing users are local dog walkers and cyclists commuting along the National Cycle route, but it is also popular with recreational users. There is a Right of Way on the foreshore east of Roa Island and a path beside the sea defences between Rampside and Newbiggin.</p> <p>Roa Island will fall within the Coastal margin. Roa Island mostly consists of urban areas and is connected to the mainland by a man-made causeway. It is a popular destination for visitors, especially those wanting to take a ferry to nearby Piel Island. From the Roa Island causeway, a further man-made shingle and rock causeway provides access to Foulney Island (see table SCS3.2 for info on Foulney Island).</p> <p>Generally, the intertidal in this subsection has little existing access, except for the 165m section east of Roa Island. The intertidal muds are not attractive and do not draw people to walk/picnic/sunbathe.</p> <p>The proposed ECP is aligned on pavements and the cycleway between Barrow and Rampside, and on the path between the sea defences and pavements between Rampside and Newbiggin.</p> <p><b>Trail:</b> Due to the high levels of existing use, there will be a negligible increase in use along the line of the ECP in this sub-section as a result of the proposals.</p> <p><b>Coastal margin:</b> There will be a negligible change within the Coastal margin. Access will be excluded from large areas of saltmarsh and flat under s25A as they are considered to be unsuitable for access. Industrial and urban land around Barrow Island, almost all of which is excepted land (buildings and curtilage) will not have coastal access rights. Farmland at Beacon Hill is behind tall hedges and is not easy to access.</p> <p>The area between Ridding Head Scar and Roa Island will become spreading room. This area is mainly intertidal muds and sands which are not particularly pleasant to walk on. There are no attractors to draw people onto the flats, therefore it is not expected that there will be an increase in use of this area as a result of the proposals. The thin section of accessible foreshore at the start of the Roa Island causeway is already used by dog-walkers and is unlikely to see a significant increase in use as a result of the coastal access proposals.</p> <p>Parts of Roa Island will become spreading room. Walkers following the England Coast Path are likely to visit Roa Island but, as this already receives a high number of visitors, it is unlikely that these proposals will lead to a significant change in use.</p>	<p><b>Low risk</b></p> <p>The proposed ECP is aligned close to several roosts.</p> <p>The proposed ECP is aligned on a popular cycle route near the roost at Cavendish Dock. The roost is landward of the trail, so does not fall within the Coastal margin. The cycle route sees a great deal of activity throughout the week and at all times of year. Given this high level of existing use, we expect a negligible change in levels and patterns of use and therefore do not expect any additional disturbance in this location as a result of our proposals.</p> <p>The ECP is aligned on a busy cycle route close to the gas terminal saltmarsh roost. This marsh falls within the Coastal margin but we are proposing to exclude access under s25A, so there will be no new rights of access to the marsh. There is some scrub at the back of the marsh, which acts as a barrier between the path and the marsh. It is expected that there will be negligible change in access along the path as a result of the Coastal Access proposals, and therefore no additional disturbance to the roost.</p> <p>The proposed ECP is close to the roost at Newbiggin. The ECP follows the pavement alongside the coast road and then an existing walked gravel track. Although the route is close to the roost, this is already a popular area for walkers. As part of our proposals, we will install signage at each end of the roost site, informing walkers to keep dogs on lead at high tide.</p> <p>The other roosts are not close to the ECP, and fall within areas where access is excluded under s25A.</p> <p>The ECP is aligned on a public footpath 250m inland of an area at Pike Stones Bed where ringed plover breed. This area (between Ridding Head Scar and Roa Island) falls within the Coastal margin, and access is not expected to increase in this area of margin.</p> <p>Therefore the proposals will not cause an increase in access in the area used by breeding ringed plover.</p>

**Table SCS 3.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
<p><b>Foulney Island.</b></p> <p>Area only visible on directions maps in the Silecroft to Silverdale report 3 maps SCS 3B &amp; 3D – 3F.</p>	<p><b>Roost sites:</b></p> <p>Foulney Island - bar tailed godwit, curlew, dunlin, eider (nationally important numbers), grey plover, knot, lapwing, oystercatcher, pintail, redshank, ringed plover, sanderling, shelduck, turnstone, wigeon.</p> <p>Foulney is an important refuge for Curlew (1,000+), when they are disturbed from Rampside (usually by kite surfers). It is also important for over 4,000 eider which roost and moult in the area, including crèches from Walney. The biggest disturbance threat currently is from the kite surfers; there is a voluntary agreement in place to stay away from the roosting areas. The voluntary agreement currently seems to be working. There are also some problems with kayakers landing on Foulney at high tide and disturbing the roosts, and minor displacement caused by fisherman. Currently disturbance of roosts by walkers or dogs does not appear to be an issue. Many visitors come by car and park in the car park on the Roa Island causeway, which is the closest and most convenient place to park. From here it is about 2km to the furthest point; the surface is not easy to walk on and the route is virtually impassable at high tides.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the intertidal flats, rocky skears and saltmarshes for feeding.</p> <p><b>Breeding sites:</b></p> <p>8 pairs of ringed plover bred on Foulney in 2015.</p>	<p>Foulney Island is a nature reserve managed by Cumbria Wildlife Trust. It is attached to the mainland by a man-made causeway. Access is restricted to marked routes only in the summer to prevent disturbance to ground-nesting birds. Between 16th August and 31st March walkers with dogs on leads can access Foulney Island.</p> <p>Foulney Island falls within the Coastal margin. If it became spreading room, and the current access restrictions were lifted, access in this area could increase.</p>	<p>Under current access arrangements, in order to reduce disturbance to bird roosts, between 16th August and 31st March dogs must be on leads on Foulney Island.</p> <p>Without mitigation, people would be able to have dogs off lead on Foulney and this could lead to increased disturbance of non-breeding birds.</p>	<p>It is proposed that access is restricted or excluded in the following areas under Section 26 (nature conservation):</p> <ul style="list-style-type: none"> <li>- Shingle and rocky skears around Foulney embankment and Foulney Island. No public access all year. To prevent disturbance to roosting and breeding birds.</li> <li>- Foulney embankment and Foulney Island. Dogs on leads 16th August to 31st March each year. To prevent disturbance to roosting birds.</li> <li>- Foulney embankment and Foulney Island. No public access 1st April to 15th August each year. To prevent disturbance to nesting birds.</li> </ul>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, access arrangements on Foulney Island will not change, allowing Cumbria Wildlife Trust to continue to manage the site for birds and allow managed access on a managed marked route.</p>

# Coastal Access Report SCS 4 Newbiggin to Greenodd Footbridge



**Table SCS 4.1 Areas where there is a low risk of impact on non-breeding waterbirds**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<b>Optional alternative route (OAR) at Canal Foot</b>  See Coastal Access report Silecroft to Silverdale 4, map SCS 4g.	The OAR is aligned outside of the boundary of the SPA / Ramsar site. There is a bird roost on the marsh at Plumpton Hall. There is no information in the Wader Roost report about this roost. There are some hilly fields and woods between the OAR and the SPA boundary, it is not thought that these are particularly suitable habitat for non-breeding waterbirds.	This is a popular area for walkers.	<b>Low risk</b> There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR. The route starts and finishes on roads and footpaths through areas of housing, taking walkers away from the coast and behind a craggy outcrop. For most of its length the OAR is 200-400m inland of the boundary of the SPA and the bird roost at Plumpton Hall. Where it is closer to the roost, walkers and dogs will not be visible as the route is perpendicular to the coast and aligned on roads through areas of housing. There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.
		The OAR is an inland route for use at high tide. It is aligned on a public right of way, (or on the existing walked line used as the public right of way).  This is a well walked route which is currently used as a circular walk with the PRow that is proposed as the main ECP. The OAR will be required around most high tides so therefore we expect levels of use to increase in a similar way to those for the main ECP. It is therefore expected that there will be a small increase in use of the OAR.	
<b>Alternative route (AR) at Nab Point.</b>  See Coastal Access report Silecroft to Silverdale 4, map SCS 4i.	The AR is aligned outside of the boundary of the SPA / Ramsar site. There is a high tide roost at Nab Point. This seasonal alternative route is mitigation to prevent disturbance to the bird roost at Nab Point.	There is no existing public right of access in this area, and current use by walkers is extremely low or non-existent.	<b>Low risk</b> There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the AR.  This is because the route is designed to avoid disturbance to roosting birds at Nab Point. The route is aligned within a field, and we propose to gap up an existing hedge and install a fence to the seaward side of the route, in order to prevent walkers and dogs from leaving the line of the trail.  There is no Coastal margin associated with an AR, other than the narrow strip of land on which the AR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the AR and the main ECP.  More information about the mitigation for non-breeding waterbirds at Nab Point is given in table SCS4.2.
		The alternative route is open when the main ECP is closed between 1st September and 31st March. It is aligned on a new route inland of Nab Point, avoiding the area used by roosting birds. It is expected that there will be a large increase in access in this area.	

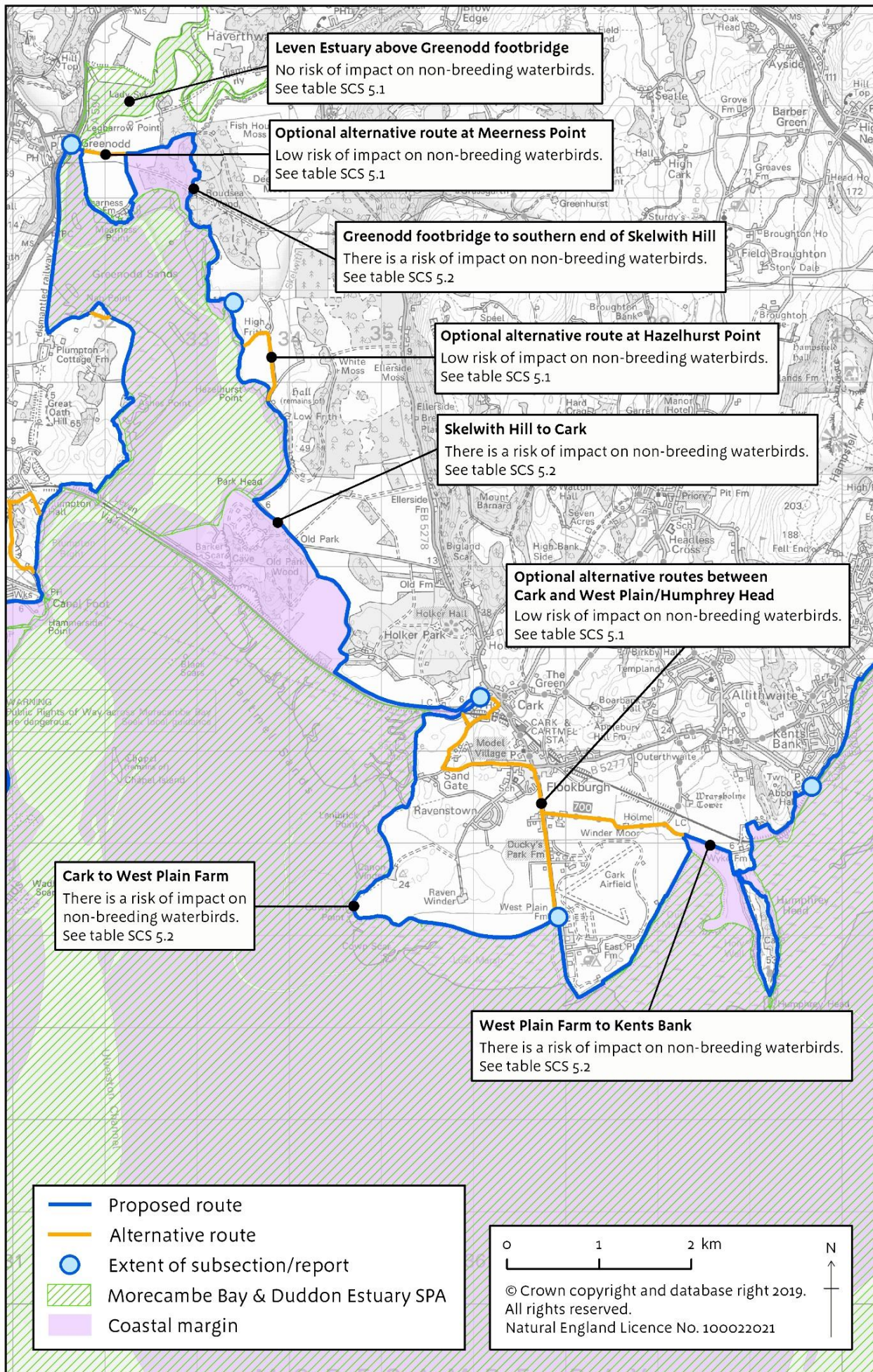
**Table SCS 4.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]  Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non- breeding waterbirds
		Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
<p><b>Newbiggin to Prioory Crossing (near Ulverston).</b></p> <p>See Coastal Access report Silecroft to Silverdale 4, maps SCS 4a – 4e and direction map SCS 4A. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Aldingham</b> Curllew, eider, grey plover, oystercatcher, redshank, sanderling, shelduck.</p> <p><b>Maskel Point</b> Eider, oystercatcher, redshank, shelduck.</p> <p><b>Bardsea</b> Curllew, dunlin, eider, grey plover, lapwing, oystercatcher, pintail, redshank, ringed plover, sanderling, shelduck, turnstone, wigeon.</p> <p><b>Conishead Bank</b> Curllew, dunlin, knot, ringed plover, turnstone.</p> <p>Disturbance by people and dogs is already an issue at these roost sites.</p> <p><b>Feeding areas:</b> Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p><b>Breeding sites:</b></p> <p><b>Beach Wood</b> (near Conishead Prioory) 1 pair of ringed plover.</p> <p><b>Bardsea</b> 1 pair shelduck.</p> <p>The majority of this subsection has low numbers of breeding birds, due to lack of suitable habitat, and existing recreational disturbance.</p>	<p>This subsection is popular with local dog-walkers in particular and also day-trip visitors. There are informal laybys scattered along the coast road, and use of the foreshore for recreation is concentrated in these areas. Visitors are attracted by the wide expanses of sand exposed at low tide, and often walk large distances from the shore. Horse riders use the intertidal along this whole subsection.</p> <p>The settlements of Aldingham and Bardsea are the most popular locations for dog-walkers.</p> <p>The former Cumbria Coastal Way followed the coast road and other publicly accessible routes linking up Ulverston and a series of smaller settlements along this subsection. Although the Cumbria Coastal Way is no longer promoted, it is marked on older OS maps and there are still some signposts on the ground.</p> <p>The proposed England Coast Path generally follows the route of the former Cumbria Coastal Way in this subsection, but includes several new sections of path at Leonard Scar (south of Newbiggin), Moat Farm, Aldingham, Baycliff and on the disused railway line at Ulverston.</p> <p><b>Trail:</b> There will be a small increase in use on existing walked sections, and a larger increase where new sections of path are proposed.</p> <p>Any increase in use is likely to be from day walkers or long-distance walkers as the area is already well known among local dog-walkers.</p> <p>In the areas with new sections of path, there is existing access along the foreshore (where the former Cumbria Coastal Way was aligned). The new access will be in fields. It is expected that there will be a small shift in walkers from the shore to these new sections, although the majority of existing users are dog walkers and will prefer to remain on the shore for recreational purposes.</p> <p><b>Coastal margin:</b> There is long established use of the extensive sand flats for recreation, including walking, horse riding and dog walking in addition to other pursuits such as fishing etc. The proposals will not create any new opportunities for recreation. There is no reason to suppose that the proposals will alter established use and practice. Neither do we expect to see a change on the current pattern of use, with access concentrated closer to the areas of parking.</p>	<p>The proposed ECP runs close to many of the roost sites in this subsection, and disturbance of roosting birds, particularly from dogs off lead, could increase slightly as a result of the proposals.</p>	<p>In order to reduce disturbance to birds roosting along the shore the following mitigation is proposed:</p> <p>Two of the same sign, one at each end of the roost, are proposed at the following roosts: Newbiggin, Aldingham, Maskel Point, Bardsea, Conishead Bank. The signs will raise awareness of the roosts, ask people to stick to the path at high tide, rather than walking along the beach, and to keep dogs on a short lead at high tide. We will work closely with Morecambe Bay Partnership to agree the messages for the signs, using the recommendations from the Morecambe Bay Disturbance &amp; Access Management report [Ref. 11] and the Waders &amp; Wildfowl Interpretation Plan [Ref. 16].</p>	<p><b>Low risk</b></p> <p>The new sections of path will take people off the foreshore and away from the Aldingham and Maskel Point roosts thus reducing disturbance to these roosts.</p> <p>At Bardsea and Conishead Bank, the ECP follows busy existing walked lines or Public Rights of Way close to the roosts and breeding areas. We do not expect any significant change in levels of access as a result of the proposals.</p> <p>The proposed signage at the roost sites aimed at dog walkers, will help to educate existing users as well as those attracted by the ECP.</p>

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19] Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
		Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
<p><b>Priory Crossing (near Ulverston) to railway underpass near Plumpton Hall.</b></p> <p>See Coastal Access report Silecroft to Silverdale 4, maps SCS 4f – 4g and direction maps SCS E6, 4B, 4E. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b>  <b>Chapel Island</b> Eider, oystercatcher, shelduck, wigeon. Levels of disturbance are fairly low due to distance from shore, however guided walks to the island can cause disturbance.  <b>South Ulverston (Carter Pool)</b> dunlin, knot, oystercatcher, redshank (in nationally important numbers), ringed plover, shelduck.  This is the only undisturbed roost in the Bardsea WeBS sector.  <b>Plumpton Hall</b> No info in the Wader Roost report about this roost  <b>Feeding areas:</b>  Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.  <b>Breeding sites:</b>  <b>Glaxo disused refuse site</b> Ringed plover have been recorded breeding here.</p>	<p>There are no paths along the foreshore between Priory Crossing and Canal Foot. This area is fairly inaccessible due to deep creeks and industrial buildings. There are public footpaths between Canal Foot and the railway underpass.  It is possible to walk to Chapel Island from Canal Foot, although this can be dangerous due to sinking sands, deep creeks and fast rising tides. Guided walks take place during the summer. Some of the mudflats between the shore and Chapel Island will be subject to a s25A access exclusion.</p> <p>The proposed ECP is aligned on a disused railway line and pavement/roads between Priory Crossing and Canal Foot. From Canal Foot to the railway underpass at Plumpton Hall, the ECP follows the public footpath.  <b>Trail:</b> There will be a large increase in use on the disused railway line, and a small increase in use on the other sections of the trail in this area.  <b>Coastal margin:</b> In the area between the disused railway line and at Canal Foot, access to the margin may increase. Access to the Glaxo disused refuse site, which will fall within the margin, is currently discouraged by the landowner. We expect an increase in use on the line of the trail along the old railway line, and this will mean more people could access the margin in this area.  Access to the rest of the margin in this subsection is not likely to increase as a result of the proposals.</p>	<p>Of particular concern is that access will increase near the <b>South Ulverston (Carter Pool) roost</b> and the <b>breeding site at Glaxo disused refuse site</b> as a result of the proposals. South Ulverston is currently the only undisturbed roost on the Bardsea WeBS sector. Increased access in this area will lead to increased disturbance of roosting birds.</p>	<p>In order to prevent disturbance as a result of the proposals to roosting and breeding birds at South Ulverston / Carter Pool /Glaxo disused refuse site the following mitigation is proposed:</p> <p>a) Access will be restricted or excluded year round in the following areas under Section 26 (nature conservation):</p> <ul style="list-style-type: none"> <li>i)Carter Pool and old refuse site area</li> <li>ii)Saltmarsh area adjacent to the old railway line</li> </ul> <p>b) Clear directional signage at Canal Foot for people walking south, so that it is clear that the ECP heads inland rather than continuing south along the shore.</p> <p>c) Signage at Canal Foot, explaining that there is no access on the foreshore beyond Hammerside Point as the area is unsuitable for access and important for nature conservation.</p> <p>d) Measures to keep people and dogs on the line of the trail on the disused railway line coming in to Ulverston from the south, to prevent disturbance to the South Ulverston Roost and breeding birds on the slag tips:</p> <ul style="list-style-type: none"> <li>i) Existing wall will be repaired to discourage access to the foreshore</li> <li>ii) Scrub will be planted in gaps to discourage access to the shore.</li> </ul> <p>Signage at Plumpton marsh to raise awareness of the roost, ask people to stick to the path at high tide, rather than walking along the beach, and to keep dogs on a short lead at high tide.</p> <p>In order to reduce disturbance to breeding birds on Chapel Island the following mitigation is proposed:  It is possible to walk to Chapel Island from Canal Foot, however the area is considered unsuitable for access and access will be restricted under s25A. A sign will be installed at Canal Foot to advise people that there are no new coastal access rights on the flats and between Canal Foot and Chapel Island.</p>	<p><b>Low risk</b>  No new access rights will be created in the area which is currently undisturbed and used by roosting and breeding birds (South Ulverston / Carter Pool / Glaxo old refuse site).</p> <p>There will be no new access rights on the flats between Canal Foot and Chapel Island as a result of the proposals.</p> <p>The proposed mitigation, particularly signage at the roost sites aimed at dog walkers, will help to educate existing users as well as those attracted by the ECP.</p>

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19] Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
		Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
<p>Railway underpass near Plumpton Hall to Greenodd Footbridge.</p> <p>See Coastal Access report Silecroft to Silverdale 4, maps SCS 4g – 4j and direction maps SCS 4C, 4D, 4F, 4G. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b> <b>Leven Viaduct West</b> (curlew, lapwing, oystercatcher, redshank). <b>Arrad Marsh / Nab Point</b> (lapwing, oystercatcher, shelduck).</p> <p><b>Feeding areas:</b> Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p><b>Breeding sites:</b> Shelduck may be breeding on <b>Ashes Point</b>.</p>	<p>Walkers from Canal Foot rarely venture past the underpass at Plumpton. Although a Public Right of Way does continue past Tridley Point, this becomes difficult to follow on the ground.</p> <p>There is no existing public right of access for at least half of this subsection, between the end of the PRow just north of Tridley Point, and the car park at Greenodd parking area.</p> <p>Fishermen and walkers access the old railway line south of Greenodd rest area and the margin from Greenodd rest area to Greenodd footbridge.</p> <p>From the parking area to Greenodd footbridge there is a popular path along the side of the estuary.</p> <p>New rights of access are proposed in this subsection, from Tridley Point to Greenodd rest area.</p> <p><b>Trail:</b> There will be a large increase in access in the majority of this sub-section.</p> <p>The proposals represent a significant change to the existing access provision in this area. However, the lack of circular route options means that this is unlikely to become a local dog-walking route, but rather a longer distance walk connecting Canal Foot and Ulverston to Greenodd.</p> <p><b>Coastal margin:</b> Most of the proposed Coastal margin is not suitable for access, being intertidal saltmarshes and flats, and access will be excluded under s25A. Part of Arrad marsh is not covered by the s25A exclusion, and it is possible that numbers of people and dogs in this area may increase.</p>	<p>For much of this subsection, the ECP is aligned behind fences, and away from the marshes. The proposed ECP goes through the roost site at Nab Point, which would lead to an increase in disturbance.</p> <p>Access may increase at Arrad Marsh and Tridley Point, leading to increased disturbance of roosting birds.</p>	<p>In order to prevent disturbance of birds roosting at <b>Nab Point and Arrad Marsh</b> the following mitigation is proposed:</p> <ul style="list-style-type: none"> <li>- Total access exclusion 1st September to 31st March each year to the areas of Arrad Marsh not covered by s25A</li> <li>- Seasonal closure of the route around Nab Point 1st September – 31st March each year, and provision of a seasonal alternative route. Gates at each end of the seasonally closed route will be locked.</li> <li>- Signage at both ends of the winter route explaining the seasonal restrictions.</li> <li>- Reinstating hedgerow / fencing seaward of the seasonal alternative route to keep people away from Nab Point.</li> </ul> <p>In order to prevent disturbance to birds on the marsh at <b>Ashes Point</b>, where the proposed ECP is aligned along an embankment:</p> <ul style="list-style-type: none"> <li>- Access will be excluded under s26 from a strip of land seaward of the trail which is not covered by the s25A exclusion.</li> <li>- A section of guide fencing (969m long) will be installed on the embankment at Ashes Point marsh, to keep people and dogs on the line of the embankment.</li> <li>- Dogs on leads restriction all year on the line of the trail. To prevent disturbance to roosting birds.</li> <li>- Signage will be installed at each end of the embankment explaining the access exclusions on the marsh, and asking people to keep their dogs under control and to prevent them roaming onto the marsh.</li> </ul> <p>At <b>Tridley Point</b>, a 450m long fence will be replaced around the headland. The ECP will be landward of the fence, which will prevent people and dogs from accessing the intertidal areas north of Tridley Point.</p> <p>Once the trail is open, Natural England will ensure that arrangements are in place to check that gates are locked at the correct time of year, the fencing is in good condition and repairs made promptly if necessary.</p>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, there is a low risk of an increase in disturbance to breeding and roosting non-breeding waterbirds as a result of the proposals.</p> <p><b>Arrad Marsh / Nab Point</b></p> <p>The ECP runs adjacent to Arrad Marsh and goes through the roost area at Nab point. The seasonal route at Nab Point and other mitigation at both sites will ensure that disturbance does not increase.</p> <p><b>Ashes Point</b></p> <p>There is a fence between the path and the Leven Viaduct West roost, and scrub seaward of the path blocking views of the marsh. The marsh is unsuitable for access, and access will be excluded from the marsh under s25A. Therefore these proposals will not cause an increase in disturbance to the roost.</p>

# Coastal Access Report SCS 5 Greenodd Footbridge to Kents Bank





**Table SCS 5.1 Areas where there is a low risk of impact on non-breeding waterbirds**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<p><b>Leven Estuary above Greenodd Footbridge</b></p> <p>See <i>Greenodd Footbridge to Kents Bank</i> map (above) for location.</p>	<p>The SPA / Ramsar site extends up the estuary for 3 miles beyond Greenodd Footbridge almost to the village of Haverthwaite. Non-breeding waterbirds could be roosting, breeding and feeding in this area of the SPA.</p>	<p>This was not assessed, as this area of the SPA / Ramsar site is unaffected by our proposals.</p> <p>The proposed ECP crosses the Leven Estuary using Greenodd Footbridge. The area landward of the footbridge will not fall into the Coastal margin. The SPA / Ramsar site extends for 3 miles upstream of Greenodd Footbridge. No new access rights will be created in the area of the SPA / Ramsar site upstream of the Greenodd Footbridge. Therefore we do not expect access to increase in this area.</p>	<p><b>Not affected by the proposals</b></p> <p>The coast path crosses the Leven Estuary using Greenodd Footbridge. This part of the SPA is north of Greenodd and inland of the coastal path. It is therefore not in the project area and is not affected by the coastal access proposals.</p>
<p><b>Optional alternative route (OAR) at Mearness Point</b></p> <p>See Coastal Access report Silecroft to Silverdale 5, map SCS 5a.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site. The fields adjacent to the OAR, and the fields between the OAR and the ECP, could be supporting habitat for non-breeding waterbirds.</p>	<p>This is a popular area for walkers and cyclists, being easily accessible from Greenodd. There is a network of public rights of way, a cycle route and permissive routes.</p> <p>The OAR is an inland route for use at high tide. It is aligned on a public right of way, which also forms part of a locally promoted circular route. As this area is already popular with walkers, it is expected there will be negligible change in access on the OAR.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is aligned on a public footpath which is already used by walkers. It is expected that there will be negligible change in access on the public footpath as a result of our proposals.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p>
<p><b>Optional alternative route (OAR) at Hazelhurst Point</b></p> <p>See Coastal Access report Silecroft to Silverdale 5, map SCS 5c.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site. The fields adjacent to the OAR, and the fields between the OAR and the ECP, could be supporting habitat for non-breeding waterbirds. However we have no survey data to support this.</p>	<p>There is little to no public access in this area.</p> <p>The OAR is an inland route for use at high tide. It is aligned on estate vehicle tracks.</p> <p>There will be an increase in levels of use of the tracks, as this area currently sees little to no existing public access. However, the remoteness of the area and limited parking will prevent this route from becoming very busy.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is aligned on estate tracks, which are used by vehicles. There are fences / hedges on both sides of the tracks, which will prevent people and dogs from accessing the adjacent fields.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p>
<p><b>Optional alternative routes (OARs) between Cark and West Plain / Humphrey Head</b></p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site. The fields adjacent to the OARs, and the fields between the OARs and the ECP, could be supporting habitat for</p>	<p>There are popular paths along the coast in this subsection.</p> <p>This area is well used by locals and by people staying at the Lakeland Leisure caravan park at West Plain. The caravan site is very busy and open all year round.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OARs.</p>

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p> <p>See Coastal Access report Silecroft to Silverdale 5, map SSC 5m &amp; 5n.</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p> <p>non-breeding waterbirds. However we have no survey data to support this.</p>	<p><b>Existing recreational use in the areas used by these species</b></p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p> <p>The OARs are aligned on minor roads, which are used by vehicles. There are fences / hedges on both sides of the tracks, which will prevent people and dogs from accessing the adjacent fields.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p>
		<p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	
		<p>The OARs form a network of inland routes for use at high tide. They are aligned on minor roads and pavements. They connect Cark with the village of Flookburgh, and re-join the ECP at West Plain caravan park and Humphry Head. There may be a small increase in walkers using these roads as a result of the proposals, but it is also possible that existing levels of use will diminish, with walkers opting to use the main ECP route (tides permitting).</p>	

**Table SCS 5.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal (excluding mitigation)</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Likely effects without mitigation</b></p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b></p>
<p><b>Greenodd Footbridge to south end of Skelwith Hill.</b></p> <p>See Coastal Access report Silecroft to Silverdale 5, maps SCS 5a – 5c and direction maps SCS 5F, 5G, 5H. See also directions maps in Overview report.</p>	<p><b>Bird roosts:</b></p> <p>There are no records of bird roosts in this subsection.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p><b>Breeding sites:</b></p> <p>There are no confirmed records of breeding redshank, ringed plover or shelduck in this subsection. Shelduck have been observed in the area during the breeding season.</p>	<p>There is existing access on a permissive route from the Greenodd footbridge to Mearness Point. The route is popular with local dog-walkers, particularly over the marsh to the south of Greenodd footbridge.</p> <p>There is a network of permissive routes through the woodland at Roudsea Wood and Mosses NNR (but none along the coast): visitors must obtain a permit before they can access the site. There is little or no existing public access around the coast between Roudsea Wood and Skelwith Hill.</p> <p>The ECP is aligned on the permissive route at Mearness Point before heading inland along existing farm and estate tracks, then through Roudsea Wood NNR on existing tracks. From Roudsea Woods the ECP follows an embankment within a reed bed, and is then aligned on the clifftop through Skelwith Hill.</p> <p><b>Trail:</b> At Mearness Point, the existing route will be promoted as a result of becoming the ECP. There is limited car parking in the area and the saltmarsh is already popular with local dog-walkers. Therefore it is expected that there will be only a small increase in access in this area.</p> <p>There will be a large increase in access between Roudsea Woods and the southern end of Skelwith Hill as this area sees little to no existing public access.</p> <p><b>Coastal margin:</b> Some areas of the Coastal margin are unsuitable for access and access is excluded under s25A, however the areas closest to the shore are not covered by s25A. There could potentially be an increase in use of the Coastal margin on this subsection, as the new route will give access to areas of shore.</p>	<p>As a result of the proposals, there could be an increase in access in areas of Coastal margin all around the Leven Estuary which currently have little or no access. This could cause increased disturbance to birds feeding, roosting or breeding around the estuary.</p> <p>Most of this area has very low levels of public access currently. Although there is a lack of evidence of roosting and breeding birds in this subsection, there is suitable habitat.</p>	<p>In order to reduce disturbance to these features it is proposed that access is restricted or excluded in the following areas under Section 26 (nature conservation):</p> <ul style="list-style-type: none"> <li>- Coastal access rights to all the non-agricultural land seaward of the trail, between Mearness farm and Skelwith Hill is to be excluded all year round.</li> <li>- Coastal access rights on the proposed trail through Roudsea Wood and Mosses NNR are to be restricted, so that dogs must kept on a lead all year round.</li> </ul> <p>Signs will be installed at entrances to the NNR and at intervals along the trail explaining the sensitivity and asking people to keep to the path and observe the requirement to keep dogs on leads.</p> <ul style="list-style-type: none"> <li>- Any informal paths leading into the Coastal margin will be blocked with brash.</li> </ul>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, there is a low risk of an increase in disturbance to non-breeding birds as a result of the proposals.</p>
<p><b>South End Skelwith Hill to Cark.</b></p> <p>See Coastal Access report Silecroft to Silverdale 5, maps SCS 5c – 5f and direction map 5I, 5J, 5M, 5N. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Reake Marsh</b> (saltmarsh between Low Frith &amp; Old Park Wood) - curlew, lapwing, oystercatcher, redshank, shelduck, wigeon.</p> <p><b>Leven Viaduct East</b> – curlew, eider, lapwing, oystercatcher, redshank, shelduck.</p> <p><b>Capes Head</b> – (no species information given in wader roost</p>	<p>There is little or no public access between the south end of Skelwith Hill and Low Frith. There is a single-track public highway between Low Frith and Old Park Wood. It currently has little use, other than by Estate staff.</p> <p>The caravan park at Old Park Wood is open between March and November each year. Holker Estate has created permissive routes around the area, which are predominantly for caravan park users. The public can gain a permit to use the routes from the estate office, however this is not widely promoted. These permissive routes are closed from 1st August to 28th February each year to allow game bird shooting to take place.</p>	<p>As a result of the proposals, there could be an increase in access in areas of Coastal margin all around the Leven Estuary (including this subsection) which currently have little or no access. This could cause increased disturbance to birds feeding, roosting or</p>	<p>In order to reduce disturbance to the <b>Reakes marsh roost</b> and to any birds <b>breeding in the Coastal margin</b> between Skelwith Hill and Park Head it is proposed that access is restricted or excluded in the following areas under Section 26 (nature conservation):</p> <ul style="list-style-type: none"> <li>- South End of Skelwith Hill to Park Head. No public access all year on saltmarsh/flats.</li> </ul>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, there is a low risk of an increase in disturbance to non-breeding birds as a result of the proposals.</p> <p>Access will be excluded from the roost sites at Reake Marsh and Leven Viaduct East, and from areas of</p>

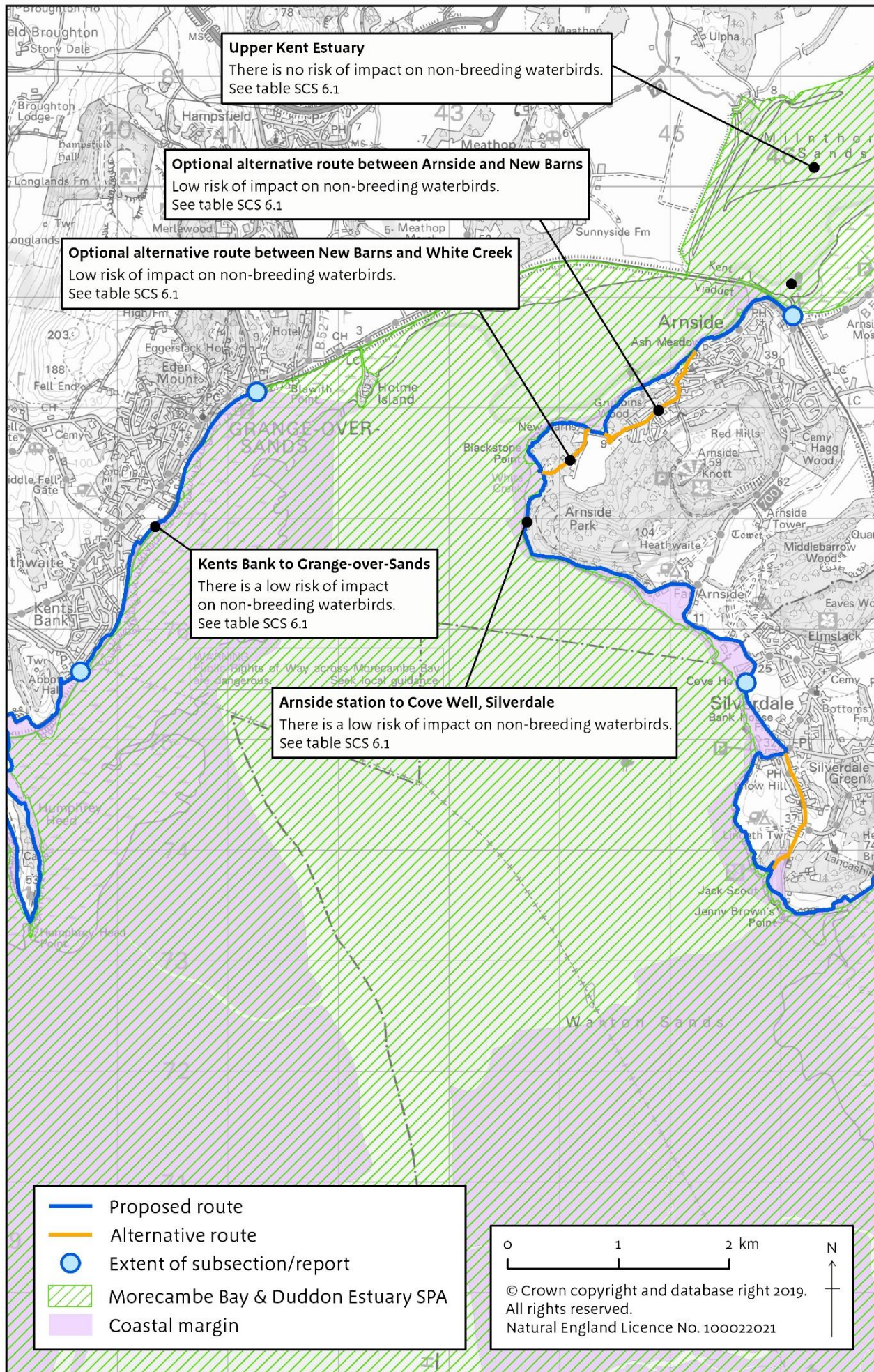
Location	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
Cross reference to the Coastal Access Report	<p>study). This roost falls within the margin, however it will not be affected by the proposals as there is a railway line between the ECP and the roost site.</p> <p><b>Feeding areas:</b> Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p><b>Breeding sites:</b> There are no records of breeding redshank, ringed plover or shelduck in this subsection.</p>	<p>There is no existing continuous public access from Old Park Wood to Cark.</p> <p>The proposed ECP is aligned on the cliff top at Little Arrad, on the foreshore for 450m at Hazelhurst Point, then follows an estate track and a public highway to Old Park Wood. From here it turns inland towards Cark, following a public highway and estate tracks.</p> <p><b>Trail:</b> There will be an increase in use between the south end of Skelwith Hill and Cark as this area currently sees little to no existing public access. However, the remoteness of the area and limited parking will prevent this route from becoming very busy.</p> <p><b>Coastal margin:</b> There could potentially be an increase in use of the Coastal margin in this subsection, as a new route along the coast will give access to areas of shore that were previously inaccessible. For most of this subsection the area of margin closest to the shore is not covered by any proposed s25A exclusions.</p> <p>Existing permissive routes on the marsh and in the woods around Barker Scar will fall within the margin, and therefore will be available to people without a permit. These will not be promoted/signposted from the ECP. It is possible that there could be a small increase in use of these routes.</p> <p>Some areas of farmland between Barkers Scar and Cark fall within the margin, and we have had reports of the fields being used by non-breeding birds. It is not expected that access will increase in these areas. Some fields will be excepted land, as they contain arable crops. All of the fields are surrounded by hedges or fences. The coast cannot be accessed via the fields because the railway embankment is between the fields and the sea. There are no particular attractants within the fields. Therefore it is unlikely that people will enter the fields.</p>	<p>breeding around the estuary.</p> <p>The area used by the <b>Reakes marsh roost</b> would become spreading room.</p> <p>Access is excluded under s25A from the marsh used by the <b>Leven Viaduct East roost</b>. However, an embankment goes through the middle of the roost area, and the embankment would become spreading room.</p> <p>The area of the Leven Estuary between Skelwith Hill and Low Firth has very low levels of public access currently, and access to the margin could increase as a result of the proposals. Although there is a lack of evidence of breeding birds in this area, there is some suitable habitat, and an increase in access could impact on any birds that do breed there.</p>	<p>In order to reduce disturbance to the <b>Leven Viaduct East roost</b> and to any <b>birds breeding in the coastal margin</b> in this area it is proposed that access is restricted or excluded in the following areas under Section 26 (nature conservation):</p> <ul style="list-style-type: none"> <li>- Old sea wall south west of Barker Scar. No public access all year.</li> </ul>	<p>foreshore used by feeding birds, and from any areas that might be used by breeding waders.</p>
<p><b>Cark to West Pain Farm.</b></p> <p>See Coastal Access report Silecroft to Silverdale 5, maps SCS 5f – 5h and</p>	<p><b>Roost Sites:</b> <b>Capes Head</b> (no species info in roost report). <b>Sandgate Marsh</b> – bar tailed godwit, curlew, dunlin (nationally important numbers), eider, grey plover, knot, lapwing, oystercatcher, pintail,</p>	<p>There are popular paths along the coast in this subsection.</p> <p>There is existing de facto access from Cark to Sandgate Gate farm, then a public right-of-way is aligned on the embankment to West Plain Farm. This area is well used by locals and by people staying at the Lakeland Leisure caravan park at West Plain.</p> <p>The caravan site is very busy and open all year round.</p>	<p>There could be an increase in access in dogs off lead in areas of margin close to the ECP. This could cause increased disturbance to birds roosting and feeding in the margin.</p>	<p>In order to prevent disturbance as a result of the proposals to birds roosting at Canon Winder Marsh and West Plain the following mitigation is proposed:</p> <ul style="list-style-type: none"> <li>i) Signage along the line of the ECP asking people to keep dogs under</li> </ul>	<p><b>Low risk</b></p> <p>Access will be excluded from West Plain Marsh under s25A. In order to minimise disturbance from dogs, signage is proposed in the area asking people to keep</p>

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p> <p>direction map 5J, 5K, 5O. See also directions maps in Overview report.</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p> <p>redshank, ringed plover, sanderling, shelduck (nationally important numbers), turnstone, wigeon.</p> <p><b>Canon Winder Marsh</b> – curlew, redshank.</p> <p><b>Cowp Scar</b> – curlew, oystercatcher (nationally important numbers), shelduck</p> <p>Cowp Scar does not suffer from significant disturbance because of the distance from the parking and access points.</p> <p><b>West Plain</b> – curlew, dunlin, knot (nationally important numbers).</p> <p>Disturbance levels at West Plain are high and increasing, with disturbance from land based activities including dog walkers, quadbikes and motorbikes. This is partly due to rapid erosion of the marsh meaning that birds are being forced closer to the embankment. There is an important winter roost here for curlew, knot and dunlin, with curlew particularly being disturbed from the edge of the saltmarsh and moving onto Cowp Scar at the western end of West Plain or round the embankment to East Plain.</p> <p><b>Chapel Island</b> – eider, oystercatcher, shelduck, wigeon.</p> <p>Chapel Island also acts as a refuge roost for other species during periods of high disturbance of the small shingle roosts along the Furness Coast Road.</p> <p>Levels of disturbance are fairly low due to distance from shore, however guided walks to the island can cause disturbance.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal (excluding mitigation)</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p>From Cark to Gully Nab, the proposed ECP will be aligned on existing walked lines and public rights of way on a raised farm track at the back of the marsh. From Gully Nab the proposed ECP will be aligned on top of a flood embankment.</p> <p><b>Trail:</b> This area is already popular with walkers and promotion of the existing route as a national trail could lead to a small increase in use in an already well used area with limited parking.</p> <p><b>Coastal margin:</b> Access to most of the Coastal margin will be excluded under a proposed s25A direction. There is unlikely to be an increase in people accessing the margin as a result of our proposals, however there could be a small increase in dogs off lead running into the areas of margin next to the ECP.</p> <p>Chapel island falls within the Coastal margin for this subsection. It is possible to walk to Chapel Island from Flookburgh, although this can be dangerous due to sinking sands, deep creeks and fast rising tides. Guided walks take place during the summer. The 2 miles of mudflats between the shore and Chapel Island will be subject to a s25A access exclusion.</p>	<p><b>Likely effects without mitigation</b></p> <p>The roosts that are most at risk from any changes in access are Canon Winder Marsh and West Plain.</p> <p>Capes Head roost is about 1.5 miles from the ECP. Access to the saltmarsh will be excluded under s25A. Therefore the proposals will not have any impact on this roost site.</p> <p>Cowp Scar does not suffer from significant disturbance because of the distance from the parking and access points. This will not change as a result of the proposals.</p> <p>Sandgate Marsh</p> <p>Access will be excluded from the saltmarsh which is used by roosting birds under s25A. The area of the roost is separated from the route of the ECP by a large creek, which stops dogs and people from accessing the roost.</p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p> <p>control and not to allow them to roam over the marsh.</p> <p>In order to reduce disturbance to roosting and breeding birds on Chapel Island the following mitigation is proposed:</p> <p>i) A year round access exclusion on Chapel Island and the shingle and skears surrounding Chapel Island.</p> <p>ii) It is possible to walk to Chapel Island from Sand Gate, however the area is considered unsuitable for access and access will be restricted under s25A. A sign will be installed at Sand Gate to advise people that there are no new coastal access rights on the flats and between Sand Gate and Chapel Island.</p>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b></p> <p>dogs under effective control and off the marsh. It is unlikely that the coastal access proposals will increase disturbance to birds breeding or roosting on the marsh.</p>
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<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p> <p><b>Breeding sites:</b></p> <p>2 pairs of breeding redshank were recorded at West Plain marsh.</p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal (excluding mitigation)</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Likely effects without mitigation</b></p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b></p>
<p><b>West Plain Farm to Kents Bank.</b></p> <p>See Coastal Access report Silecroft to Silverdale 5, maps SCS 5i – 5l and direction map SCS 5K, 5P.</p> <p>See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>East Plain</b> – bar tailed godwit , curlew, dunlin (nationally important numbers), eider, grey plover, knot (internationally important numbers), lapwing, oystercatcher (internationally important numbers), pintail, redshank, ringed plover, sanderling, shelduck, wigeon, whooper swan.</p> <p>There is a medium and increasing level of disturbance.</p> <p>East Plain is the most important roost on Morecambe Bay north with an assemblage of up to 15,000 birds. Birds previously roosting at West Plain now roost at East Plain (due to disturbance at West Plain) and this has been particularly noticeable over the last two years.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p><b>Breeding sites:</b></p> <p>2 pairs of breeding redshank were recorded at <b>East Plain marsh.</b></p> <p>East Plain is one of the most productive marshes for breeding waders in the north of the Bay. This is likely due to its relative lack of disturbance and diversity of vegetation heights and types.</p>	<p>From West Plain Farm, a public road leads to the caravan park at West Plain. This area is well used by locals and by people staying at the caravan park at West Plain.</p> <p>The caravan site is very busy and open all year round. Many of the caravan park residents walk dogs on the sea-defence to the east of the site. Beyond this point few people access the embankment which continues to the car park at Humphrey Head.</p> <p>There are walking routes on Humphrey Head and people also walk along the western shore towards the seaward end the peninsular. This is a reasonably popular area already with the public, although parking is limited.</p> <p>Between Humphrey Head outdoor centre and Kents Bank railway station there is currently a walked line at the landward edge of the saltmarsh. However, this can be very muddy, can be cut off by the tide and few people walk along it.</p> <p>From West Plain to Humphrey Head, the proposed ECP will be aligned on the public highway past the caravan park and then behind the flood embankment at East Plain, in order to prevent disturbance to birds roosting and breeding on East Plain marsh. The ECP is separated from the embankment by a ditch in most places.</p> <p>At Humphrey Head the ECP follows an existing promoted route on the headland.</p> <p>The ECP then follows an existing walked line on saltmarsh for 350m between Humphrey Head outdoor centre and the railway line. It is then aligned on new paths landward of the railway line between Humphrey Head and Kent's Bank.</p> <p><b>Trail:</b> Between Lakeland Leisure Caravan Park and Humphrey Head it is expected that there will be an increase in use of the route. However this route is behind the flood embankment so will not impact on birds roosting on East marsh.</p> <p>It is expected that there will be a small increase in use of the route around Humphrey Head. It will become possible to walk to Humphrey Head from Grange-over-Sands and Kents Bank as a result of the proposals; this is likely to lead to an increase in use by day walkers as well as by long distance walkers.</p> <p>Between Humphrey Head and Kents Bank station it is expected that there will be a large increase in use on the proposed line of the route, as this section currently has no</p>	<p>The route alignment is designed to reduce disturbance to birds at East Plain marsh. However some of the embankments would fall within the spreading room, and if access on the embankments were to increase, there would be significant disturbance to birds roosting on East Plain marsh.</p>	<p>In order to prevent disturbance as a result of the proposals to roosting and breeding birds at East Plain the following mitigation is proposed:</p> <p>i) Total access exclusion year round to the areas of marsh not covered by s25A, and to the embankment.</p> <p>ii) Signage at both ends of the embankment clearly showing which areas are available for access.</p> <p>iii) Replace gate across the embankment near the caravan park to prevent people continuing to walk along the embankment</p> <p>iv) In places where there is no ditch seaward of the path, a fence will be installed to prevent people and dogs getting onto the floodbank.</p>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, there is a low risk of an increase in disturbance to non-breeding birds as a result of the proposals.</p> <p>Access will be excluded from the marshes and flats in this subsection, and the margin will not be easily accessible from the ECP.</p>

<b>Location</b> Cross reference to the Coastal Access Report	<b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b>	<b>Existing recreational use in the areas used by these species</b>	<b>Likely effects without mitigation</b>	<b>Mitigation incorporated into this proposal to manage risk</b>	<b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b>
	<b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b>	<b>Access proposal (excluding mitigation)</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b>			
	<p>public access, and there is plenty of parking for walkers in Kents Bank and Grange-over-Sands. The route will also be used by locals.</p> <p><b>Coastal margin:</b> Access to most of the Coastal margin will be excluded under a proposed s25A direction. Areas of farmland near Humphrey Head will fall within the Coastal margin, however these fields are surrounded by thick hedges and ditches, and there are no attractors in the fields, so it is unlikely that access in the fields will increase. There are small areas of marsh and embankment close to the proposed route of the ECP which are not covered by s25A exclusions, and access may increase in these areas.</p>				

# Coastal Access Report SCS 6 Kents Bank to Cove Well, Silverdale



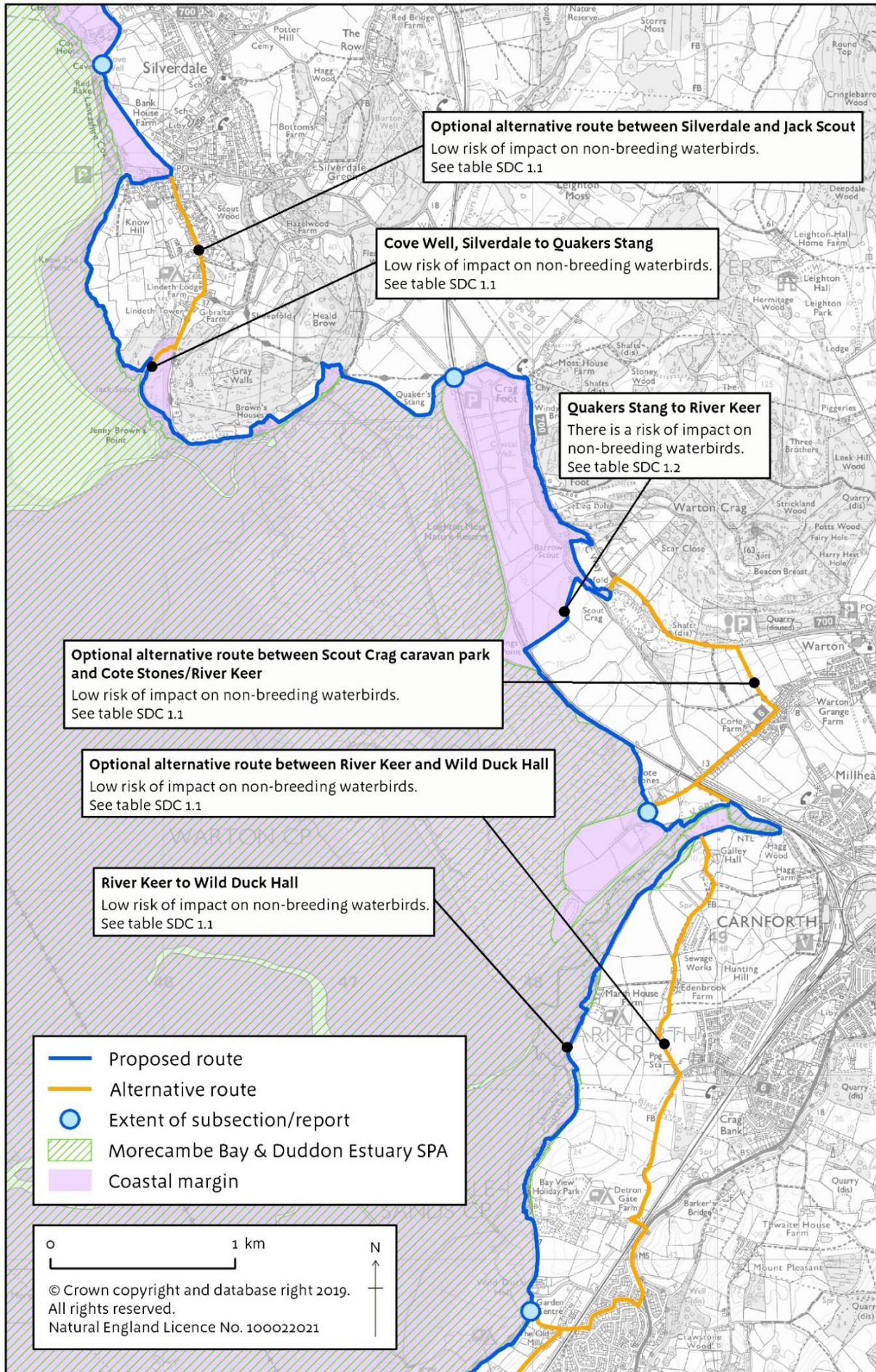


**Table SCS 6.1 Areas where there is a low risk of impact on non-breeding waterbirds**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p>
<p><b>Kents Bank to Grange-over-Sands station.</b></p> <p>See Coastal Access report Silecroft to Silverdale 6, maps SCS 6a – 6b and direction map 6B. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Kents Bank</b> pintail (internationally important numbers), curlew, oystercatcher, shelduck.</p> <p>Disturbance at this roost is low.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p><b>Breeding sites:</b></p> <p>Due to the height and frequent inundation of the marshes this area is not likely to hold any significant breeding bird interest.</p>	<p>Kent's Bank railway station is connected to Grange-over-Sands railway station by pavements, public rights of way and the promenade. It is a busy area, popular with tourists and day trippers.</p> <p>Access on the saltmarshes that run along this subsection is fairly low.</p> <p>The proposed ECP is aligned on existing routes, landward of the railway line between Kent's Bank and Grange-over-Sands, and on the Promenade at Grange-over-Sands.</p> <p><b>Trail:</b> It is unlikely that there will be an increase in access levels from Kents Bank to Grange-over-Sands station as the proposed trail is on existing pavements, public rights of way and the busy promenade.</p> <p><b>Coastal margin:</b> Access to most of the Coastal margin will be excluded under a proposed s25A direction. It is unlikely that there will be a change in access to the margin as a result of the proposals. Where the ECP is aligned landward of the railway line it will be difficult to access the margin. Where it is aligned on promenade, we expect existing patterns and levels of use in the margin to remain the same.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals.</p> <p>Between Kent's Bank and Grange-over-Sands the trail is aligned landward of the railway, and access to the marsh is excluded as it is unsuitable for access. Therefore access to the Kent's Bank roost is not likely to increase.</p> <p>At Grange-over-Sands the trail is aligned on a busy promenade. It is unlikely that there will be an increase in access on the saltmarsh which runs alongside the promenade, as the marsh is dissected by deep channels and is not easy to walk on.</p> <p>Therefore there is a low risk of an increase in disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p>
<p><b>Upper Kent Estuary.</b></p> <p>See <i>Kents Bank to Cove Well, Silverdale</i> map above.</p>	<p>The SPA extends up the estuary beyond the railway viaduct to the A590. Non-breeding waterbirds roost and feed in this area of the SPA.</p> <p>There are records of breeding redshank and shelduck in this subsection.</p>	<p>This was not assessed, as this area of the SPA / Ramsar site is unaffected by our proposals.</p> <p>There will be a gap in the coast path over the Kent Estuary, between Grange-over-Sands and Arnside, walkers will be able to continue their journey using the train.</p> <p>The SPA / Ramsar site extends for 5 miles upstream of Arnside. No new access rights will be created in the area of the SPA / Ramsar site upstream of the Arnside railway viaduct. Therefore we do not expect access to increase in the upper Kent Estuary as a result of the proposals.</p>	<p><b>Not affected by the proposals</b></p> <p>This part of the SPA is inland of the coastal path and is therefore not in the project area and is not affected by the coastal access proposals.</p>
<p><b>Arnside station to Cove Well, Silverdale.</b></p> <p>See Coastal Access report Silecroft to Silverdale 6, maps SCS 6c – 6e and direction map 6A, 6C and 6D.</p> <p>See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p>There were no bird roosts located along this subsection, according to the 2012 Wader Roost Study. However, large numbers of waders do congregate along the water's edge between Blackstones Point and Silverdale at the lower high tides in winter.</p> <p>Where the proposed ECP is aligned on the foreshore near Far Arnside, there are no records of bird roosts.</p> <p>New Barns saltmarsh historically was a roost site, however birds on the marsh are now frequently disturbed from people and dogs. Natural England, the landowner and Morecambe Bay Wildfowlers are</p>	<p>There are high levels of existing access around this subsection, both on the promenade and cliff top paths as well as the foreshore. This is a popular tourist destination within the Arnside and Silverdale AONB.</p> <p>The foreshore is muddy and subject to rapid tidal inundation thanks to the Arnside tidal bore. A siren at the coastguard station is sounded when the bore is due. Despite this, the foreshore is popular with locals and visitors.</p> <p>Between Far Arnside and Silverdale there are no paths along the coast, and walkers must use inland rights of way and a public highway to connect the two.</p> <p>The proposed ECP in this subsection mainly follows promenade, existing walked lines and public rights of way. There is a section of new access proposed between Far Arnside and Cove Well, which is aligned through fields, apart from a 130m section on the foreshore</p> <p><b>Trail:</b></p> <p>The proposed ECP between Arnside and Middlebarrow Plain Caravan Site follows very well walked routes in a popular walking area, so it is not expected that use will</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals.</p> <p>The margin at Far Arnside where access will increase is very narrow (70m wide), and there are extensive flats in this area which do not fall within the Coastal margin and which will not have access rights over them. There are no records of roosting birds at Far Arnside. Access here is unlikely to cause significant disturbance of feeding birds due to the large areas of available undisturbed feeding habitat in the vicinity.</p> <p>There is a low risk of an increase in disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p>

<b>Location</b> Cross reference to the Coastal Access Report	<b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b>	<b>Existing recreational use in the areas used by these species</b>	<b>Risk of impact of proposals on non-breeding waterbirds.</b>
	<b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b>  working to control public access to the marsh. <b>Feeding areas:</b> Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding. <b>Breeding Sites:</b> There are no records of breeding redshank, ringed plover or shelduck in this subsection.	<b>Access proposal</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b>  increase as a result of our proposals. There will be a large increase in use on the new path from Middlebarrow Plain Caravan Site to Cove Well. <b>Coastal margin:</b> Between Arnside and Middlebarrow Plain Caravan Site the margin is very popular with walkers, and it is not expected that access will change as a result of the proposals. There is unlikely to be an increase in access to the margin between Middlebarrow Plain Caravan Site and Cove Well as the ECP is aligned inland. The exception is a 350m section at Far Arnside, where the ECP is aligned on the foreshore. Access to the margin in this area will increase as a result of the proposals. The margin here is very narrow, as a permanent creek runs close to the shore.	
	<b>Optional alternative route (OAR) between Arnside and New Barns</b>  See Coastal Access report Silecroft to Silverdale 6, maps SCS 6c & 6d	The OAR is aligned outside of the boundary of the SPA / Ramsar site. It is aligned through urban areas / woodland, which is not supporting habitat for non-breeding waterbirds.	
<b>Optional alternative route (OAR) between New Barns and White Creek</b>  See Coastal Access report Silecroft to Silverdale 6, map SCS 6d.	The OAR is aligned outside of the boundary of the SPA / Ramsar site. It is aligned through woodland, which is not supporting habitat for non-breeding waterbirds.	This is a very popular area with walkers. There is a network of busy public rights of way in this area.  The OAR is an inland route for use at high tide. It is aligned on PRowS. As these routes are already very popular, it is expected that there will be negligible change in levels of access on these routes as a result of the proposals.	

# Coastal Access Report SDC 1 Cove Well, Silverdale to Wild Duck Hall, Bolton-le-Sands



**Table SDC 1.1 Areas where there is a low risk of impact on non-breeding waterbirds**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p>
<p><b>Cove Well to Railway underpass, Quaker's Stang.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 1, maps SDC 1a – 1b and direction maps 1B, 1C. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Jenny Brown's Point:</b> bar tailed godwit, black-tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher (internationally important numbers), redshank, ringed plover, shelduck, turnstone, wigeon.</p> <p>This roost site is at the far north western end of the Warton Common saltmarsh, and is separated from Jenny Brown's Point by a deep creek (Quicksands Pool). It is not possible to access the roost location from the ECP at Browns' Houses.</p> <p><b>Feeding areas:</b></p> <p>The mudflats within the Coastal margin are used by feeding waterbirds.</p> <p><b>Breeding Sites:</b></p> <p>There are no records of breeding redshank, ringed plover or shelduck in this subsection. Redshank and ringed plover do breed on Warton Common, to the south of this subsection, however it is not possible to access Warton Common from this subsection, due to the presence of a deep creek (Quicksands Pool).</p>	<p>There are high levels of existing access around most of this subsection, on public footpaths, walked routes and along the foreshore. The exception is at Gibraltar Farm (south of Silverdale), where there is no existing continuous path along the cliff top or though the farmland.</p> <p>The Lancashire Coastal Way follows the coast for most of this subsection, apart from at Gibraltar Farm, where it turns inland and follows a public highway.</p> <p>This subsection is in the Arnside and Silverdale AONB, and is a popular destination for local and visiting walkers.</p> <p>Cove Well and Silverdale have beaches which are easily accessible. The foreshore between the two has fairly low existing use due to the muddy conditions.</p> <p>Walkers use the shore between Silverdale and Brown's Houses at low tide, however the mud is sticky and it is possible to get cut off by the tide.</p> <p>The proposed ECP follows the Lancashire Coastal Way from Cove Well to Shore Road, Silverdale. It is then aligned on the foreshore for a short distance before following a new route along the cliffs at Gibraltar Farm. It then continues on an existing path through Jack Scout, and re-joins the Lancashire Coastal way before heading behind Brown's Houses and through fields to the railway underpass at Quaker Stang (near to the RSPB car park)</p> <p><b>Trail:</b> There will be negligible change in access in areas where the proposed ECP follows existing walked routes and public rights of way, and a large increase in use on the new sections of path.</p> <p><b>Coastal margin:</b> Accessible areas of the margin in this subsection are already used by walkers, and it is not expected that this use will change as a result of the proposals.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals. The roost at Jenny Brown's point and breeding sites on Warton Common cannot be accessed due to the presence of a deep creek (Quicksands Pool). Therefore there is a low risk of an increase in disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p>
<p><b>Optional alternative route (OAR) between Silverdale and Jack Scout</b></p> <p>See Coastal Access report Silverdale to Cleveleys 1, map SDC 1a.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site.</p> <p>There are no records of non-breeding waterbirds using the fields seaward of the OAR.</p>	<p>There are high levels of existing access in this area on public rights of way and the shore. The exception is at Gibraltar Farm (south of Silverdale), where there is no existing continuous path along the cliff top or though the farmland. Walkers use the shore between Silverdale and Brown's Houses at low tide; however the mud is sticky and it is possible to get cut off by the tide.</p> <p>The Lancashire Coastal Way follows a public highway between Silverdale and Jack Scout.</p> <p>The OAR is an inland route for use at high tide. Most of the OAR is aligned on a public highway through Silverdale village (currently the route of the Lancashire Coastal Way), and then is aligned for 200m on a walked line through Jack Scout SSSI, where it joins the ECP.</p> <p>As this is already a popular area, it is expected that there will be negligible change in levels of access on the line of the OAR.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>People and dogs are expected to remain on the line of the OAR due to the presence of houses, hedges, walls, fences and scrub along its entire length.</p> <p>The OAR is between 60m and 600m inland of the boundary of the SPA and is separated from the SPA by fields, woodland and cliffs.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p> <p>Therefore there is a very low risk of an increase in disturbance of any birds using the coastal fields.</p>

Location	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
<p>Cross reference to the Coastal Access Report</p> <p><b>Optional alternative route (OAR) between Scout Crag Caravan Park and Cote Stones / River Keer</b></p> <p>See Coastal Access report Silverdale to Cleveleys 1, maps SDC 1d and 1e.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site.</p> <p>There are no records of non-breeding waterbirds using the fields seaward of the OAR, although it is possible that geese could use the fields just landward of the railway line for feeding and waders could use the fields near the coast for roosting / feeding.</p>	<p><b>Access proposal</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p>This is a popular area for walkers, with a network of public rights of way and other paths on Warton Crag. The Lancashire Coastal Way is aligned on Crag Road and on public rights of way in this area.</p> <p>The OAR is an inland route for use around high tide. It is mostly aligned on the route of the Lancashire Coastal Way. It follows a public footpath, a minor road (Crag Road) then returns to the coast via a combination of PRow, pavement and then road / cycleway.</p> <p>It is possible that the OAR could be combined with the ECP to create a circular route, therefore there could be a small increase in use on the OAR.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is already used by walkers, as it forms part of the Lancashire Coastal Way.</p> <p>People and dogs are expected to remain on the line of the OAR due to clear signage and the presence of walls, hedges or residential properties along much of its length.</p> <p>Most of the route is landward of the railway and is between 200m and 700m inland of the SPA / Ramsar site boundary. The OAR is separated from the SPA / Ramsar site boundary by fields, woodland, a main road and the railway line. In the area near Cote Stones, where the OAR is aligned seaward of the railway line, it is aligned on roads with walls or hedges on each side, which make access into the surrounding fields difficult.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. As a result there will be no new access rights created in the area between the OAR and the main ECP.</p> <p>Therefore there is a very low risk of an increase in disturbance of any birds using the coastal fields.</p>
<p><b>River Keer to Wild Duck Hall.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 1, maps SDC 1e – 1g.</p>	<p><b>Roost sites:</b> <b>Bolton-le-Sands</b> (bar tailed godwit, black tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher (nationally important numbers), redshank, ringed plover, shelduck (nationally important numbers), turnstone, wigeon). The northern end of this roost just enters the margin for this subsection, however due to a deep creek it is not possible to walk out to the roost site from this section of the ECP.</p> <p>Disturbance from walkers and dogs is noted as an issue at this roost site. The roost site is on an 'island' of saltmarsh, at very high tides this is covered and birds move to areas including the marsh by Bay View Holiday Park, which is in this subsection.</p>	<p>From the River Keer to Wild Duck Hall the existing Lancashire Coastal Way is aligned on public highways, public rights of way and on other walked routes towards the landward edge of the saltmarsh. This section is reasonably well used; however, it can be difficult to cross the saltmarsh creeks in wet conditions, especially around Bay View Holiday Park. This factor currently limits the use of the proposed route.</p> <p>This saltmarsh and some of the intertidal flats in this section have open access rights under s15 of CRow.</p> <p>From the River Keer, the proposed ECP will follow a single track public highway before joining the route of the existing Lancashire Coastal Way at the back edge of the marsh, to Wild Duck Hall. A short (300m) section of new path is aligned in the fields, just south of Marsh House Farm. This part of the alignment of the ECP departs from the line of the Lancashire Coastal Way which is on the marsh.</p> <p><b>Trail:</b> The existing Lancashire Coastal Way along this section of coast is sometimes difficult to walk due to surface flooding, particularly from Marsh Farm, around Bay View Holiday Park to Wild Duck Hall. We will install sleeper bridges over the wetter areas and creeks / channels, making this a much easier path to walk on. Improving this section of path over the saltmarsh, plus the proximity of car parking and cafés at Wild Duck Hall and Red Bank Farm, and the fact that circular</p>	<p><b>Low risk</b></p> <p>There will be an increase in access on the line of the trail in an area used by roosting birds (on saltmarsh near Bay View Caravan Park). However, at very high tides, when this area is used by large numbers of roosting birds, the area is cut off by the tide and walkers would not be present. An inland optional alternative route is proposed to allow walkers to continue onwards at high tide.</p> <p>Walkers are likely to stick to the line of the trail, due to the wet nature of the surrounding marsh, and the fact that new sleeper bridges will be installed to bridge creeks, making the route easier to walk than the surrounding marsh.</p> <p>A 300m section just south of Marsh House Farm has been aligned in fields, access in this area is currently on the marsh. So in this area</p>

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p> <p><b>Feeding areas:</b> The saltmarshes and mudflats within the Coastal margin are used by feeding waterbirds.</p> <p><b>Breeding sites:</b> There are no records of breeding redshank, ringed plover or shelduck in this subsection.</p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p>walks are possible utilizing the proposed ECP, the Lancaster Canal path and other footpaths in the area means that this section will see an increase in use.</p> <p><b>Coastal margin:</b> Walkers will be more likely to stick to the path as it will be easier to walk on than the surrounding marsh, particularly in places where the existing path crosses creeks and is prone to becoming waterlogged. Therefore we do not expect use of the Coastal margin by walkers to increase.</p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p> <p>disturbance events on the marsh are likely to decrease.</p> <p>The saltmarsh along this section of the coast is an established and regularly used area for recreation. The proposed path improvements will create a single well-defined route and will focus use on the marked trail.</p> <p>Any changes in use of the trail are unlikely to make a significant positive or negative difference to the condition of the salt marsh for non-breeding waterbirds.</p>
<p><b>Optional alternative route (OAR) between River Keer and Mill Lane (Wild Duck Hall)</b></p> <p>See Coastal Access report Silverdale to Cleveleys 1, maps SDC 1e, 1f and 1g.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site.</p> <p>The fields between the OAR and the SPA / Ramsar site boundary could be supporting habitat for non-breeding waterbirds, however we have no survey data to support this.</p>	<p>From the river Keer to Wild Duck Hall, the Lancashire Coastal Way is aligned on existing public highways, existing public rights of way and on walked lines towards the landward edge of the saltmarsh. There is also a network of rights of ways between the railway line and the coast.</p> <p>The OAR is an inland route for use at high tide. It is aligned on public rights of ways, roads and pavements. Signing and promoting the route as a high tide OAR could lead to a small increase in levels of use.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is aligned on PRoWs, roads and pavements which are already used by walkers.</p> <p>The majority of the route is over 200m inland of the SPA / Ramsar site boundary. The OAR is separated from the SPA / Ramsar site boundary by fields, 2 caravan parks and the urban area of Bolton-le-Sands.</p> <p>The area between the OARs and the SPA boundary is a patchwork of fields, and in most places there are 2 – 5 fields between the OAR and the SPA.</p> <p>In many places the OARs have boundary walls, hedges or fences, preventing access onto the fields which the OARs run through.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p> <p>Therefore there is a very low risk of an increase in disturbance of any birds using the coastal fields.</p>

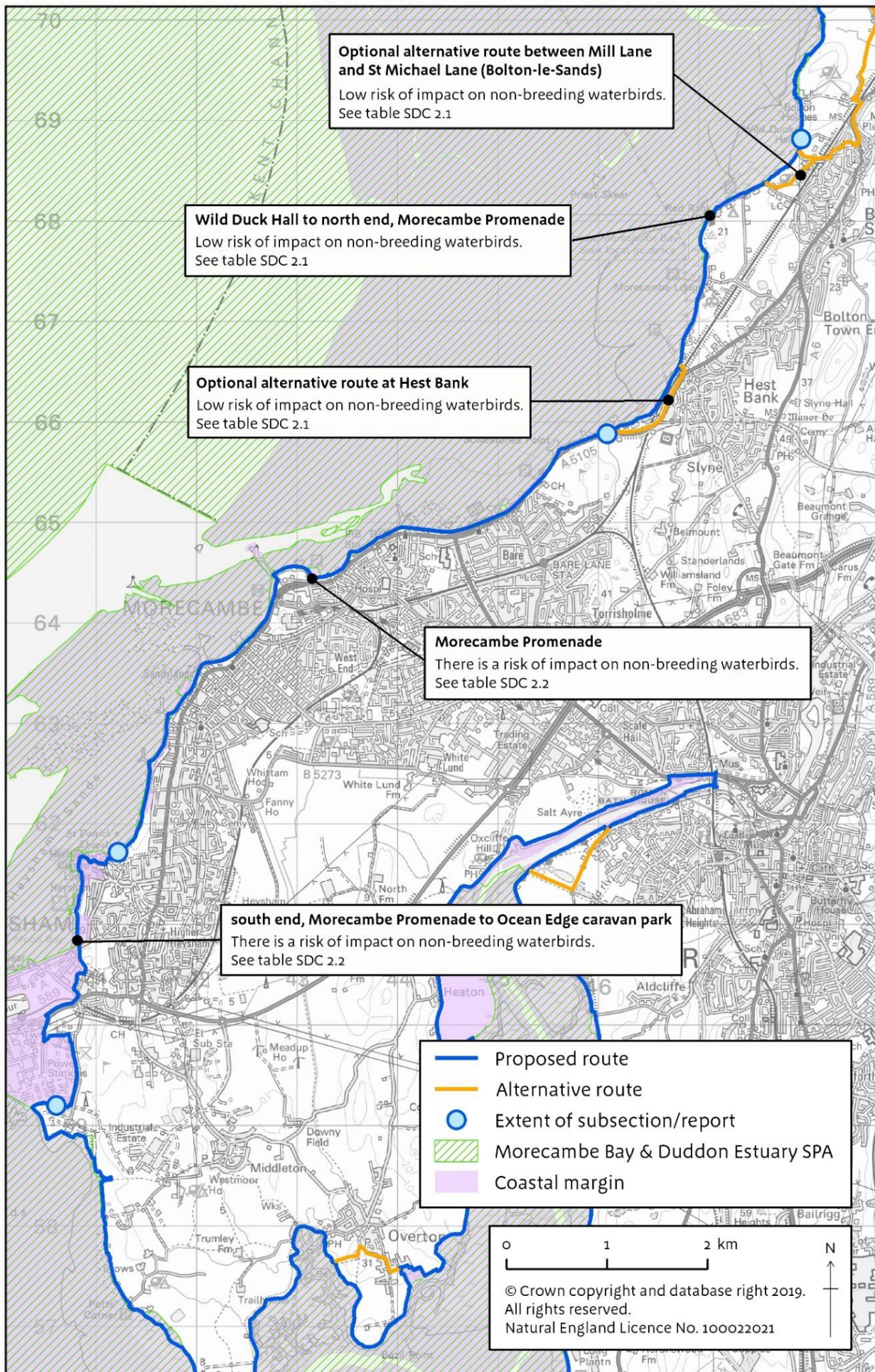
**Table SDC 1.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal (excluding mitigation)</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Likely effects without mitigation</b></p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b></p>
<p><b>Quaker's Stang to River Keer.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 1, maps SDC 1c – 1e and direction maps 1A, 1C, 1D, 1E.</p> <p>See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Jenny Brown's Point</b> (on Warton Common) bar tailed godwit, black-tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher (internationally important numbers), redshank, ringed plover, shelduck, turnstone, wigeon.</p> <p>This roost is fairly remote and existing disturbance is low.</p> <p><b>Inner Marsh</b> (Leighton Moss) Black tailed godwit (internationally important numbers), curlew, dunlin, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, wigeon.</p> <p>Inner Marsh is part of the Leighton Moss nature reserve and existing disturbance is low.</p> <p><b>Carnforth Marsh</b> (Warton Common) Bar tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher (nationally important numbers), pintail, redshank, ringed plover, shelduck, wigeon.</p> <p>Disturbance by walkers and dogs off lead has been recorded at this roost.</p> <p><b>Fields on old refuse site</b> walkover surveys in November 2018 showed that these fields are used by large numbers of lapwing, black tailed godwit, curlew and redshank at high tide.</p> <p>Other locations may be used for roosting depending on the height of the tide and other factors. This includes the edge of the slag banks</p>	<p>Between Quakers Stang and the River Keer, the Lancashire Coastal Way follows Crag Road, a public highway, which is located inland from the coast.</p> <p>It is not possible to walk from Brown's Houses to the River Keer across the saltmarsh due to several creeks and the deep channel called Quicksands Pool. Neither is it possible to walk along the seaward edge of the railway line from Quakers Stang to the River Keer due to the location of the RSPB reserve.</p> <p>Warton Common is designated as open access land under CRoW.</p> <p>Inner Marsh is not part of the common. It is managed by RSPB as part of their Leighton Moss reserve. There is a path from Quakers Stang to hides overlooking scrapes on the seaward side of the railway line. Access to these hides is for RSPB members and paying visitors to the reserve.</p> <p>The main access point to Warton Common is via Cotestones, where there is a small layby for parking. There is a stock car race track on the edge of the common. On race days, vehicular gates at Cotestones are opened and there is parking on extensive hard standing in the race track area. Dog walking is a popular activity over this part of the common. Recreational activity is concentrated along the bank of the River Keer to the race track and southern end of the slag banks. A smaller number of people take longer walks along the slag banks and a track that runs parallel to them. Occasionally people walk over drier parts of the salt marsh where there are no established paths. Such use is limited however as the mud flats and much of the salt marsh are dangerous and difficult to walk over.</p> <p>There is currently a 'no dogs' restriction (under CRoW) over most of Warton Common, including the majority of the slag banks area, from 1 November to 31 July, to protect wintering and breeding birds. Dogs are required to be on a lead at other times in the restricted area. On-site information about the restriction is limited.</p>	<p><b>Roosting birds:</b></p> <p><b>Jenny Brown's Point</b></p> <p>The roost at Jenny Brown's point is physically difficult to approach on foot due to tidal channels and other obstacles. No new coastal access rights will be created in this area as the salt marsh is unsuitable for public access</p> <p><b>Fields on old refuse site</b></p> <p>The roost on the fields at the old refuse site at old tip fields is unlikely to be affected. These fields will fall within the margin and will become spreading room. It is not thought that access into these fields will increase as a result of the proposals as the fields are surrounded by fences and there are no obvious attractors within the fields.</p> <p><b>Inner Marsh, Carnforth Marsh and the Reed bed at Crag Foot.</b></p> <p>Without further mitigation, access could increase on sections of Carnforth Marsh not covered by the s25A access exclusion, at Inner Marsh and around the reed bed at Crag Foot. These areas would fall within spreading room, and disturbance of roosting birds could increase.</p> <p>It is possible that people might use the new access point at Ings Point as an alternative way of viewing birds in the Inner Marsh and cause disturbance of this area.</p> <p>The roost at Carnforth marsh is in an area where access will be excluded under s25A. Birds using this roost are occasionally disturbed by the presence of people at the north of the slag banks and this would be likely to continue. Circular routes could develop between the slag banks and the ECP, which could increase disturbance to birds roosting on Carnforth Marsh.</p>	<p>A package of access management and mitigation measures has been developed to reduce the risk or disturbance to non-breeding waterbirds and breeding waders and seabirds across this whole site.</p> <p><b>Mitigation for the proposed new section of path between Ings Point and Cotestones:</b></p> <p>In order to ensure that walkers and dogs stay on the line of the ECP, a new dog proof fence will be erected seaward of the trail between the railway crossing at Ings Point and Cotestones.</p> <p>Once the trail is open, Natural England will ensure that arrangements are in place to check that the fence is in good condition and repairs made promptly if necessary.</p> <p>The fence is required to reduce disturbance of ground nesting birds on salt marsh near the trail and to prevent new desire lines developing that might increase disturbance to roosting and breeding birds on Inner Marsh and Carnforth Marsh. It will also act to clearly delineate the extent of the new access rights.</p> <p><b>Mitigation within the Coastal margin:</b></p> <p>Coastal access rights will be excluded over the majority of mudflats and much of the saltmarsh of Warton Common on public safety grounds (s25A). The following additional restrictions are proposed for nature conservations reasons:</p> <p>A direction to exclude access all year round from the reed bed and surrounding fields at Crag Foot.</p> <p>A direction to exclude access all year round from the field at Ings Point.</p> <p>A direction to exclude access all year round from Inner Marsh.</p> <p>A direction to exclude access all year round from areas of Carnforth Marsh and the slag</p>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, there is a low risk of an increase in disturbance to non-breeding birds as a result of the proposals.</p>

<b>Location</b> Cross reference to the Coastal Access Report	<b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b>  <b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b>  where disturbance from recreational activities is more likely.  At high tide there are often significant bird movements between the mud flats, salt marsh and nearby fields.  <b>Reed bed at Crag Foot</b> This reed bed is likely to be supporting habitat for non-breeding waterbirds.  <b>Feeding areas:</b> The saltmarshes and mudflats within the Coastal margin are used by feeding waterbirds.  <b>Breeding sites:</b> <b>Inner Marsh</b> 7 pairs of redshank bred in 2016. Shelduck probably breed here. <b>Carnforth Marsh</b> The marsh accounts for less than a fifth of the total saltmarsh area within Morecambe Bay SSSI but supports 86% (51 out of 59 pairs) of the breeding redshank population. Shelduck probably breed on Carnforth Marsh. A small number of ringed plover have been consistently recorded as breeding on the saltmarsh (Jenny Brown's Point end of the marsh).  <b>Slag Banks</b> A small number of ringed plover consistently breed on the slag banks.  Disturbance from recreational activities is impacting on breeding success for ringed plover in the slag banks area.	<b>Existing recreational use in the areas used by these species</b>  <b>Access proposal (excluding mitigation)</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b>  The proposed ECP is aligned some way landward of the railway line between Quakers Stang and Ings Point, in order to avoid areas used by roosting, feeding and breeding birds. Between New Road and the River Keer, a new section of path is proposed, crossing the railway at Ings Point and passing through fields and over the edge of the saltmarsh just seawards of the railway to link with existing paths at Cotestones. An inland optional high tide route is proposed for times when the route over the marsh is unavailable. <b>Trail:</b> The new section of trail between New Road and Cotestones will be used by people following the coast path and also provides opportunities for circular walks, from Warton village or Warton Crag car park for example. There is likely to be a large increase in use of the trail from New Road to Cotestones, an area which currently has very low levels of access. Between Cotestones and the River Keer it is expected there will be a small increase in use of the proposed route as a result of installing new steps and sections of boardwalk. This area is currently used by local dog walkers. <b>Coastal margin:</b> Large areas of Coastal margin will be created as a result of the proposals and access to the margin could increase. The proposal to establish a new section of path from New Road to Cotestones will create a new access point onto Warton Common at Ings Point. The new path will substantially improve access to this part of the common, and it is possible that new desire lines may develop beyond the proposed trail, including in the vicinity of Inner Marsh and an area of marsh between the new section of path and slag banks where access with dogs is currently restricted. Elsewhere over Warton Common, the current pattern of access is unlikely to change as a result of becoming part of the Coastal margin. Coastal access rights will be excluded under s25A from the mud flats and much of the saltmarsh, since these areas are unsuitable for public access (restriction of CRoW access rights on public safety grounds was not previously possible).	<b>Likely effects without mitigation</b>  <b>Breeding birds:</b> Establishing a new path between Ings Point and Cotestones will increase recreational activity alongside a part of the saltmarsh used by breeding redshank, and will create a new access point to the marsh at Ings Point, which is close to the important breeding areas at Inner Marsh. The proposed route of the ECP is in close proximity to one current and one historic breeding redshank territory. The salt marsh vegetation provides some cover for breeding birds and impacts from people (and their dogs) sticking to the line of the path are likely to be minimal. However; dogs off-lead in this area would cause significantly more disturbance and it is possible that new desire lines over the marsh from the new section of path would develop, increasing human presence in this area. It is also possible that people might use the new access point at Ings Point as an alternative way of viewing birds in the Inner Marsh and causing some disturbance in this area.  Without further mitigation, disturbance could increase in areas used by breeding redshank on Carnforth Marsh and Inner Marsh. Access restrictions currently apply on Carnforth Marsh, in order to protect ground nesting birds.  Patterns of recreational use in areas that provide suitable habitat for ringed plover (the saltmarsh and slag banks) would be unlikely to change significantly as a result of the proposals, however; current disturbance pressure from recreation on the slag banks which is affecting breeding success would not be improved.	<b>Mitigation incorporated into this proposal to manage risk</b>  banks that are not covered by the s25A access exclusion.  These access restrictions will reduce the risk of disturbance of non-breeding waterbirds while they are roosting and breeding. The access restrictions, plus the fencing, will reduce the risk of disturbance of ground nesting birds on saltmarsh near the trail, and are also relevant to preventing new desire lines developing that might increase access (and therefore disturbance of birds) using areas Inner Marsh and Carnforth Marsh for breeding and roosting.  The route currently used by dog walkers along the River Keer will remain available to walkers. New signage will be installed, promoting a route to a point on the slag banks, beyond which new access rights would be excluded.  Guide posts on the slag banks will help to delineate the end of the dog walking route and the extent of the accessible area.  New signage and information along the ECP and at Ings Point, Cotestones and in the slag banks area will be installed to inform people about the exclusions and restrictions and those areas where dogs can be exercised off-lead.  An on-site event will be held when access rights commence, to raise awareness about the changes in access arrangements proposed and reasons for them.	<b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b>



# Coastal Access Report SDC 2 Wild Duck Hall, Bolton-le-Sands to Ocean Edge Caravan Park, Heysham



**Table SDC 2.1 Areas where there is a low risk of impact on non-breeding waterbirds**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p>
<p><b>Wild Duck Hall to north end of Morecambe Promenade.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 2, maps SDC 2a - 2c and direction maps 2A. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Bolton-le-Sands</b> (on saltmarsh between Wild Duck Hall and Red Bank Farm): bar tailed godwit, black tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, turnstone, wigeon.</p> <p><b>Hest Bank</b> (on saltmarsh near Strand Dub Wood): bar tailed godwit, black tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, turnstone, wigeon.</p> <p>There are high levels of disturbance at these roosts, particularly from dogs off lead.</p> <p><b>Feeding areas:</b></p> <p>These birds feed on the saltmarsh and extensive mudflats in this subsection.</p> <p><b>Breeding sites:</b></p> <p>There are very low numbers of breeding birds in this subsection, considering the size of the marsh. There are significant levels of recreational disturbance on the site, although the habitat is in reasonable condition.</p>	<p>The Lancashire Coastal Way runs along the coast from Wild Duck Hall to Morecambe Promenade. This section of the coastal way is popular with walkers. There are several busy car parks and cafés along this section of coast. The car parks and adjacent saltmarsh/foreshore at Wild Duck Hall and Red Bank Farm in particular are popular with local dog walkers.</p> <p>The proposed ECP will follow the Lancashire Coastal Way.</p> <p><b>Trail:</b> As this section is currently very well used by walkers it is expected that there will be negligible change in use of the coastal way as a result of the proposals.</p> <p><b>Coastal margin:</b> Access will be excluded from much of the Coastal margin in this subsection under s25A as it is unsuitable for access. Areas of saltmarsh and foreshore next to the path, where the birds are roosting, will become spreading room. This area is already well used for a variety of different types of recreational activity including walking, dog walking and horse riding. It is not expected that access in these areas will increase as a result of the proposals.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals. There is a low risk of an increase in disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p> <p>The proposals will not impact on existing projects to reduce recreational disturbance in the area (e.g. Morecambe Bay Partnership Natural Ambassadors Scheme, or work by the RSPB).</p>
<p><b>Optional alternative route (OAR) between Mill Lane and St Michael Lane (Bolton-le-Sands)</b></p> <p>See Coastal Access report Silverdale to Cleveleys 2, map SDC 2a.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site.</p> <p>The fields between the OAR and the SPA / Ramsar site boundary could be supporting habitat for non-breeding waterbirds; however, we have no survey data to support this.</p>	<p>The Lancashire Coastal Way runs along the coast here. This section of the coastal way is popular with walkers. There are several busy car parks and cafés along this section of coast. The car parks and adjacent saltmarsh/foreshore at Wild Duck Hall and Red Bank Farm in particular are popular with local dog walkers.</p> <p>The OAR is an inland route for use around high tide. It is aligned on a public right of way which runs parallel to the coast. Signing and promoting the route as a high tide OAR could lead to a small increase in use.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is aligned on a public right of way which is 150m inland of the ECP. The PRoW is aligned through residential areas, then through a linear field which is only 25m wide and has hedges on both sides, then through a caravan park. Where the PRoW is aligned through the field, there is a fence on both sides of the PRoW.</p> <p>There are fields between the OAR and the SPA boundary. Anyone walking on this route will be screened from the surrounding fields.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p> <p>Consequently there is a very low risk of an increase in disturbance of any birds using the coastal fields.</p>

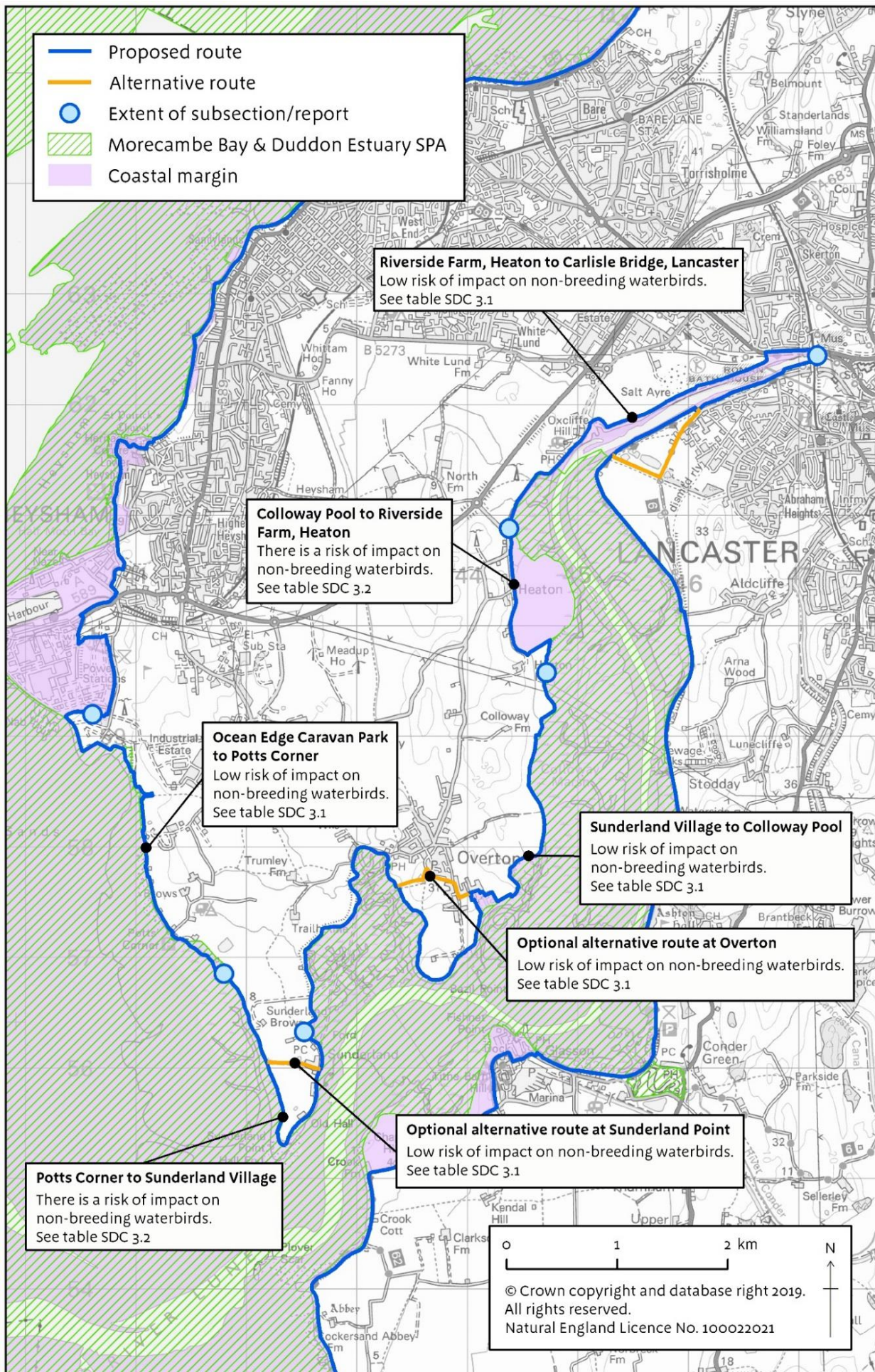
Location	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
		Access proposal Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<p>Cross reference to the Coastal Access Report</p>	<p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p>The Lancashire Coastal Way runs along the coast here.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is aligned on the pavement next to a main road. There are houses, trees and a railway line between the OAR and the area used by roosting birds.</p>
<p><b>Optional alternative route (OAR) at Hest Bank</b></p> <p>See Coastal Access report Silverdale to Cleveleys 2, map SDC 2c.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site.</p> <p>There is a high tide roost at Hest Bank. There are high levels of disturbance at this roost, particularly from dogs off lead.</p>	<p>The OAR is an inland route for use at high tide. It is aligned on a pavement next to the A5105 (Marine Drive). It is not expected that levels of access will increase in this area.</p>	

**Table SDC2.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]  Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
		Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
<p><b>Morecambe Promenade</b></p> <p>See Coastal Access report Silverdale to Cleveleys 2, maps SDC 2c – 2g and direction maps 2C, 2D, 2E, 2F. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Teal Bay</b> (breakwater): black tailed godwit, curlew, dunlin, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, turnstone, wigeon.</p> <p><b>Town Hall Breakwater:</b> black tailed godwit, curlew, dunlin, eider, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, turnstone, wigeon.</p> <p><b>Bubbles Breakwater:</b> knot, oystercatcher, redshank, ringed plover, turnstone.</p> <p><b>Sunnyslopes Breakwater:</b> dunlin, knot, oystercatcher, redshank, ringed plover.</p> <p>The roosts are all on breakwaters on Morecambe Promenade, and fall within the Coastal margin. The roosts are generally undisturbed by regular use of the adjoining promenades, however disturbances to the roosts have been recorded by anglers, children and photographers. These roosts have been highlighted by the Morecambe Bay Recreational Disturbance Report as key sites requiring management.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds feed on the intertidal in this section.</p> <p><b>Breeding sites:</b></p> <p>There are no records of breeding redshank, ringed plover or shelduck in this subsection, due to the lack of suitable habitat.</p>	<p>The promenade at Morecambe is approx. 4 miles long, and is very popular with walkers and cyclists.</p> <p>There are designated bathing beaches at Morecambe which are popular for recreation, and also muddy areas of intertidal which are less popular.</p> <p>The proposed ECP follows the promenade.</p> <p><b>Trail:</b> Due to the high levels of existing use, it is expected that there will be negligible change in access on the promenade.</p> <p><b>Coastal margin:</b> Some areas of the Coastal margin are unsuitable for access and access will be excluded under s25A. The areas not covered by s25A are already used for recreation and it is not expected that this will increase as a result of the proposals.</p>	<p>Morecambe Bay Partnership plan to put interpretation panels near the roost sites, and to work with the council to discourage use of the breakwaters by anglers and other users.</p> <p>If spreading room were to cover the breakwaters, disturbance could increase.</p>	<p>In order to assist with the management of access to the breakwaters where birds are roosting, the following restrictions are proposed under Section 26 (3)(a) (nature conservation):</p> <ul style="list-style-type: none"> <li>- Fishtail Groynes from Hest Bank to Lower Heysham (except the Battery). Total exclusion - 01/09 to 31/03 every year.</li> <li>- New signage to inform people about the restrictions.</li> </ul>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, there is a low risk of an increase in disturbance to non-breeding birds as a result of the proposals.</p>
<p><b>South end of Morecambe Promenade to Ocean Edge Caravan Park.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 2,</p>	<p><b>Heliport:</b> dunlin, knot, lapwing, oystercatcher, redshank, ringed plover.</p> <p>The birds roost on the exposed outside sloping stone apron to the sea wall and at times on the hardstanding above. The top of the seawall is open at both ends and is used by walkers, dog walkers and those taking a short cut from the docks to the half moon bay café. The level of disturbance and the number of birds seen disturbed here during the recreational disturbance study was among the highest recorded for any roost. This roost has been highlighted by the Morecambe Bay Recreational Disturbance Report as a key site requiring management.</p>	<p>At the southern end of Morecambe promenade paths lead to Heysham Head. Heysham Head is owned by the National Trust and is a popular area for local and visiting walkers. From here a path runs south to Half Moon Bay, which is a popular bathing beach.</p> <p>There is no public access to the Nuclear Power station and most of the port.</p>	<p><b>Heliport:</b></p> <p>Morecambe Bay Partnership &amp; Natural England are working with the landowner to improve fencing around some of the site, to increase awareness of the roost to the public/port workers and to discourage use of the sea wall. The roost site will fall within the Coastal margin, and if this site becomes spreading room it will be harder for the</p>	<p>In order to assist with the management of access to the roost sites, the following restrictions are proposed under Section 26 (nature conservation):</p> <ul style="list-style-type: none"> <li>- Sea wall at Near Haze (Half Moon Bay). No Dogs - 01/09 to 30/04 every year</li> <li>- Red Nab. Total access exclusion Required - All Year.</li> </ul>	<p><b>Low risk</b></p> <p>With this route alignment and mitigation in place, there is a low risk of an increase in disturbance to non-breeding birds as a result of the proposals.</p>

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]  Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
		Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
<p>maps SDC 2g – 2h and direction maps 2F, 2G. See also directions maps in Overview report.</p>	<p><b>Wooden Jetty (Heysham Port):</b> turnstone. <b>Red Nab</b> (Heysham): bar tailed godwit, black tailed godwit, curlew, dunlin, eider, grey plover, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, turnstone, wigeon. Red Nab is a really rich area for feeding during spring/autumn migration and during the breeding season. Juvenile birds are often recorded there late in the breeding season. Disturbance at this site is high.</p> <p><b>Feeding areas:</b> Non-breeding waterbirds feed on the intertidal in this section.</p> <p><b>Breeding sites:</b> There are no records of breeding redshank, ringed plover or shelduck in this subsection, due to the lack of suitable habitat.</p>	<p>There is informal parking near Ocean Edge Caravan Park. People park here to access the seawall in front of the power station and beach, near Red Nab. The area is well used by dog walkers.</p> <p>The proposed ECP follows well used paths through Heysham Head to Half Moon Bay. It then passes landward of Heysham Port and Power Station to Ocean Edge Caravan Park.</p> <p><b>Trail:</b> It is expected that there will be negligible change in use of most of the trail, with a small increase in use at Heysham Head and Ocean Edge Caravan Park.</p> <p><b>Coastal margin:</b> Much of the Coastal margin in this subsection is already well used for a variety of different types of recreational activity including walking, dog walking, swimming and horse riding. Because the Coastal margin is already popular, it is not expected that there will be negligible change in access as a result of the proposals. The exception is around Ocean Edge Caravan Park, where access to the margin could increase slightly.</p>	<p>management measures to be effective.</p> <p>Disturbance could increase at Red Nab in this area if it becomes spreading room.</p>	<p>Signage to inform people about the restrictions.</p>	

# Coastal Access Report SDC 3 Ocean Edge Caravan Park, Heysham to Carlisle Bridge, Lancaster



**Table SDC 3.1 Areas where there is a low risk of impact on non-breeding waterbirds**

<p><b>Location</b> Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b>  <b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b>  <b>Access proposal</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p>
<p><b>Ocean Edge Caravan Park to Potts Corner.</b>  See Coastal Access report Silverdale to Cleveleys 3, maps SDC 3a – 3b and direction map 3B. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b> There are no roosts recorded in this subsection. (The roost at Red Nab is considered in report SDC2, see table SDC2.2 above). <b>Feeding areas:</b> The Coastal margin is used by feeding non-breeding waders. <b>Breeding sites:</b> There are no records of breeding redshank, ringed plover or shelduck in this subsection.</p>	<p>This subsection starts from Ocean Edge Caravan Park at Heysham, where pedestrians can access the foreshore. There are defacto access points to the foreshore at various locations, but no promoted routes.  Although there are no existing paths between Ocean Edge and Potts Corner, it is possible to walk along the beach. The beach is fairly popular around Heysham/ Ocean Edge and around Potts Corner, with fewer people in between.  There are a number of smaller caravan parks located on or near the coast in this area that bring users to the beach, plus a small caravan park at Potts Corner.  The ECP in this subsection is proposed on a new path through the caravan park and along the seaward edge of fields. <b>Trail:</b> This ECP will be an easier route to walk than walking along the beach. It is expected that there will be a large increase in the use of the path. The new access would link an urban area to a beach, so it is likely that more people would choose to walk the route. <b>Coastal margin:</b> The beach between Ocean Edge Caravan Park and Potts Corner, which will become spreading room, already has a high level of recreational use. Although access will increase along the line of the trail, it is not thought that use of the margin will change significantly as a result of the proposals. This is because the margin is currently well used and is not easily accessible from most of the new sections of trail.</p>	<p><b>Low risk</b> It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals. Therefore there is a low risk of an increase in disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p>
<p><b>Optional alternative route (OAR) at Sunderland Point</b>  See Coastal Access report Silverdale to Cleveleys 3, map SDC 3c. Also directions maps in Overview report.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site. The saltmarsh south of Potts Corner is used by roosting and breeding waders. The mud and skears around Sunderland point are particularly important for feeding waders. The fields between the OAR and the SPA / Ramsar site boundary could be supporting habitat for non-breeding waterbirds, however we have no survey data to support this.</p>	<p>There is good existing access and established recreational use from Potts Corner to Sunderland Village. From Potts Corner there is a bridleway to Sunderland Village, and a well-used walked route to Sambos Grave. There is a de facto walked route on the foreshore around Sunderland Point which is less well used than the other routes in the area. It is fairly rough underfoot on the foreshore around Sunderland point, which is sufficient to deter most walkers.  The OAR is an inland route for use at high tide. It is aligned on the bridleway called 'The Lane', which crosses the peninsular west of Sunderland Village. This is a popular route and there is expected to be negligible change in levels of access on the bridleway as a result of our proposals.</p>	<p><b>Low risk</b> There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR. The route is aligned on a popular bridleway which has hedges on either side. Therefore anyone using this route would be screened from the surrounding fields. There is no coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP. Therefore there is a very low risk of an increase in disturbance of any birds that might be using the coastal fields. The route also takes walkers away from areas of Middleton Marsh which are used by roosting birds at high tide, which reduces the risk of disturbance to roosting birds.</p>
<p><b>Sunderland Village to Colloway Pool.</b> See Coastal Access report Silverdale to Cleveleys 3, maps SDC</p>	<p><b>Roost sites:</b> <b>Lades Marsh:</b> black-tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher, pintail,</p>	<p>There is a single track road from Sunderland Village to Overton that is used by pedestrians and vehicles. This road gets inundated at high tide. From Overton there is a public footpath around the coast to Bazil Point and Fiskes Point.  From Fiskes Point to Colloway Pool there are no obvious walked routes along the coast. Small numbers of local dog walkers walk on Colloway marsh, however the surface is poached by cattle and is difficult to walk on.</p>	<p><b>Low risk</b> It is expected that there will be negligible change in access to the saltmarshes and flats used by non-breeding waterbirds as a result of the proposals. The new sections of path are separated from the marsh by existing fences and hedges. There is high</p>

<b>Location</b> Cross reference to the Coastal Access Report	<b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b>  <b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b>	<b>Existing recreational use in the areas used by these species</b>  <b>Access proposal</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b>	<b>Risk of impact of proposals on non-breeding waterbirds.</b>
3c – 3f and direction maps 3B – 3D. See also directions maps in Overview report.	<p>redshank, ringed plover, shelduck, turnstone, wigeon.</p> <p><b>Colloway marsh:</b> Bar tailed godwit, black tailed godwit, curlew, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, wigeon.</p> <p>Disturbance in this area is likely to be low due to the low levels of existing access.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds feed on the saltmarshes and flats.</p> <p>The fields between Overton and Lancaster are important feeding areas for pink-footed geese. Current disturbance of geese in these fields is low.</p> <p><b>Breeding sites:</b></p> <p><b>Peggymarsh Pool:</b> 1 pair redshank</p> <p><b>Colloway Marsh:</b> 3 pairs redshank.</p> <p><b>Lades Marsh:</b> 4 pairs redshank.</p> <p>Disturbance in these areas is likely to be low due to the low levels of existing access.</p>	<p>The majority of the proposed ECP in this subsection is aligned on new paths.</p> <p>The ECP will be aligned on a new path on a flood embankment between Sunderland Village and Overton, on public rights of way between Overton and Fiskes Point and on a new route at the seaward edge of fields between Fiskes Point and Colloway Pool.</p> <p><b>Trail:</b> Between Sunderland and Overton there will be a large increase in use of the proposed ECP because there is currently no access on the flood embankment.</p> <p>From Overton to Fiskes Point the route follows existing PRowWs which are already used by locals. Some access improvements are proposed, including a new section of route which will avoid a very wet section of public footpath. Access improvements plus signposting the route as the ECP mean we expect to see a small increase in use in this area.</p> <p>Between Fiskes Point and Yenham Lane there will be a large increase in use of the proposed ECP. The new path will link up with a PRowW, forming a pleasant circular route from Overton Village.</p> <p>Between Yenham Lane and Colloway Pool there will be a small increase in use of the proposed ECP. This area is reasonably remote, there are no other paths or lanes in the area connecting to the ECP so circular routes will not be created, and there are no car parks nearby.</p> <p><b>Coastal margin:</b> There will be negligible change in use of the margin. The margin is unsuitable for access and access is excluded under s25A. The margin in this area is saltmarsh, and although possible to walk on, the surface is very poached by cattle, making difficult walking conditions right up to the landward edge of the marsh. After rain or high tides, the marsh is very wet and muddy. This will prevent most people from walking in the margin. The new path between Sunderland Village and Overton is separated from the marsh by a fence which will prevent dogs from running onto the marsh. The new path between Fiskes Point and Colloway Marsh is separated from the marsh by a fence and hedge, which will prevent skylining and prevent dogs from running onto the marsh.</p>	<p>confidence that the route alignment and condition of the surface of the marshes means that people and dogs will stay on the ECP.</p> <p>The fields that are used by feeding geese do not fall within the margin and most of the fields are not affected by the proposals. However the proposed ECP is aligned to the seaward edge of a small proportion (8) of these fields. The fields are large, and the geese prefer the higher ground so tend to be grazing away from the route of the ECP. Because of this, risk of increased disturbance to feeding geese is low.</p> <p>Therefore there is a low risk of an increase in disturbance of roosting, breeding and feeding non-breeding waterbirds as a result of the proposals.</p>
<p><b>Optional alternative route (OAR) at Overton</b></p> <p>See Coastal Access report Silverdale to Cleveleys 3, map SDC 3e.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site.</p> <p>The OAR is aligned through fields that could be supporting habitat for non-breeding waterbirds, however we have no survey data to support this.</p> <p>There is a high tide roost on Lades Marsh.</p>	<p>There is a network of public rights of way around Overton Village. They are popular routes which are used by locals and by walkers who visit the area.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is aligned on a popular public right of way through fields, and then through the village of Overton. It is possible that there will be a small increase in use of these paths at high tide, but as the paths are already popular with walkers, it is unlikely that the increase in use will lead to an increase in</p>



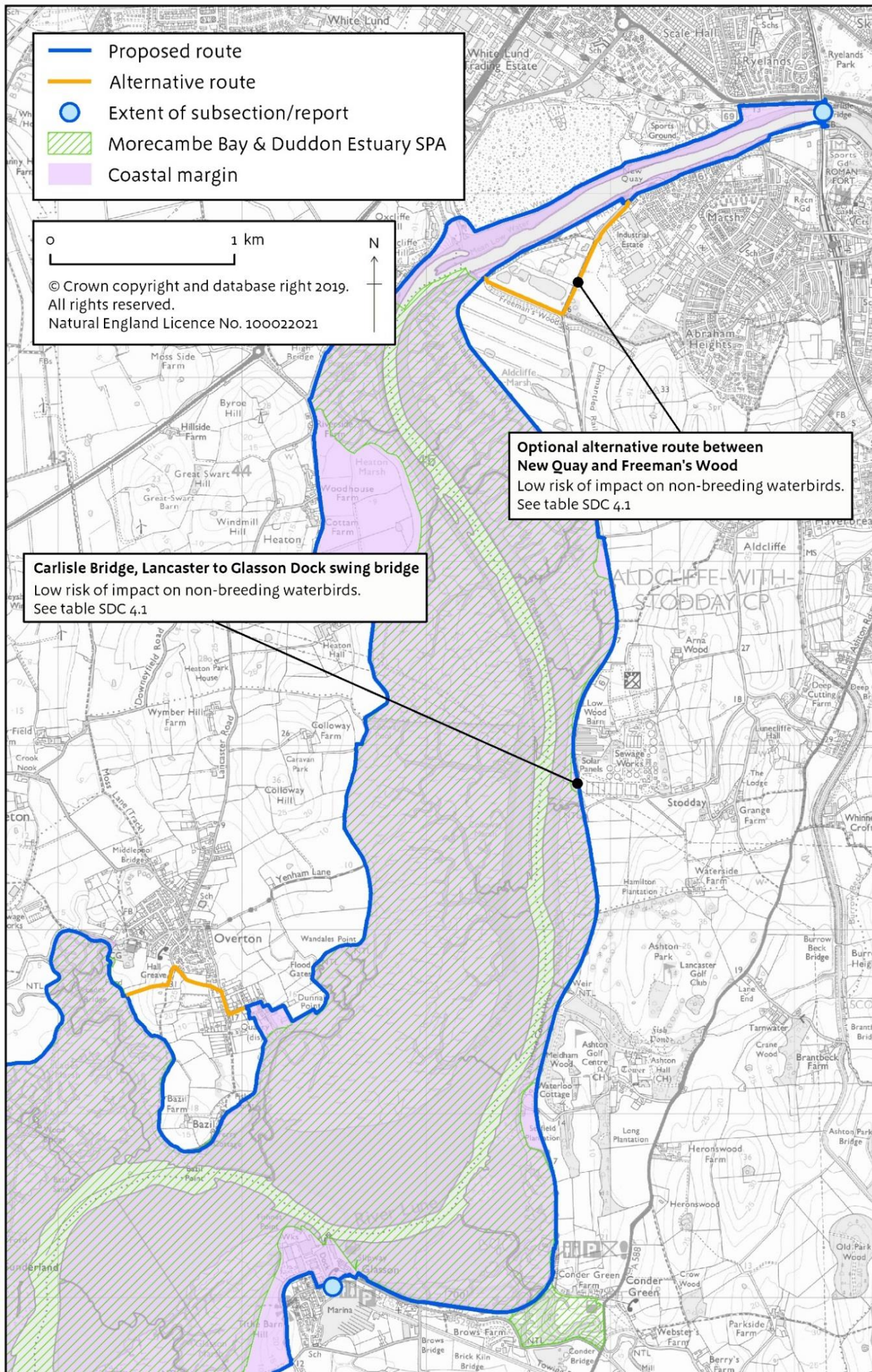
<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <hr/> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p>The OAR is an inland route for use around high tide. It is aligned on a public right of way which runs from the coast to Overton Village, and on roads and pavements through the village.</p> <p>It is expected that there will be a small increase in use of the PRow as a result of signposting it as the OAR.</p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p> <p>disturbance of any non-breeding waterbirds that are using the fields.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP.</p> <p>The route also takes walkers away from Lades Marsh, which is used by roosting birds at high tide, which reduces the risk of disturbance to roosting birds.</p>
<p><b>Riverside Farm, Heaton to Carlisle Bridge, Lancaster.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 3, maps SDC 3h – 3j and direction maps 3D, 3E. See also directions maps in Overview report.</p>	<p>Non-breeding waterbirds feed on the saltmarshes and flats.</p>	<p>From Heaton to Carlisle Bridge in Lancaster, pedestrians currently walk along Lancaster Road, and then use the cycle path that runs along the River Lune to Lancaster.</p> <hr/> <p>The proposed ECP will follow Lancaster Road and the cycleway.</p> <p><b>Trail:</b> There will be a negligible change in access on the line of the trail. The ECP will follow existing well used routes, and use will not increase significantly as a result of the proposals.</p> <p><b>Coastal access:</b> It is expected that there will be a negligible change in use of the margin. The margin is unsuitable for access and access is excluded under s25A.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals. Therefore there is a low risk of an increase in disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p>

**Table SDC 3.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
<p><b>Potts Corner to Sunderland Village.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 3, maps SDC 3b – 3c and direction maps 3B, 3G. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Middleton Marsh</b> (saltmarsh between Potts Corner and Sunderland Point): Bar tailed godwit (nationally important numbers), black tailed godwit, curlew (nationally important numbers), dunlin, eider, grey plover, knot (internationally important numbers), lapwing, oystercatcher (nationally important numbers), pintail, red shank, ringed plover, shelduck, turnstone, wigeon.</p> <p>Middleton is arguably the most important roost in Morecambe Bay South (certainly for knot). Disturbance is high at the north end of the marsh, low at the south end. Dog walking has been recorded as a source of disturbance. Dog walkers are by far the largest group visiting the area and most stay less than an hour. This roost has been highlighted as one needing action to reduce disturbance from dog walkers.</p> <p><b>Feeding areas:</b> The entire Coastal margin is used by feeding non-breeding birds. The mud and skears around <b>Sunderland Point</b> are particularly important for feeding waders.</p> <p><b>Breeding sites:</b> In 2016, 4 pairs of redshank were recorded as breeding on <b>Middleton Marsh</b>.</p>	<p>Potts Corner is the main car park on this subsection. The sand and mudflats are heavily used for recreational activity including walking, dog walking, horse riding, kite surfing, vehicle use and model aircraft flying. Natural England and partners are trying to ensure that all these activities are better managed and regulated, as they are impacting on features of the SPA and SAC.</p> <p>There is good existing access and established recreational use from Potts Corner to Sunderland Village.</p> <p>From Potts Corner there is a bridleway to Sunderland Village, and a well-used walked route to Sambos Grave. There is a de facto access walked route on the foreshore around Sunderland Point which is less well used than the other routes in the area. It is fairly rough underfoot on the foreshore around Sunderland point which reduces the numbers walking around the point.</p> <p>Sunderland Village is a village of 30 or so houses and farms at the end of a tidal causeway. Sunderland Point is currently accessed by car or on foot via a tidal causeway from Overton, or on horseback or foot from Potts Corner which is just over a mile away. There are also a few public footpaths through the local farmland to the Point, but their usage is fairly low. There is limited parking which is also restricted by the tide.</p> <p>The proposed ECP will be aligned on the existing bridleway and path between Potts Corner and Sambo's Grave, then on a new path in fields around Sunderland Point.</p> <p><b>Trail:</b> There will be a negligible increase in levels of use between Potts Corner and Sambo's Grave, this is a well-used bridleway and then a busy locally promoted route. It is likely that there will be a small increase in use between Sambo's Grave and the new path, and a large increase on the new path in the fields around Sunderland Point.</p> <p><b>Coastal margin:</b> Access will be restricted to most of the Coastal margin under s25A as it is unsuitable for access. There is potential for access to increase in the margin on areas of Middleton Marsh which are not covered by the s25A access exclusion (particularly dogs off lead running on to the marsh), and on the foreshore around Sunderland Point.</p>	<p><b>Middleton Marsh:</b> There is potential for access to increase in the margin on areas of Middleton Marsh which are not covered by a s25A access exclusion (particularly dogs off lead running on to the marsh). This could lead to increased disturbance of roosting birds.</p> <p><b>Sunderland Point:</b> The foreshore will fall within the Coastal margin. If this area becomes spreading room there could be an increase in disturbance to feeding waders.</p>	<p>The following access restrictions and exclusions are proposed under Section 26 (nature conservation):</p> <p>i) Marsh south of Potts Corner (Middleton Marsh). Total access exclusion to the Coastal margin - All Year.</p> <p>ii) Skears/shingle Bank at Sunderland Point. Total Exclusion to the Coastal margin - All Year.</p> <p>iii) Sunderland Point. Dogs on Leads to line of ECP - All Year. Restriction runs from the Lane to public footpath on east side of point.</p> <p>Signage and interpretation will be installed to tell people about the exclusions and to tell dog walkers where they can exercise dogs off lead.</p>	<p><b>Low risk</b></p> <p>The recreational disturbance study recommended that a marked trail on the saltmarsh would assist in keeping walkers to a set route and away from the saltmarsh edge.</p> <p>The proposed ECP will form a 'marked trail' as recommended by the bird disturbance report.</p> <p>The alignment of the ECP, plus access exclusions on the marsh, means that there is low risk of an increase in disturbance to breeding and roosting non-breeding waterbirds.</p> <p>The new route around Sunderland Point is in fields, with a fence and some shrubs between the path and the foreshore. Access to the foreshore will be excluded. Therefore there is a low risk of an increase in disturbance of birds feeding on the foreshore at Sunderland Point.</p>
<p><b>Colloway Pool to Riverside Farm, Heaton.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 3, maps</p>	<p><b>Roost sites:</b></p> <p><b>Heaton Marsh:</b> curlew, lapwing, oystercatcher, redshank, whooper swan.</p> <p>Disturbance in this area is likely to be low due to the low levels of existing access.</p> <p><b>Feeding areas:</b></p>	<p>There are no existing walked routes in this area (other than the public highway in the hamlet of Heaton). Existing levels of access are very low, as the area is fairly remote with no nearby parking.</p> <p>The ECP is aligned on an embankment for 500m. It then turns inland on a farm track, briefly joins a public highway in Heaton and it is then aligned through a field.</p>	<p>The embankment runs alongside a large area of saltmarsh which supports roosting and feeding waterbirds. People walking on the proposed ECP may cause disturbance to</p>	<p>The following mitigation is proposed:</p> <p>i) A year round total access exclusion is proposed on the line of the track used by the</p>	<p><b>Low risk</b></p> <p>This area currently has very low levels of access.</p> <p>The remoteness of this section of the trail and unsuitability of the saltmarsh for walking over</p>

<p><b>Location</b></p> <p><b>Cross reference to the Coastal Access Report</b></p> <p>SDC 3g and direction maps 3D, 3E, 3I. See also directions maps in Overview report.</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p>			
	<p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p> <p>Non-breeding waterbirds feed on the saltmarsh and flats.</p> <p>Geese feed in fields within the Coastal margin.</p> <p><b>Breeding sites:</b></p> <p>In 2016, 3 pairs of redshank were recorded as breeding on Heaton Marsh.</p>	<p><b>Access proposal (excluding mitigation)</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p> <p><b>Trail:</b> Use of the ECP in this area is likely to be low, as it is a fairly remote section, 1.6 miles from the nearest car park at Overton (there is no parking in Heaton). No circular routes will be created, this area is likely to be used by long distance walkers travelling between Overton and Lancaster.</p> <p><b>Coastal margin:</b> The margin is unsuitable for access and access is excluded under s25A.</p>	<p><b>Likely effects without mitigation</b></p> <p>birds through skylining. Numbers of dogs off lead in the margin could increase, leading to increased disturbance to birds.</p> <p>There is a private access track to pylons that leads from the ECP out into the marsh. It was a condition of SSSI consent for the track that no public access would be allowed, in order to prevent disturbance to birds on the marsh. Use of this track may increase as a result of the proposals if the track becomes spreading room.</p> <p>The ECP is aligned in a small field near Heaton which supports feeding geese. For land management reasons, a fence will be installed seaward, so that the ECP is in a fenced corridor. This will prevent people and dogs from entering the main area of the field.</p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p> <p>electricity company. (The rest of the marsh is covered by a s25A exclusion as it is unsuitable for access).</p> <p>ii) Signage will be installed showing the ECP route and telling people that there are no access rights on the track.</p> <p>iii) Where the ECP is aligned on an embankment at Heaton Marsh, coastal access rights on the trail are to be restricted so that dogs must be kept on a lead all year round.</p> <p>iv) Dogs on leads signs will be installed along the embankment.</p>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b></p> <p>reduce the risk of disturbance. Conditions underfoot next to the embankment and on the marsh are difficult, the sward is heavily poached by cattle, and therefore people are likely remain on the route of the ECP.</p> <p>It is not possible to fence the route of the ECP as cattle grazing the marsh need to access the embankment at high tide.</p> <p>Additional measures are included in the proposals to exclude access from an access track over the marsh, and to make it clear that the track is not available for public access.</p> <p>There will be a dogs on lead restriction and associated signage on the embankment, reducing the risk of dogs leaving the embankment and causing disturbance to breeding birds.</p> <p>Any small increase in disturbance as a result of the proposals is not likely to have a significant impact on populations of non-breeding waterbirds.</p>

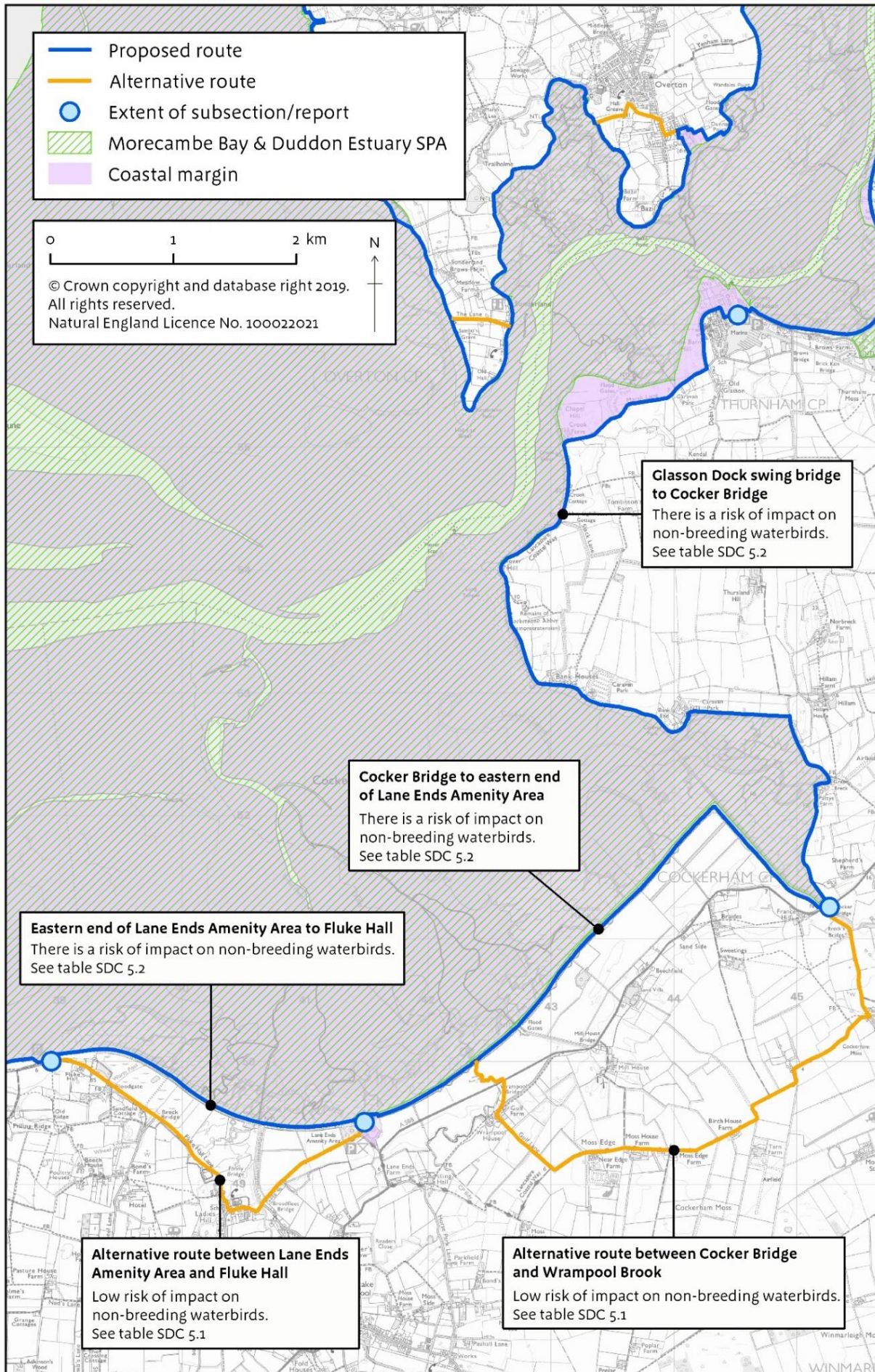
# Coastal Access Report SDC 4 Carlisle Bridge, Lancaster to Glasson Dock swing bridge



**Table SDC 4.1 Areas where there is a low risk of impact on non-breeding waterbirds**

<p><b>Location</b></p> <p>Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b></p> <p><b>Access proposal</b></p> <p><b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Risk of impact of proposals on non-breeding waterbirds.</b></p>
<p><b>Carlisle Bridge, Lancaster to Glasson Dock swing bridge.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 4, maps SDC 4a – 4e and direction maps 4A, 4B. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Colloway marsh:</b> on other side of estuary, 300m distance from this subsection of the ECP. Bar tailed godwit, black tailed godwit, curlew, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, wigeon.</p> <p>Disturbance is likely to be low due to the low levels of current access.</p> <p><b>Aldcliffe and Heaton marsh:</b> These marshes are close together on either side of the Lune river channel. Heaton marsh is on other side of estuary, 270m distance from this subsection of the ECP, 150m distance from the margin edge in this subsection. Aldcliffe marsh is in this subsection. Curlew, lapwing, oystercatcher, redshank, whooper swan.</p> <p><b>Conder marsh:</b> Bar tailed godwit, curlew, dunlin, eider, grey plover, knot, redshank.</p> <p>There is a medium level of disturbance at Aldcliffe and Heaton marshes.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds feed on the saltmarshes and flats.</p> <p><b>Breeding sites:</b></p> <p><b>Aldcliffe Marsh:</b> 4 pairs redshank, 2 pairs shelduck</p> <p><b>Stodday Marsh:</b> 5 pairs redshank, 3 pairs shelduck</p> <p><b>Conder Marsh:</b> 4 pairs redshank.</p>	<p>Good existing access and heavy established recreational use from Carlisle Bridge to Cocker Bridge.</p> <p>The existing Lancashire Coastal Way and PRowWs are well signposted throughout and are used by pedestrians, cyclists and horse riders.</p> <p>The existing access follows a PRow on the edge of the River Lune to join the Lune Estuary cycleway to Glasson Dock.</p> <p>The proposed ECP is aligned on the Lancashire Coastal Way, on a public footpath and a cycle route.</p> <p><b>Trail:</b> Due to the high levels of existing use, there will be negligible change in use of the trail as a result of the proposals.</p> <p><b>Coastal margin:</b> Access will be restricted to the Coastal margin under s25A, so there will be no change in access to the margin as a result of the proposals.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals. The ECP is aligned on the route of Lancashire Coastal Way, which follows a popular cycleway and public footpath. Access to the Coastal margin will be excluded as it is unsuitable for access. Therefore there will be a low risk of an increase in disturbance of roosting, breeding and feeding non-breeding waterbirds as a result of the proposals.</p>
<p><b>Optional alternative route (OAR) between New Quay and Freeman’s Wood (Lancaster)</b></p> <p>See Coastal Access report Silverdale to Cleveleys 4, map SDC 4a.</p>	<p>The OAR is aligned outside of the boundary of the SPA / Ramsar site. The areas adjacent to the OAR could be supporting habitat for non-breeding waterbirds.</p>	<p>There is good existing access and heavy established recreational use in this area, which is on the edge of Lancaster.</p> <p>The existing Lancashire Coastal Way and Bay Cycle Way are aligned in this area, plus there is a network of PRowWs.</p> <p>The OAR is an inland route for use at high tide. It is aligned on an old railway line which is part of the Bay Cycle Way, and on a PRow at Freeman’s Wood.</p> <p>As this is already a popular route, it is expected that there will be a negligible change in levels of use as a result of our proposals.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the OAR.</p> <p>The route is aligned on a popular cycle route and public footpath on the edge of Lancaster. It is expected that there will be a negligible change in levels of use as a result of our proposals.</p> <p>There is no Coastal margin associated with an OAR, other than the narrow strip of land on which the OAR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the OAR and the main ECP. The route has fences and trees on both sides, making it difficult to access the adjacent land.</p>

# Coastal Access Report SDC 5 Glasson Dock swing bridge to Fluke Hall Lane car park, Pilling



**Table SDC 5.1 Areas where there is a low risk of impact on non-breeding waterbirds**

Location	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<p>Cross reference to the Coastal Access Report</p> <p><b>Alternative route (AR) between Cocker Bridge and Wrampool Brook</b></p> <p>See Coastal Access report Silverdale to Cleveleys 5, maps SDC 5j, 5k and 5l.</p>	<p>The AR is aligned outside of the boundary of the SPA / Ramsar site. The areas adjacent to the AR and between the AR and the SPA / Ramsar site boundary are important supporting habitat for non-breeding waterbirds. Large numbers of geese and swans feed in the fields across the whole area.</p> <p>The fields between the embankment and the A588 are used by large numbers of feeding, breeding and roosting birds.</p>	<p>Current access provision along the coast from Cocker Bridge to Fluke Hall is poor. The Lancashire Coastal Way in this area is aligned over a mile inland on existing public rights of way and single track roads from Cocker Bridge through to Lane Ends Amenity Area. A flood embankment runs along the coast from Cocker Bridge to Lane Ends. There is no legal right of access along the embankment, and although there is some unauthorised use by walkers this is very low.</p> <p>The AR is a seasonal inland route which will be used when the main ECP is closed from 1st September to 31st March each year. During this time access will be excluded from the main route of the ECP in order to prevent disturbance to roosting and feeding non-breeding waterbirds.</p> <p>It is aligned along existing minor roads (also the route of the Lancashire Coastal Way) before following a new route along the edge of the River Wrampool.</p> <p>We would expect to see an increase in use of the entire length of this AR – the proposed route of the main trail will improve access to this part of the coast but a consequence of that will be when access is excluded at certain times of the year, existing users and new visitors will follow the proposed AR. However, when the main route is accessible, we would perhaps expect some reduction in levels of use of the existing Lancashire Coastal Way, as walkers opt to use the new ECP instead.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the AR.</p> <p>The route is aligned on minor roads between Cocker Bridge and Wrampool Bridge. Walkers are already using these lanes as part of the Lancashire Coastal Way, and access is expected to increase on this route as a result of the proposals. There may be geese and swans using the fields adjacent to the road. There are fences on both sides of the roads, and hedges in many places. Therefore there is a low risk of people / dogs entering the fields and causing disturbance to geese and swans.</p> <p>A new section of path will be created along the edge of the River Wrampool. It will be aligned within a fenced corridor, thus preventing dogs from straying into the adjacent fields and causing disturbance.</p> <p>There is no Coastal margin associated with an AR, other than the narrow strip of land on which the AR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the AR and the main ECP.</p>
<p><b>Alternative route (AR) between Lane Ends Amenity Area and Fluke Hall</b></p> <p>See Coastal Access report Silverdale to Cleveleys 5, maps SDC 5h and 5i.</p>	<p>The AR is aligned outside of the boundary of the SPA / Ramsar site. The fields between the AR and the SPA / Ramsar site boundary are used by feeding geese and swans during winter.</p>	<p>Public access is provided within the Lane Ends Amenity Area. This facility is well used, especially by members from the local community who appear to use it primarily as a popular dog walking and exercise area. Access west along the embankment towards Fluke Hall is currently provided under an access order between the Environment Agency and Lancashire County Council but this only provides a right of access along part of the embankment, for part of the year (no access between Boxing Day and Maundy Thursday) and does not permit people to take dogs with them. Access under this same agreement also allows people to access the sea defence bank via 2 tracks that join up with the inland road at Broadfleet Bridge and along Fluke Hall Lane. An existing right of access for people who reside in the Parish of Pilling is also provided heading immediately out of Lane Ends Amenity Area onto the marsh and flats.</p> <p>The AR is a seasonal inland route which will be used when the main ECP is closed from 1st September to 31st March each year. During this time access will be excluded from the main route of the ECP in order to prevent disturbance to roosting and feeding non-breeding waterbirds.</p> <p>It is aligned along existing minor roads and on pavements through Pilling (this is also the route of the Lancashire Coastal Way).</p> <p>There may be a small increase in use of the AR as the proposed route of the main trail will improve access to this part of the coast - a consequence of that will be when access is excluded to the main trail at certain times of the year, existing users and new visitors will follow the proposed AR.</p>	<p><b>Low risk</b></p> <p>There is a low risk of disturbance of non-breeding waterbirds as a result of people and dogs using the AR.</p> <p>The route is aligned on minor roads. Walkers are already using these lanes as part of the Lancashire Coastal Way, and access is expected to increase on this route as a result of the proposals. There may be geese and swans using the fields adjacent to the road. There are fences on both sides of the roads, and hedges in places. Therefore there is a low risk of people / dogs entering the fields and causing disturbance to geese and swans.</p> <p>There is no Coastal margin associated with an AR, other than the narrow strip of land on which the AR sits, typically to the first boundary feature on either side. Therefore there will be no new access rights created in the area between the AR and the main ECP.</p>

**Table SDC 5.2 Areas where there is a risk of impact on non-breeding waterbirds and where mitigation is required to reduce the risk**

<p><b>Location</b> Cross reference to the Coastal Access Report</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b>  <b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p>	<p><b>Existing recreational use in the areas used by these species</b>  <b>Access proposal (excluding mitigation)</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>	<p><b>Likely effects without mitigation</b></p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b></p>
<p><b>Glasson Dock Swing Bridge to Cocker Bridge.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 5, maps SDC 5a – 5d and direction maps 5C – 5E. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Glasson marsh:</b> Bar tailed godwit (nationally important numbers), black tailed godwit, curlew, dunlin, eider, knot, lapwing, oystercatcher, redshank, shelduck, turnstone, wigeon.</p> <p>This marsh currently has low levels of access on and around it. Increased access could lead to disturbance of non-breeding birds.</p> <p><b>Plover Scar</b> (near Cockersand Abbey): Bar tailed godwit, black tailed godwit, curlew, dunlin, eider, grey plover, knot, lapwing, oystercatcher, pintail, ringed plover, redshank, sanderling, shelduck, turnstone, wigeon, whooper swan.</p> <p>Disturbance is high. It is one of the most regularly disturbed key roosts in Morecambe Bay. This roost currently suffers from disturbance due to people and dogs, and has been highlighted in the Morecambe Bay Recreational Disturbance Site as one of the roosts requiring management. Morecambe Bay Partnership and NE are currently working to reduce access in this area.</p> <p><b>Bank End:</b> Bar tailed godwit, black tailed godwit, curlew, dunlin, eider, grey plover, knot, lapwing, oystercatcher, pintail, redshank, sanderling, shelduck, turnstone, whooper swan.</p> <p><b>Feeding areas:</b> Non-breeding waterbirds feed on the saltmarshes and flats.</p> <p><b>Breeding sites:</b> <b>Glasson Marsh:</b> 1 pair redshank, 2 pairs shelduck. Shelduck are thought to be nesting in the flood banks and adjacent hedgerows / scrub. Current disturbance is low. <b>Plover Scar:</b> 1 pair ringed plover. Disturbance is high in this area.</p>	<p>This is a popular area for walkers. The Lancashire Coastal Way follows public rights of way around the coast. This coastal walk is well publicised online and there are specific walks leaflets and promoted routes for this area.</p> <p>The proposed ECP follows the Lancashire Coastal Way in this subsection. For two short sections near Cocker Bridge the ECP is aligned on top of embankments in places where the Lancashire Coastal Way is aligned on wet saltmarsh.</p> <p><b>Trail:</b> There will be negligible change in use of the trail in most areas. Due to the surface improvements on the bridleway at Marsh Lane, which is currently extremely wet, it is expected that there will be a small increase in use as more people use this route to get from Glasson to the coast, currently there are drier inland PRoWs to use.</p> <p>The two new sections on embankments run parallel to existing popular paths. Although we would expect a large increase in numbers of people using the new routes (as currently they are not walked), this will be mainly due to existing walkers choosing to use the new line, rather than new walkers being attracted to the area.</p> <p><b>Coastal margin:</b> Access will be restricted to most of the Coastal margin under s25A and therefore access is not expected to change in these areas. The exceptions are Chapel Hill embankment (next to Glasson Marsh), fields near Glasson Marsh and shingle / rocky skears around Plover Scar that will fall within the margin. Access in these areas could increase as a result of the proposals.</p>	<p>An increase in access on Chapel Hill flood bank would lead to an increase in disturbance of roosting and feeding birds on Glasson marsh, due to skylining and dogs running onto the marsh.</p> <p>There is an area of farmland east of Janson’s Pool where an increase in access is possible. This area is under HLS for non-breeding waders. Increased access here could cause disturbance to feeding birds.</p> <p>The other fields along Marsh Lane are separated from the proposed ECP by a fence or hedge, so it is not expected that there will be an increase in access in these fields.</p>	<p>The following mitigation is proposed:</p> <p>i) A year round total access exclusion along Chapel Hill flood bank and fields to the east of Janson Pool</p> <p>ii) A year round total access exclusion on the rocky skears around Plover Scar</p> <p>iii) installation of signage explaining the restrictions and exclusions</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals. Access is excluded from the sensitive areas. Therefore there is a low risk of an increase in disturbance of roosting, breeding and feeding non-breeding waterbirds as a result of the proposals.</p>
<p><b>Cocker Bridge to eastern end of Lane Ends Amenity area.</b></p> <p>See Coastal Access report Silverdale to Cleveleys, maps SDC 5e –</p>	<p><b>Roost sites:</b></p> <p><b>Bank End</b> (eastern end of embankment, near Cockerham): bar tailed godwit, black tailed godwit, curlew, dunlin, eider, grey plover, knot, lapwing, oystercatcher, pintail, redshank, shelduck, wigeon, whooper swan.</p> <p><b>Bank End to Lane Ends</b> Curlew, dunlin, eider, grey plover, knot, lapwing, oystercatcher, pintail, redshank, shelduck (nationally important numbers), wigeon.</p> <p>This is the most important area for wigeon in Morecambe Bay in winter. Disturbance is low.</p>	<p>Current access provision along the coast from Cocker Bridge to Fluke Hall is poor. The Lancashire Coastal Way in this area is aligned over a mile inland on existing public rights of way and single track roads from Cocker Bridge through to Lane Ends Amenity Area. A flood embankment runs along the coast from Cocker Bridge to Lane Ends. There is no legal right of access along the embankment, and although there is some unauthorised use by walkers this is very low.</p>	<p>The embankment and saltmarsh between Cocker Bridge and Lane Ends Amenity Area will form part of the Coastal margin and there is the potential for people to access the top of the embankment</p>	<p>Due to the sensitivities between Cocker Bridge and Lane Ends Amenity Area, the trail is aligned on the landward side of the embankment in this area. This will help to reduce disturbance to roosting birds on the marsh. However there are still</p>	<p><b>Low risk</b></p> <p><b>From 1<sup>st</sup> September to 31<sup>st</sup> March:</b></p> <p>The combination of route alignment landward of the embankment and mitigation including a seasonal closure of the</p>

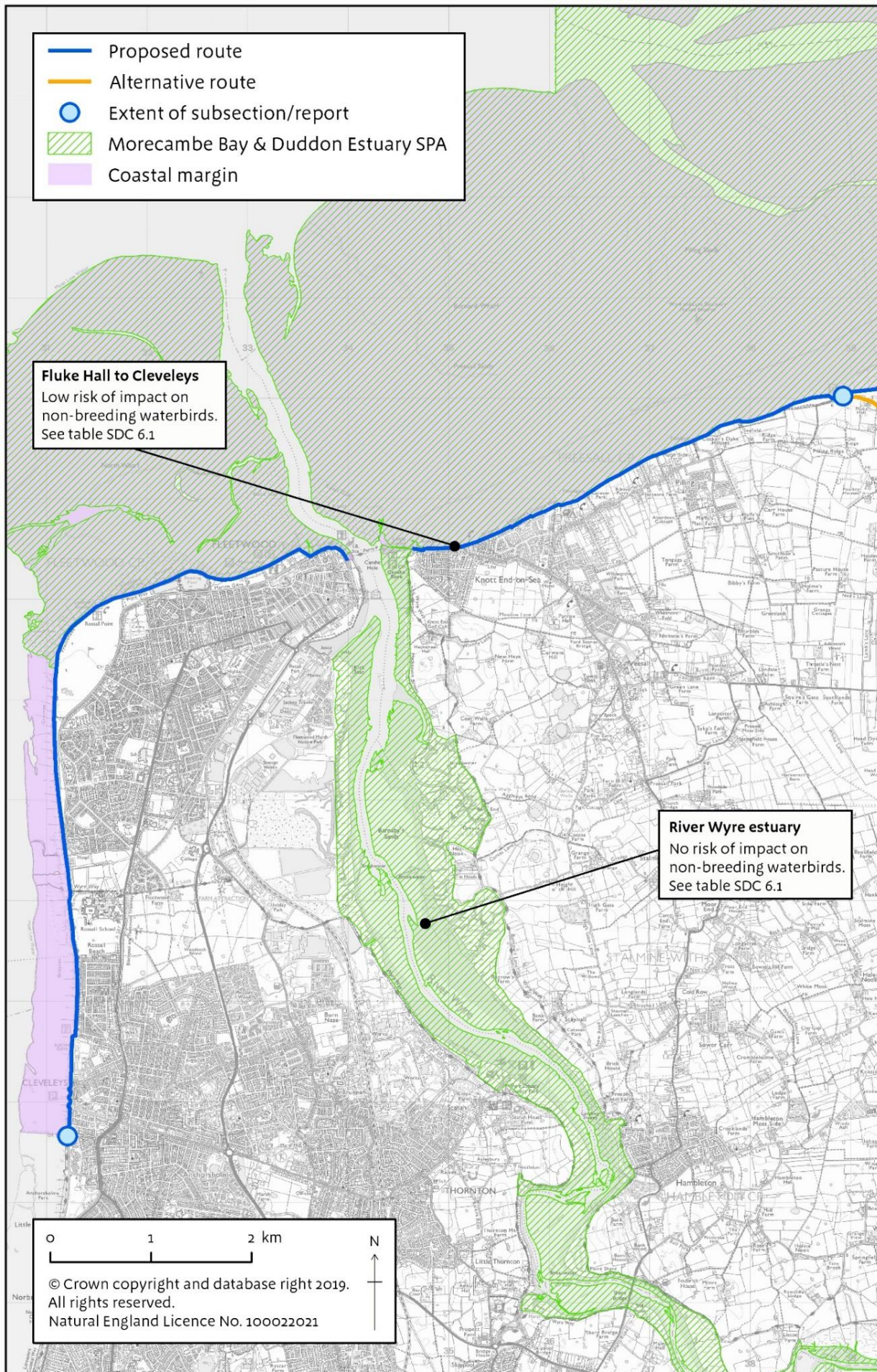


<p><b>Location</b> Cross reference to the Coastal Access Report</p> <p>5g and direction maps 5C, 5F. See also directions maps in Overview report.</p>	<p><b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b></p> <p><b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b></p> <p><b>Geese and swan night time roosts:</b> Geese roost on the flats, marsh and fields.</p> <p><b>Feeding areas:</b> Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p>The fields between the embankment and the A588 are used by large numbers of birds. Most of the fields to the east of Lane Ends are under agri-environment agreements. Some fields are managed to maintain the rough grassland habitat for over-wintering geese and swans. Some are managed to provide suitable foraging, feeding, loafing and roosting opportunities for waterfowl. The following birds are recorded regularly on the fields from September to March: Bewicks Swan (max count 33 at Sand Villa), Whooper Swans (max count 97 at Sand Villa), Pink-footed goose (max count 12,000 at Sand Villa, 10,000 at Wrampool, 12,000 at Braides), Golden Plover (max count 3,000 at Sand Villa, 2,500 at Braides), Curlew max count 1,000 Sand Villa, 780 Wrampool, 300 Braides). Low numbers of dark and pale bellied brent geese, barnacle geese, greylag, Greenland white fronted geese and Russian white fronted geese are also recorded.</p> <p><b>Breeding sites:</b> <b>Cockerham Marsh:</b> 1 pair shelduck. <b>Wrampool Marsh:</b> 2 pairs redshank, 1 pair shelduck. <b>Wrampool Bridge:</b> 1 pair redshank, 1 pair shelduck. <b>Wrampool Brook:</b> 1 pair redshank. <b>Cockerham Out Marsh:</b> 4 pairs redshank, 1 pair shelduck, 4 pairs shelduck. <b>Millhouse Pool:</b> 1 pair redshank. <b>Fields and embankment at Braides</b> (east end of the embankment): 1 pair redshank. A survey by the RSPB in 2017 identified at least two established Redshank territories in the ditch surrounding Braides fields along with possible breeding curlew. These fields are in an HLS scheme for breeding waders. Current disturbance is fairly low in most of these areas</p>	<p><b>Existing recreational use in the areas used by these species</b></p>	<p><b>Likely effects without mitigation</b></p> <p>from the trail in order to get better views out</p> <p>across the Bay. This would cause increased disturbance to birds roosting next to the embankment and to birds feeding on the marsh, due to skylining and dogs off lead running onto the marsh.</p> <p>There is a risk that birds feeding in the fields landward of the embankment could be disturbed by dogs running into the fields. In most locations landward of the flood bank there is a ditch and boundary fence which would prevent dogs running into the fields, but there are places where the ditch can be crossed.</p>	<p><b>Mitigation incorporated into this proposal to manage risk</b></p> <p>concerns that this alignment could increase disturbance to wintering birds feeding and roosting on the marsh and in the fields behind the embankment. In order to address these concerns the following mitigation is proposed:</p> <ul style="list-style-type: none"> <li>- A seasonal access exclusion on the line of the ECP, between Cocker Bridge and the river Wrampool, from 1st September to 31st March, to prevent disturbance to roosting and feeding birds. Gates at either end of this route will be locked when the path is closed, to prevent access. Signage at both ends will clearly show the alternative route.</li> <li>Once the trail is open, Natural England will ensure that arrangements are in place to check that gates are locked.</li> <li>- The seasonal alternative route will run along the Wrampool channel in a fenced corridor, thus preventing dogs from straying into the fields and causing disturbance.</li> <li>- The trail at the landward edge of the embankment between the river Wrampool and the Lane Ends Amenity Area will be open all year, however there is some screening provided by trees between the trail and the fields, which means the risk of disturbing birds on the fields is low.</li> </ul>	<p><b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b></p> <p>trail means that there will not be an increase in access in the areas where birds are roosting and feeding as a result of the proposals.</p> <p><b>From 1<sup>st</sup> April to 31<sup>st</sup> August:</b></p> <p>The combination of route alignment behind the embankment, access exclusions on the embankment, fencing and signage means there will not be an increase in access in the majority of areas used by breeding birds.</p> <p>The dogs on leads restriction plus signage is designed to reduce the risk of dogs running through open gates into the fields behind the embankment.</p> <p>The trail itself does go through some breeding bird territories.</p> <p>Aligning the ECP though the territories won't, in itself, cause a loss of habitat. The habitat remains available for feeding and foraging. The path will become unavailable as nest sites but the size of this in comparison to the available habitat is minimal. The alignment is unlikely to cause a decline in the numbers of breeding birds.</p>
		<p><b>Access proposal (excluding mitigation)</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b></p>			
		<p>The England Coast Path will follow a new path from Cocker Bridge to Lane Ends Amenity Area along the landward side of the existing sea defence embankment. This area currently has low levels of access.</p> <p><b>Trail:</b> There will be a large increase in use of the ECP.</p> <p><b>Coastal margin:</b> Access will be excluded under s25A from most of the saltmarsh and flats in this subsection as they are unsuitable for access.</p>			

<b>Location</b> Cross reference to the Coastal Access Report	<b>Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]</b>  <b>Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]</b>	<b>Existing recreational use in the areas used by these species</b>	<b>Likely effects without mitigation</b>	<b>Mitigation incorporated into this proposal to manage risk</b>	<b>Risk of impact of proposals (including mitigation) on non-breeding waterbirds</b>
<b>Access proposal (excluding mitigation)</b> <b>Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal</b>					
<b>Eastern end of Lane Ends Amenity area to Fluke Hall Lane car park, Pilling.</b>  See Coastal Access report Silverdale to Cleveleys 5, maps SDC 5h – 5i and direction maps 5C, 5F. See also directions maps in Overview report.	<b>Roost sites:</b> <b>Lane Ends</b> (roost is west of Lane Ends Amenity Area). Bar tailed godwit, light bellied brent goose, black tailed godwit, curlew (nationally important numbers), dunlin, eider, grey plover (nationally important numbers), knot, lapwing, oystercatcher, pintail, redshank, ringed plover, sanderling, shelduck, wigeon. There is a medium level of disturbance at this site. <b>Fluke Hall</b> bar tailed godwit, black tailed godwit, curlew, dunlin, eider, grey plover, knot, lapwing, oystercatcher (nationally important numbers), pintail, redshank, ringed plover, sanderling, shelduck, wigeon, whooper swan. Fluke Hall acts as a refuge roost on high spring tides. There is a high level of disturbance at this site. <b>Broadfleet</b> , landward of embankment. Very well established and regularly used. Redshank roost at northern end of Broadfleet (West side) waterbody with muddy shore.  <b>Geese and Swan night time roosts:</b>	Public access is provided within the Lane Ends Amenity Area, which is also where the public are able to get access to part of the existing flood defence embankment to the west of the amenity area. This amenity area has car parking on two levels, with its upper level providing good views out over the bay. This facility is well used, especially by members from the local community who appear to use it primarily as a popular dog walking and exercise area. Access west along the embankment towards Fluke Hall is currently provided under an access agreement between the Environment Agency and Lancashire County Council but this only provides a right of access along part of the embankment, for part of the year (no access between Boxing Day and Maundy Thursday) and does not permit people to take dogs with them. Access under this same agreement also allows people to access the sea defence bank via 2 tracks that join up with the inland road at Broadfleet Bridge and along Fluke Hall Lane. Most visitors appear to ignore the current restrictions that are in place. An existing right of access for people who reside in the Parish of Pilling is also provided heading	There is a risk of significant disturbance to birds roosting close to the embankment and feeding on the marsh close to the embankment. This is due to an increase in people skylining and an increase in numbers of dogs running onto the marsh.	Due to concerns that this alignment could cause increased disturbance to wintering birds feeding and roosting on the embankment, the following mitigation is proposed:  - The trail will be closed between 1st September and 31st March between the end of the track from Broadfleet Bridge to Fluke Hall; - Gates at either end of this route will be locked when the path is closed, to prevent access. - Once the trail is open, Natural England will ensure that gates are locked.	<b>Low risk</b> <b>From 1<sup>st</sup> September to 31<sup>st</sup> March:</b> Access will be excluded from the top of the embankment at the time of year when non-breeding waterbirds are present (with the exception of the section where access is currently permitted). Therefore there will not be any significant changes in access in the areas used by non-breeding waterbirds, at the time of year when they are present, as a result of the proposals. Therefore there is a low risk of an increase in

Location Cross reference to the Coastal Access Report	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Likely effects without mitigation	Mitigation incorporated into this proposal to manage risk	Risk of impact of proposals (including mitigation) on non-breeding waterbirds
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal (excluding mitigation) Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal			
	<p>Geese roost on the embankment between Broadfleet and Fluke hall (observed by NE staff March 2017), and on the flats, marsh and fields.</p> <p><b>Feeding areas:</b></p> <p>Non-breeding waterbirds use the intertidal flats and saltmarshes for feeding.</p> <p>The fields behind the embankment between Broadfleet and Fluke Hall Lane are in HLS. Arable (Maize) is used by feeding geese and swans during winter. These areas will not be affected as they will not fall within the Coastal margin.</p> <p><b>Breeding sites:</b></p> <p><b>Pilling Marsh mid:</b> 9 pairs redshank.</p> <p><b>Lane Ends Marsh:</b> 2 pairs redshank.</p> <p><b>Pilling Marsh:</b> 4 pairs redshank.</p>	<p>immediately out of Lane Ends Amenity Area onto the marsh and flats.</p> <p>Use of most of the Coastal margin by pedestrians is low in this area, apart from the area of margin around Fluke Hall which is used by walkers and dog walkers.</p> <p>An access survey undertaken over 2 days in May 2017 showed that:</p> <ul style="list-style-type: none"> <li>• Most people had their dogs 'off the lead' within Lane Ends Amenity Area and also when walking on the embankment (heading west), although dogs were usually put on the lead when other dogs were nearby.</li> <li>• Most people and dogs stayed on the embankment with only a small number of people and dogs finding their way down to the back edge of the marsh at the base of the embankment.</li> <li>• No dogs were observed venturing out onto the marsh beyond 30+metres.</li> </ul>		<p>- Signage at both ends will clearly show the winter route.</p> <p>- A dogs on leads restriction is proposed on the line of the trail.</p> <p>In order to increase compliance with the proposed restrictions and exclusions, the following measures are proposed for Lane Ends Amenity Area:</p> <ul style="list-style-type: none"> <li>- Clear signage, explaining where people can walk, where dogs should be on a lead and where they can exercise dogs off lead;</li> <li>- Improved interpretation and information about the wildlife;</li> <li>- An event when the route opens, targeted at local people, with the aim of explaining the new access arrangements, restrictions and exclusions and raising awareness of the sensitive wildlife.</li> </ul>	<p>disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p> <p><b>From 1<sup>st</sup> April to 31<sup>st</sup> August:</b></p> <p>Access is excluded under s25A from the saltmarsh, where birds breed. The 'dogs on leads' restriction on the embankment, plus signage, will reduce the risk of dogs roaming onto the marsh and causing disturbance to breeding birds.</p> <p>There will not be any significant changes in access in the areas used by breeding birds as a result of the proposals.</p> <p>Therefore there is a low risk of additional disturbance of breeding birds as a result of the proposals.</p>

# Coastal Access Report SDC 6 Fluke Hall Lane car park, Pilling, to South Promenade (Kingsway), Cleveleys



**Table SDC 6.1 Areas where there is a low risk of impact on non-breeding waterbirds**

Location	Species present and location of roosts sites, feeding areas and breeding sites [Ref. 10, 19]	Existing recreational use in the areas used by these species	Risk of impact of proposals on non-breeding waterbirds.
	Existing disturbance to non-breeding waterbirds [Ref. 10, 11, 19]	Access proposal Predicted change in levels and patterns of use in the areas used by these species as a result of the proposal	
<p>Cross reference to the Coastal Access Report</p>			
<p><b>Fluke Hall Lane car park to South Promenade (Kingsway), Cleveleys.</b></p> <p>See Coastal Access report Silverdale to Cleveleys 6, maps SDC 6a – 6h and direction maps 6A, 6B. See also directions maps in Overview report.</p>	<p><b>Roost sites:</b></p> <p><b>Rossall Point</b> Bar-tailed godwit, dunlin, grey plover, knot, oystercatcher, redshank, ringed plover, sanderling (nationally important numbers), shelduck, turnstone (nationally important numbers), wigeon, Disturbance is very high.</p> <p><b>King Scar</b> A shingle bank which has recently formed an island. It is possible to walk to King Scar from Fleetwood at low tide. Non-breeding waterbirds roost at the site.</p> <p>Wyre Borough Council (who own the foreshore at Rossall Point) and conservation groups (including NE) have been working to reduce disturbance to the sensitive features at these sites.</p>	<p>The Lancashire Coastal way runs along the coast between Fluke Hall Lane car park and Cleveleys, which follows an existing and popular surfaced route (combination of public rights of way and permissive access) between Fluke Hall Lane car park and Knott End. Once across the river Wyre, the proposed trail is aligned along the pavement and then on an existing busy promenade between Fleetwood and Cleveleys. This is a busy section of coast which is very popular with walkers and with people using the beaches for recreation.</p> <p>The proposed ECP is aligned on the Lancashire Coastal Way, and walkers will use the ferry between Knott End and Fleetwood. Access will be excluded under s25A from parts of the Coastal margin, as they are unsuitable for access.</p> <p><b>Trail:</b> The trail is already very well-used, so it is expected that there will be negligible change in use.</p> <p><b>Coastal margin:</b> The Coastal margin is already well-used, so it is expected that there will be negligible change in use as a result of the proposals. Due to the s25A exclusion, there will not be a new right of access created to King Scar.</p>	<p><b>Low risk</b></p> <p>It is expected that there will be negligible change in access in the areas used by non-breeding waterbirds as a result of the proposals. Therefore there is a low risk of an increase in disturbance of roosting and feeding non-breeding waterbirds as a result of the proposals.</p> <p>However we acknowledge that inclusion within the Coastal margin could impact the efforts being made to reduce disturbance. Currently, we are not proposing to put restrictions or exclusions in place over the Coastal margin at either Rossall Point or King Scar, as we believe that other measures by landowners and conservation partners to reduce disturbance will be more successful. This will be reviewed on commencement of coastal access rights, and, if appropriate, access exclusions or restrictions will be implemented at that point.</p>
<p><b>River Wyre Estuary.</b></p> <p>See map Fluke Hall Lane car park, Pilling, to South Promenade (Kingsway), Cleveleys See above for location.</p>	<p>The SPA extends 7.5 miles up the Wyre estuary beyond Shard Bridge almost as far as Little Eccleston. Non-breeding waterbirds roost, feed and could be breeding in this area of the SPA.</p>	<p>This was not assessed, as this area of the SPA / Ramsar site is unaffected by our proposals.</p> <p>The proposed ECP stops at Knott End and restarts in Fleetwood. Walkers will cross the Wyre Estuary using the ferry. The area landward (upstream) of Knott End and Fleetwood will not fall into the Coastal margin. The SPA / Ramsar site extends for 7.5 miles upstream of the ferry. No new footpaths or access rights will be created in the area of the SPA / Ramsar upstream of the ferry. Therefore we do not expect access to increase in this area.</p>	<p><b>Not affected by the proposals</b></p> <p>The coast path crosses the Wyre Estuary between Knott End and Fleetwood using the ferry. This part of the SPA is inland of the coastal path, does not fall within the Coastal margin, and is not affected by the coastal access proposals.</p>

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

#### Morecambe Bay SAC / Duddon Estuary Ramsar site

Table 16a. Assessment of adverse effect on site integrity alone: Saltmarshes, features: H1310. Salicornia and other annuals colonising mud and sand, H1330. Atlantic salt meadows (Glauco-Puccinellietalia maritima), Wetland plant assemblage.

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?
<p>More frequent trampling following changes in recreational activities as a result of the access proposal and constructing sections of new path through these habitats leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site</li> <li>• Reduction in extent of the feature within the site</li> <li>• Changes in key structural, influential and distinctive species</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation</li> <li>• Changes in structure and function: presence and patterning of creeks and salt pans</li> <li>• Structure and function: presence of unvegetated surfaces</li> </ul>	<ul style="list-style-type: none"> <li>• Where the path crosses saltmarsh, safe routes are promoted avoiding areas that could be damaged by trampling. It mainly follows existing paths on raised, firm ground and with vegetation that will withstand regular use appropriate to the context.</li> <li>• In places the path crosses channels within the saltmarsh or short sections of wetter ground due to drainage from adjacent land. At these locations sleeper bridges and stone flags will be installed to improve the path surface.</li> <li>• Restriction of coastal access rights where the saltmarsh is unsuitable for access</li> </ul>	<p>Yes. Whilst there will be some small scale loss of saltmarsh under infrastructure and some degradation of vegetation along the path the scale of this impact is small and widely distributed across the SAC. Therefore the effect on the ecological functions and distribution of habitats and species will be minor.</p> <ul style="list-style-type: none"> <li>• In some places, the proposed route for ECP crosses saltmarsh and there will be greater footfall as a result of the proposals</li> <li>• Most of these sections of trail follow existing paths with surfaces that are able to withstand additional use without becoming damaged. In places where existing path surfaces may be susceptible to increased footfall, targeted surface improvements will be made. The majority of these improvements are where paths cross creeks or land drains and the path has become waterlogged. New sleeper bridges or flag stones will be installed to create a more sustainable path surface. As a result, trampling pressure over adjacent areas of salt marsh habitat will be reduced and any areas of damaged vegetation allowed to recover.</li> <li>• Two new sections of path are proposed over saltmarsh. A route over firm ground has been identified, where the saltmarsh is resilient to trampling.</li> <li>• Away from established paths, there is limited use of saltmarsh around Morecambe Bay for informal recreation. Recreational use of saltmarsh is limited by the difficulty and dangers of walking in intertidal areas. Coastal access rights will be excluded over the majority of saltmarsh (92%) on grounds that it is unsuitable for public access or important for nature conservation and this will further discourage people from using them for recreation. Where use does take place, current patterns and levels of activity are not expected to increase as a result of the proposals.</li> </ul> <p>See appendix 1 for a detailed assessment of feature's integrity attributes.</p>	<p>Yes. 147 m<sup>2</sup> loss of H1330 Atlantic salt meadow. This is 0.0004% of the total saltmarsh area.</p> <p>0.274ha of the saltmarsh area within the SAC may experience some degradation in saltmarsh vegetation due to alignment of the ECP on saltmarsh. This is 0.0073% of the total saltmarsh area.</p>

**Table 16b. Assessment of adverse effect on site integrity alone: sand dunes, features: H2120. Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"), H2130. Fixed dunes with herbaceous vegetation ("grey dunes"), H2190. Humid dune slacks, H2110. Embryonic shifting dunes, H2150. Atlantic decalcified fixed dunes (*Calluno-Ulicetea*), H2170. Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*), Wetland plant assemblage, Wetland invertebrate assemblage.**

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?
<p>More frequent trampling following changes in recreational activities as a result of the access proposal and constructing sections of new path through these habitats leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site</li> <li>• Reduction in extent of the feature within the site</li> <li>• Changes in key structural, influential and distinctive species</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation</li> <li>• Future extent of habitat within the site and ability to respond to seasonal changes</li> <li>• Structure and function: presence of unvegetated surfaces</li> </ul>	<p>Where the path is aligned through dune, we avoid aligning in embryonic dunes as these are sensitive to trampling. We align through vegetated, stable dunes towards the back of the dune system where possible.</p> <p>Where we align through mobile dunes, infrastructure is kept to a minimum.</p> <p>Surface improvements on an existing path near Askam-in-Furness.</p>	<p>Yes. Whilst there will be some small scale loss of sand dune habitat under infrastructure and some alteration of vegetation due to tussock cutting, the scale of this impact is small and widely distributed across the SAC. Therefore the effect on the ecological functions and distribution of habitats and species will be minor.</p> <ul style="list-style-type: none"> <li>• In areas of dune the path largely aligns on existing walked paths.</li> <li>• Where new paths are proposed these will be positioned away from sensitive foredunes. New paths are largely located towards the rear of the dune system where trampling and erosion impacts have less negative effect.</li> <li>• A new aggregate surface will be installed on a 26m section of path at Askam-in-Furness. We believe that this will facilitate habitat restoration by removing any current trend to avoid excessively wet parts of the existing path. The width of the path will decrease once it has been surfaced; currently it is muddy and people are spreading out to get around the wet areas, causing further loss of vegetation.</li> </ul> <p>See appendix 2 for a detailed assessment of feature's integrity attributes</p>	<p>Yes. Up to 68.5m<sup>2</sup> of sand dune habitat could be lost under infrastructure as a result of establishing the England Coast Path. Tussocks will be cut on a further 200m<sup>2</sup> of habitat, meaning that vegetation composition will alter in this area.</p>
<p>Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site</li> <li>• Reduction in extent of the feature within the site</li> <li>• Changes in key structural, influential and distinctive species</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation</li> </ul>	<p>Access with dogs to the Coastal margin within the grazing enclosures at Haverigg will be restricted by a formal direction on land management grounds. Where the trail passes through the grazing enclosures, dogs must be on leads. Signage at entrances to the grazing enclosures to inform people about the access restrictions.</p>	<ul style="list-style-type: none"> <li>• Where there are concerns about disruption to the conservation grazing regime by dogs, people with dogs are excluded from the Coastal margin, and dogs must be on a lead on the ECP.</li> </ul>	<p>No</p>

**Table 16c. Assessment of adverse effect on site integrity alone: Perennial vegetation of stony banks, H1220.**

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?
<p>More frequent trampling following changes in recreational activities as a result of the access proposal:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site</li> <li>• Reduction in extent of the feature within the site</li> <li>• Changes in key structural, influential and distinctive species</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation</li> </ul>	<p>The access proposals promote routes that avoid areas of vegetated shingle</p> <p>At Bazil Point, where the trail passes close to an area of shingle, access to the shingle will be excluded by formal direction and notices will be installed to inform people about the access restrictions.</p>	<p>Yes</p> <p>Access to the shingle is not expected to increase as a result of the proposals at Haverigg, Sandscale Haws, Rampside, lower reaches of the river Lune around Glasson, seaward side of Sunderland Bank, Cockerham Sands and Fleetwood.</p> <p>Access restrictions at Foulney and Sunderland Point (to protect breeding and roosting birds), and at Bazil Point (to protect vegetated shingle), mean there will be no new access rights to these areas.</p>	<p>No</p>

**Table 16d. Assessment of adverse effect on site integrity alone: Reefs, H1170.**

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?
<p>More frequent trampling following changes in recreational activities as a result of the access proposal:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site.</li> <li>• Reduction in extent of the feature within the site.</li> <li>• Changes in key structural, influential and distinctive species.</li> <li>• Changes in physical structure of rocky substrate</li> <li>• Species composition of component communities</li> </ul>	<p>Because this habitat is difficult to walk over and is sensitive to trampling damage, the ECP is not aligned through it. This habitat falls within the Coastal margin.</p>	<p>Yes</p> <p>This habitat is found in the following areas where access to the habitat is not expected to increase as a result of the proposals: Duddon Estuary, North Wharf (Fleetwood) and Rossall Point, between Sunderland Village and Bazil Point, Morecambe Foreshore &amp; Half Moon Bay, Ulverston Foreshore, Conishead to Roosebeck, Rampside Sands, Walney Channel and Roa Island.</p> <p>In the following areas where reefs are present access exclusions are proposed (to protect breeding, roosting and feeding birds): Red Nab, Bank Houses to Plover Scar, Foulney Island. Therefore there will be no new access rights in these areas.</p>	<p>No</p>



**Table 16e. Assessment of adverse effect on site integrity alone: H1130 Estuaries and H1160 large shallow inlets and bays.**

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?
<p>More frequent trampling following changes in recreational activities as a result of the access proposal and constructing sections of new path through these habitats leads to:</p> <ul style="list-style-type: none"> <li>• Changes in distribution of the feature, including associated transitional habitats, within the site</li> <li>• Reduction in extent of the feature within the site</li> <li>• Changes in key structural, influential and distinctive species</li> <li>• Changes in vegetation community composition &amp; zonation of vegetation</li> <li>• Changes in physical structure of rocky substrate (reef subfeatures only)</li> <li>• Species composition of component communities (reef subfeatures only)</li> <li>• Future extent of habitat within the site and ability to respond to seasonal changes</li> <li>• Structure and function: presence of unvegetated surfaces</li> <li>• Structure and function: presence and patterning of creeks and salt pans (saltmarsh subfeatures only)</li> </ul>	<p>The subfeatures Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) and <i>Salicornia</i> and other annuals colonising mud and sand are sensitive to changes in access. See assessment for saltmarshes within this table for relevant design features of the access proposal.</p> <p>The subfeatures Intertidal biogenic reef: mussel beds, Intertidal biogenic reef: <i>Sabellaria</i> spp., Intertidal rock and Intertidal stony reef are sensitive to changes in access. See assessment for reefs within this table for relevant design features of the access proposal.</p>	<p>Yes</p> <p>The subtidal subfeatures are not affected by the proposals as they are always underwater.</p> <p>The subfeatures Intertidal coarse sediment, Intertidal mixed sediments, Intertidal mud, Intertidal sand and muddy sand and Intertidal seagrass beds are also subfeatures of H1140 Mudflats and sandflats not covered by seawater at low tide. This feature was assessed in <b>Table 5a Assessment of likely significant effects alone for Morecambe Bay SAC</b> and it was concluded that our proposals will not have a likely significant effect on the feature H1140 Mudflats and sandflats not covered by seawater at low tide.</p> <p>The subfeatures Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) and <i>Salicornia</i> and other annuals colonising mud and sand are sensitive to changes in access. See assessment for saltmarshes within this table for conclusion of impact on site integrity.</p> <p>The subfeatures Intertidal biogenic reef: mussel beds, Intertidal biogenic reef: <i>Sabellaria</i> spp., Intertidal rock and Intertidal stony reef are sensitive to changes in access. See assessment for reef within this table for conclusion of impact on site integrity.</p>	<p>Yes –saltmarsh and sand dune subfeatures only</p>

**Table 16f. Assessment of adverse effect on site integrity alone: S1166 great crested newt.**

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?
<p>An increase in incidences of dogs accessing breeding ponds, following changes in recreational activities as a result of the access proposal, causes disturbance, injury or death of eggs, larvae or adults, leading to</p> <ul style="list-style-type: none"> <li>• A reduction in population abundance.</li> </ul>	<p>Signage will be placed along the route of the ECP at Sandscale Haws, requesting that visitors keep dogs on a short lead or under control, and do not allow dogs to enter ponds.</p>	<p>Yes</p> <p>It is expected that there will be negligible change in access within the Coastal margin at Sandscale Haws as a result of the proposals. Along the route of the ECP there will be an increase in access, and signage will be used to encourage dog owners to keep dogs out of the breeding ponds.</p> <p>The risks during establishment and maintenance work will be minimized by using reasonable avoidance measures during works.</p>	<p>No</p>
<p>Works to construct and/or maintain the England Coast Path lead to:</p> <ul style="list-style-type: none"> <li>• A reduction in population abundance</li> <li>• Loss of supporting habitat</li> </ul>	<p>To prevent injury, disturbance or death of great crested newts during establishment or maintenance works, reasonable avoidance measures will be used. Cumbria County Council will submit method statements outlining how they will carry out the work, getting advice from a suitably qualified ecologist where appropriate.</p>	<p>As minimal infrastructure and establishment work is required to establish the path through Sandscale Haws (scrub clearance and 3 kissing gates), the impact of establishing the path on the area of supporting habitat for great crested newts is negligible.</p> <p>Studies in the UK have found that spread of the chytrid fungus is most likely linked to where people have deliberately introduced non-native alpine newts into pools with native amphibians, or transferred infected animals between pools. Bio security measures have been introduced for people that work with native amphibians e.g. capturing animals to collect biological data or involved in translocation schemes. Beyond these specific activities, the risks of spreading the chytrid fungus in UK appear to be low. Dogs entering pools are not thought any more likely to transfer the fungus than other possible agents, such as wild birds.</p> <p>Therefore, no special measures are currently considered necessary in connection with general recreational activities.</p> <p>The increase in access on the line of ECP is unlikely to affect the conservation grazing of the habitat because the area is already walked and the livestock are tolerant of people.</p>	<p>No</p>
<p>Potential for chytrid fungus <i>Batrachochytrium dendrobatidis</i> and other diseases to be spread by people and dogs, leading to:</p> <ul style="list-style-type: none"> <li>• A reduction in population abundance.</li> </ul>	<p>None</p>	<p>Therefore, no special measures are currently considered necessary in connection with general recreational activities.</p> <p>The increase in access on the line of ECP is unlikely to affect the conservation grazing of the habitat because the area is already walked and the livestock are tolerant of people.</p>	<p>No</p>
<p>Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to:</p> <ul style="list-style-type: none"> <li>• A reduction in population abundance.</li> <li>• Loss of supporting habitat</li> </ul>	<p>None</p>	<p>For these reasons, there is unlikely to be a reduction in population abundance or loss of supporting habitat as a result of the proposals.</p>	<p>No</p>

**Table 16g. Assessment of adverse effect on site integrity alone: natterjack toad, *Bufo calamita*.**

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?
<p>An increase in incidences of dogs accessing breeding ponds, or people walking next to breeding ponds, following changes in recreational activities as a result of the access proposal, causes disturbance, injury or death of eggs, larvae or adults, leading to</p> <ul style="list-style-type: none"> <li>• A reduction in population abundance.</li> </ul>	<p>Where possible we avoid aligning the England Coast Path close to natterjack breeding ponds. Where the ECP is aligned close to breeding ponds we will install signage at key locations along the route of the ECP and at the entrance to the Coastal margin asking people to keep dogs out of breeding ponds.</p>	<p><b>Yes</b></p> <p>For much of the Coastal margin, where natterjacks breed, it is not expected that there will be an increase in access. Where the trail is aligned in the vicinity of breeding ponds, signage will be used to reduce the risk of dogs entering breeding ponds.</p> <p>The risks during establishment and maintenance work will be minimized by using reasonable avoidance measures during works.</p> <p>Minimal infrastructure is required through the areas of natterjack habitat, as discussed in the assessment tables for salt marsh and sand dunes above, the infrastructure will not cause a significant loss of area of habitat/supporting habitat for natterjacks.</p> <p>Studies in the UK have found that spread of the chytrid fungus is most likely linked to where people have deliberately introduced non-native alpine newts into pools with native amphibians, or transferred infected animals between pools. Bio security measures have been introduced for people that work with native amphibians e.g. capturing animals to collect biological data or involved in translocation schemes. Beyond these specific activities, the risks of spreading the chytrid fungus in UK appear to be low. Dogs entering pools are not thought any more likely to transfer the fungus than other possible agents, such as wild birds. Therefore, no special measures are currently considered necessary in connection with general recreational activities.</p> <p>Where there are concerns about disruption to the conservation grazing regime by dogs, dogs are excluded from the Coastal margin, and must be on a lead on the ECP.</p>	<p>No</p>
<p>Works to construct and / or maintain the England Coast Path lead to:</p> <ul style="list-style-type: none"> <li>• A reduction in population abundance</li> <li>• Loss of supporting habitat</li> </ul>	<p>To prevent injury, disturbance or death of natterjack toads during establishment and maintenance works, reasonable avoidance measures will be used. Cumbria County Council will submit method statements outlining how they will carry out the work, getting advice from a suitably qualified ecologist where appropriate.</p>	<p>Therefore there is unlikely to be a reduction in population abundance or loss of supporting habitat as a result of the proposals.</p>	
<p>Potential for chytrid fungus <i>Batrachochytrium dendrobatidis</i> and other diseases to be spread by people and dogs, leading to:</p> <p>A reduction in population abundance.</p>	<p>None</p>		
<p>Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to:</p> <ul style="list-style-type: none"> <li>• A reduction in population abundance.</li> <li>• Loss of supporting habitat.</li> </ul>	<p>Access with dogs to the Coastal margin within the grazing enclosures at Haverigg will be restricted by a formal direction on land management grounds. Where the trail passes through the grazing enclosures, dogs must be on leads. Signage at entrances to the grazing enclosures to inform people about the access restrictions.</p>		

## Morecambe Bay & Duddon Estuary SPA / Duddon Estuary Ramsar site / Morecambe Bay Ramsar site

**Table 16h. Assessment of adverse effect on site integrity alone: Breeding seabirds; Common tern, Arctic tern, little tern, Sandwich tern, herring gull, lesser black-backed gull, black-headed gull. Internationally important seabird assemblage of over 20,000 individuals (breeding).**

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 breeding seabirds, following changes in recreational activities as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the distribution of qualifying features within the site.	The alignment of the Coast Path has been designed to avoid the areas where these birds breed. Access exclusions and restrictions at Foulney Island. Access exclusions at Inner Marsh and Carnforth Marsh. Fencing between Ings Point and Cotestones. Signage to highlight the access restrictions.	<p>Yes</p> <p>The tern colony at Hodbarrow and most areas used by breeding gulls are outside of the project area and will not be affected by the project.</p> <p>Within the project area, seabirds breed at Foulney Island and Inner Marsh (Leighton Moss RSPB reserve). The proposed route alignment and mitigation was designed to avoid disturbance to seabirds breeding at these locations.</p> <p>Access exclusions and restrictions at Foulney Island nature reserve mean that access arrangements will not change as a result of the proposals. Access will be excluded from the black headed gull colony at Inner Marsh.</p> <p>A pair of little terns breed at Haverigg in an area where access is not expected to increase as a result of our proposals. The proposed route alignment was designed to avoid the area where these birds breed.</p> <p>Taking into account the proposed mitigation, there will be no increase in access in the areas where these birds breed as a result of the access proposals.</p>	No

**Table 16i. Assessment of adverse effect on site integrity alone: non-breeding waterbirds; Pink-footed goose, whooper swan**

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 feeding or roosting birds, 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.	The alignment of the coast path avoids sensitive areas. Access restrictions exclude access from sensitive areas at times when the birds are present. Fencing at Pilling to keep people and dogs to the line of the ECP. Signage to highlight the access restrictions.	<p>Yes</p> <p>These birds are sensitive to changes in access while they are roosting and feeding. Particularly important currently undisturbed sites for these birds are the flats, marshes and fields in the Pilling area (whooper swan and pink footed goose) and the fields on the west side of the Lune (pink footed goose). As described in section D3.3.2 above the proposals have been carefully designed to avoid impact on the important areas for these birds. Taking into account the proposed mitigation, the access proposal will not lead to any significant disturbance in the areas where these birds feed or roost, at the time of year when these birds are present.</p>	<p>Yes.</p> <p>The path and its associated access restrictions have been specifically designed to prevent damaging levels of disturbance, occurring at important feeding and roosting sites throughout the SPA. These measures will prevent the ECP having an adverse impact on the integrity of the SPA.</p> <p>The promotion of the ECP will however create a general increase in the amount of access to the shoreline throughout the year which will increase the risk of disturbance to feeding and roosting birds across the SPA. This wider increase in walkers visiting the coast whilst unlikely to cause an adverse impact (due to the mitigation and avoidance measures mentioned in this document) there will be a residual effect and will need to be considered in-combination with other plans or projects and in future management.</p>

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 feeding or roosting birds, during path establishment work, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.	Design access routes, storage areas and site facilities to minimise disturbance impacts. Conduct operations out of sight of roosting and feeding areas where possible. Local authority to plan schedule with Natural England to limit disturbance risk. Time operations during a period of low sensitivity at each construction site. Avoid use of percussive machinery outside this period wherever practicable. Use hand tools where practicable. At all other times, stop work around high tide to avoid disturbance to roost sites. Limit activities to daylight hours.	Yes Works will be carried out by local authority staff or approved contractors using method statements prepared by the local access authority based on the principles described in table 8 and agreed with Natural England before works commence. Natural England will monitor and, where necessary, supervise works to ensure that mitigation is implemented correctly.	No

**Table 16j. Assessment of adverse effect on site integrity alone: Non-breeding waterbirds; Lesser black-backed gull, Mediterranean gull)**

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 resting gulls (and breeding Mediterranean gull) 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.	Access exclusion at Red Nab.	Yes The main roost/preening sites for the gulls are either not in the project area or are in areas where access is not expected to increase as a result of the proposals. Therefore the access proposal will not lead to any significant disturbance in the areas where these birds roost/preen. The year round access exclusion (to protect roosting and feeding waterbirds) at Red Nab, Heysham means that there will be no new access rights in this important area for Mediterranean gull. Mediterranean gull breeds on islands at Hodbarrow Lagoon. This site is landward of the proposed ECP and will not be affected by our proposals.	No
Disturbance to feeding or roosting birds, during path establishment work, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.	Design access routes, storage areas and site facilities to minimise disturbance impacts. Conduct operations out of sight of roosting and feeding areas where possible. Local authority to plan schedule with Natural England to limit disturbance risk. Time operations during a period of low sensitivity at each construction site. Avoid use of percussive machinery outside this period wherever practicable. Use hand tools where practicable. At all other times, stop work around high tide to avoid disturbance to roost sites. Limit activities to daylight hours.	Yes Works will be carried out by local authority staff or approved contractors using method statements prepared by the local access authority based on the principles described in table 8 and agreed with Natural England before works commence. Natural England will monitor and, where necessary, supervise works to ensure that mitigation is implemented correctly.	No

**Table 16k. Assessment of adverse effect on site integrity alone: Non-breeding waterbirds, waders, shelduck, pintail (Bar-tailed godwit, black-tailed godwit, curlew, dunlin, golden plover, grey plover, knot, little egret, oystercatcher, redshank, ringed plover, ruff, sanderling & turnstone.**

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?
<p>Disturbance to foraging, resting or breeding birds, 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.</p>	<p>The alignment of the coast path avoids sensitive areas. Access restrictions exclude access from sensitive areas at times when the birds are present. Signage to highlight the access restrictions. Signage to highlight important roost areas. Various other mitigation (e.g. fencing) as described in section D3.3.2.</p>	<p>Yes</p> <p>These birds are sensitive to changes in access while roosting, and while feeding close to the shore.</p> <p><b>Roost sites:</b></p> <p><b>Oystercatcher, curlew, redshank, dunlin and shelduck</b> occur in mixed roosts all around the SPA. The proposals have been designed to avoid increased disturbance to roost sites.</p> <p>The other species are more dependent on a smaller number of roost sites, and any increase in disturbance at these roosts could be significant at a population level:</p> <p><b>Ringed Plover</b> – present in low numbers at roost sites throughout the SPA, higher numbers are at: Bardsea, Middleton, Lane Ends, Rossall Point (where access is not expected to increase as a result of the proposals); Plover Scar (where access will be excluded from the foreshore).</p> <p><b>Grey Plover</b> - present in low numbers at roost sites throughout the SPA, higher numbers are at: Middleton (where access to the foreshore is not expected to change as a result of the proposals); Bank End to Cocker's Dyke (Pilling area) (where the route has been designed to prevent disturbance and mitigation including access exclusions and seasonal route closures mean that disturbance of roosts is unlikely to increase).</p> <p><b>Bar tailed godwit</b> –important roost sites at: Middleton, Lane Ends and Cocker's Dyke where access to the foreshore is not expected to increase as a result of the proposals; Conder Estuary Marsh and Glasson Marsh, where access will be excluded under s25A.</p> <p><b>Black tailed godwit</b>- mainly found on the southern side of Morecambe Bay, they roost in internationally important numbers at Inner Marsh near Warton. This roost site is protected by mitigation including a s26 nature conservation access exclusion.</p> <p><b>Pintail</b> – Roosts are found in: the upper Duddon Estuary, (where access is not expected to increase as a result of the proposals); Carnforth marsh (where a package of mitigation aims to reduce some of the existing disturbance issues); nationally important numbers at Meathop (outside the project area so not affected by the proposals); internationally important numbers at Kents Bank (access to the marshes excluded under s25A).</p> <p><b>Ruff</b> – roost in the fields around Leighton Moss, which are outside of the project area and therefore not affected by the proposals.</p> <p><b>Knot</b>- Found throughout the SPA: nationally important numbers at West Plain (where access to the marsh is not expected to increase as a result of the proposals); internationally important numbers at East Plain and Heysham Heliport, (route alignment and mitigation including access exclusions in the margin mean that access is not expected to increase in these areas); Middleton (where access to the foreshore is not expected to increase as a result of the proposals).</p> <p><b>Sanderling</b> – Found in low numbers along the Furness Coast, larger numbers from Lane Ends to Knott End and nationally important numbers at Rossall Point. With mitigation in place, disturbance to roosts is not expected to increase in these areas as a result of the proposals.</p> <p><b>Turnstone</b> – found in low numbers on rocky skears throughout the SPA, important roosts: breakwaters and heliport at Morecambe (access will be excluded from these areas), Cocker's Dyke (access to the foreshore is not expected to increase as a result of the proposals), Fleetwood Marine Lakes (outside the project area so will not be affected by the proposals)</p> <p><b>Little egret</b> feed throughout the project area.</p> <p><b>Feeding areas</b></p> <p>There are vast expanses of intertidal flats available to these birds for feeding at low tide. When the tide is in, feeding areas are much smaller and birds are more likely to come into contact with people and dogs. Access will be excluded from most of the areas used by feeding birds.</p>	<p>Yes.</p> <p>The path and its associated access restrictions and other mitigation have been specifically designed to prevent damaging levels of disturbance from occurring at important feeding, roosting and breeding sites throughout the SPA. These measures will prevent the coastal access proposals from having an adverse impact on the integrity of the SPA.</p> <p>The promotion of the ECP will however create a general increase in the amount of access to the shoreline throughout the year which could increase the risk of disturbance to feeding, breeding and roosting birds across the SPA. This wider increase in walkers visiting the coast whilst unlikely to cause an adverse impact (due to the mitigation and avoidance measures mentioned in this document) will be a residual effect and will need to be considered in-combination with other plans or projects and in future management.</p>

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?
		<p><b>Breeding sites</b>  <b>Redshank, ringed plover and shelduck.</b>            These species breed in many locations all around the SPA. The proposals have been developed to take into account the areas used by these birds for breeding. Where necessary the trail has been aligned inland to avoid sensitive areas, and where appropriate, other mitigation such as fencing, access restrictions and signage are proposed.</p> <p><b>Areas where access may increase</b>            The following areas were identified as places where access, and therefore potential disturbance by people and dogs, may increase slightly as a result of the proposals in areas where these birds feed, roost or breed:            Northern end of Millom Marsh, Soutergate Marsh (Duddon Estuary), Hazelhurst Point (Upper Leven Estuary), Bay View Holiday Park (near Bolton-le-Sands) and Heaton Hall (Lune Estuary).            With the exception of Hazelhurst Point and Heaton Hall, these are all areas where there is existing access. The increased access at each of these sites on its own will not have a significant impact on bird populations. Taken in combination the increased access will not have a significant impact on feeding birds because the affected areas are so small compared to the available habitat for feeding birds within the SPA, and no major roost sites or particularly important feeding areas or breeding sites are affected.</p> <p><b>Conclusion</b>            Taking into account the proposed mitigation and route alignment, which was designed to avoid an increase in disturbance at roost sites, breeding sites and areas used by the birds for feeding, the access proposal is unlikely to lead to a significant increase in access in the areas where these birds roost, breed or feed, at the time of year when these birds are present. Care has been taken to ensure that species such as black tailed godwit which rely on small numbers of specific roost sites will not be affected by the proposals.</p>	
Disturbance to feeding or roosting birds, during path establishment work, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.	Design access routes, storage areas and site facilities to minimise disturbance impacts. Conduct operations out of sight of roosting and feeding areas where possible. Local authority to plan schedule with Natural England to limit disturbance risk. Time operations during a period of low sensitivity at each construction site. Avoid use of percussive machinery outside this period wherever practicable. Use hand tools where practicable. At all other times, stop work around high tide to avoid disturbance to roost sites. Limit activities to daylight hours.	Yes Works will be carried out by local authority staff or approved contractors using method statements prepared by the local access authority based on the principles described in table 8 and agreed with Natural England before works commence. Natural England will monitor and, where necessary, supervise works to ensure that mitigation is implemented correctly.	No

**Table 16l. Assessment of adverse effect on site integrity alone: Non-breeding waterbirds: internationally important waterbird assemblage**

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?
<p>Disturbance to foraging or resting birds, 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.</p>	<p>The alignment of the coast path avoids sensitive areas. Access restrictions exclude access to sensitive areas at times when the birds are present. Signage to highlight the access restrictions. Signage to highlight important roost areas. Various other mitigation (e.g. fencing) as described in section D3.3.2 above.</p>	<p>Yes All qualifying species discussed above are included in the SPA waterbird assemblage as main components. There are a further 19 species listed as main components, followed by another 63 additional species.  Taking into account the proposed mitigation and route alignment, which was designed to avoid an increase in disturbance at roost sites and areas used by the assemblage species for feeding, the access proposal will not lead to any significant increase in access in the areas where these birds roost or feed, at the time of year when these birds are present. Care has been taken to ensure that species such as black tailed godwit which rely on small numbers of specific roost sites will not be affected by the proposals.</p>	<p>Yes. The path and its associated access restrictions have been specifically designed to prevent damaging levels of disturbance, occurring at important feeding and roosting sites throughout the SPA. These measures will prevent the ECP having an adverse impact on the integrity of the SPA.  The promotion of the ECP will however create a general increase in the amount of access to the shoreline throughout the year which will increase the risk of disturbance to feeding and roosting birds across the SPA. This wider increase in walkers visiting the coast whilst unlikely to cause an adverse impact (due to the mitigation and avoidance measures mentioned in this document) there will be a residual effect and will need to be considered in-combination with other plans or projects and in future management.</p>
<p>Disturbance to feeding or roosting birds, during path establishment work, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.</p>	<p>Design access routes, storage areas and site facilities to minimise disturbance impacts. Conduct operations out of sight of roosting and feeding areas where possible. Local authority to plan schedule with Natural England to limit disturbance risk. Time operations during a period of low sensitivity at each construction site. Avoid use of percussive machinery outside this period wherever practicable. Use hand tools where practicable. At all other times, stop work around high tide to avoid disturbance to roost sites. Limit activities to daylight hours.</p>	<p>Yes Works will be carried out by local authority staff or approved contractors using method statements prepared by the local access authority based on the principles described in table 8 and agreed with Natural England before works commence.  Natural England will monitor and, where necessary, supervise works to ensure that mitigation is implemented correctly.</p>	<p>No</p>



# Assessment of the Coastal Access programme under regulation 63 of the Habitats Regulations 2017 ('Habitats Regulations Assessment')

## Conclusion:

### Morecambe Bay SAC / Duddon Estuary Ramsar

The following risks to 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:

- **Sand dunes** Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to: changes in distribution of the feature, including associated transitional habitats, within the site, reduction in extent of the feature within the site, changes in key structural, influential and distinctive species, changes in vegetation community composition & zonation of vegetation.
- **Reefs, Perennial vegetation of stony banks** More frequent trampling, following changes in recreational activities as a result of the access proposal, leads to: changes in distribution of the feature, including associated transitional habitats, within the site, reduction in extent of the feature within the site, changes in key structural, influential and distinctive species, changes in vegetation community composition & zonation of vegetation, changes in physical structure of rocky substrate (reefs only), species composition of component communities (reefs only).
- **Great crested newt, Natterjack toad** An increase in incidences of dogs accessing breeding ponds, or people walking next to breeding ponds, following changes in recreational activities as a result of the access proposal, causes disturbance, injury or death of eggs, larvae or adults, leading to a reduction in population abundance. Works to construct and / or maintain the England Coast Path lead to a reduction in population abundance & loss of supporting habitat. Potential for chytrid fungus *Batrachochytrium dendrobatidis* and other diseases to be spread by people and dogs, leading to a reduction in population abundance. Changes in conservation grazing patterns as a result of disturbance of grazing animals by dogs as a result of the access proposal, leads to a reduction in population abundance & loss of supporting habitat.

The following risks to 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:

- **Saltmarshes, Sand dunes, Estuaries, Large shallow inlets and bays** More frequent trampling following changes in recreational activities as a result of the access proposal and constructing sections of new path through these habitats leads to: changes in distribution of the feature, including associated transitional habitats, within the site, reduction in extent of the feature within the site, changes in key structural, influential and distinctive species, changes in vegetation community composition & zonation of vegetation.

## Assessment of the Coastal Access programme under regulation 63 of the Habitats Regulations 2017 ('Habitats Regulations Assessment')

### Morecambe Bay & Duddon Estuary SPA / Duddon Estuary Ramsar site / Morecambe Bay Ramsar site

The following risks to 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:

- **Breeding seabirds:** Disturbance to breeding seabirds, following changes in recreational activities as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the distribution of qualifying features within the site.
- **Non-breeding waterbirds:** Disturbance to feeding or roosting birds, during path establishment work, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.

The following risks to 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:

- **Non-breeding waterbirds:** Disturbance to foraging, breeding or resting birds, 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.

### 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. These are:

- **Saltmarshes, Sand dunes, Estuaries, Large shallow inlets and bays:** More frequent trampling following changes in recreational activities as a result of the access proposal and constructing sections of new path through these habitats leads to: changes in distribution of the feature, including associated transitional habitats, within the site, reduction in extent of the feature within the site, changes in key structural, influential and distinctive species, changes in vegetation community composition & zonation of vegetation.

**Non-breeding waterbirds:** Disturbance to foraging, breeding or resting birds, 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.

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

See table 17 for the Assessment of adverse effect on site integrity alone.

**Table 17. Assessment of adverse effect on site integrity alone**

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
Wyre Council	Wyre Local Plan 2011-2031	<p><b>No.</b> The Habitat Regulations Assessment (HRA) associated with the plan considers the potential impacts of recreational pressure and habitat loss from proposed new development.</p> <p>A number of mitigation measures have been built into the Plan to address these potential impacts. These include: European sites to be taken into account during the planning process, residential developments within 3.5km of Morecambe Bay required to prepare a Home Owners Pack for future home owners which would highlight the sensitivity of Morecambe Bay to recreational disturbance (A Recreational Disturbance Study carried out by Footprint Ecology for the Morecambe Bay identified that visitors to Morecambe Bay who were on a day-trip/short visit from home travelled a median distance of 3.454km to get to the European site) and the requirements for the provision of green infrastructure.</p> <p>It was concluded that there would be no adverse effect on integrity, and with the mitigation measures in place no residual effects were identified.</p>
Lancaster City Council	Lancaster Local Plan - Strategic Policies and Land Allocation Development Plan Document (DPD) and Development Management DPD	<p><b>No.</b> The Local Plan was submitted for examination to the Secretary of State in May 2018, subsequently Lancaster City Council published the proposed Main Modifications to the Local Plan. At the time of writing this assessment, consultation was taking place on the soundness of the plan as a result of the Main Modifications.</p> <p>The submitted HRA considers the potential impacts of recreational pressure and habitat loss on Morecambe Bay from new development. A suite of mitigation measures for all new housing developments within 3.5km of Morecambe Bay (as identified in the Recreational Disturbance Study) has been proposed, this includes home owner packs highlighting the sensitivity of Morecambe Bay to recreational disturbance. The plan also outlines the requirements for public open space to be built into residential developments, thereby minimising the need for residents to visit Morecambe Bay on a regular basis. Policies within the plan clearly set out the requirements for European sites to be taken into account during the planning process, ensuring projects adequately assess the potential impacts upon the European sites prior to planning permission being granted.</p> <p>It was concluded that there would be no adverse effect on integrity, and with the mitigation measures in place no residual effects were identified.</p>
South Lakeland District Council	South Lakeland Local Plan - Development Management Policies DPD, Land Allocations DPD, Arnsdale and Silverdale AONB DPD and Core Strategy	<p><b>No.</b> The HRA associated with the plan considers the potential impacts of increased disturbance and habitat loss on designated sites from new development.</p> <p>A suite of mitigation measures, including those developed for the Core Strategy (2010), have been incorporated into the Development Management Policies DPD (2018). Relevant policies include CS8.4 Biodiversity and Geodiversity and CS8.5 Coastal Zone which include requirements to have regard for the European sites and ensure</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		<p>development proposals would not negatively affect the ecological features of the Morecambe Bay European sites. Policy CS8.5 also includes the requirement to 'provide information to encourage responsible recreation use and help visitors to understand the special features of the protected sites of Morecambe Bay'.</p> <p>It was concluded that there would be no adverse effect on integrity, and with the mitigation measures in place no residual effects were identified.</p>
Lake District National Park (LDNPA)	Lake District Local Plan	<p><b>No.</b> A review of the Local Plan began in 2016, it was submitted for examination to the Secretary of State in August 2019. At the time of writing this assessment no HRA has been submitted. The Appropriate Assessment associated with the plan, currently under consultation before submission, considers the potential impacts of increased disturbance through recreation pressure and habitat loss. There are policies within the Local Plan which aim to mitigate any effects, in particular Policy 04: Biodiversity and geodiversity aims to protect biodiversity and deliver biodiversity net gain, through a mitigation hierarchy being applied to all proposals.</p> <p>It was concluded that there would be no adverse effect on integrity, and with the mitigation measures in place no residual effects were identified.</p>
Barrow Borough Council	Barrow Borough Local Plan 2016-2031	<p><b>No.</b> The HRA associated with the Local Plan considers the potential impacts of increased recreational pressure and loss of habitats from new development. A series of mitigation measures to address these potential impacts are listed in the natural environment chapter of the Local Plan.</p> <p>It was concluded that there would be no adverse effect on integrity, and with the mitigation measures in place no residual effects were identified.</p>
Copeland Borough Council	Copeland Local Plan 2013-2028 - Local Plan 2013-2028 Core Strategy and Development Management Policies, and Local Plan 2013-2028 Proposals Map and Local Plan 2001-2016 'Saved' Policies	<p><b>No.</b> The HRA associated with the Local Plan has not identified any likely significant effects that the Core Strategy and Development Management Policies would have on the integrity of any of the European sites. It does, however, identify where further Habitats Regulations Assessment and possibly Appropriate Assessments are likely to be needed when the Site Allocations Policies and associated maps are prepared. Site by site Assessments will need to be considered when planning application proposals come forward. The Development Management Policies document makes it clear that any development that would be likely to have an adverse impact on the integrity of a European designated site would not be supported.</p>
Fylde Council	Fylde Local Plan to 2032	<p><b>No.</b> The HRA associated with the Local Plan considers the potential impacts of increased recreational pressure and loss of habitats from new development.</p> <p>A number of mitigation measures have been included in the plan. These include policies that clearly set out the requirements for European sites to be taken into account during the planning process and the requirements for the provision of green space.</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		It was concluded that there would be no adverse effect on integrity, and with the mitigation measures in place no residual effects were identified.
Cumbria County Council	Cumbria Minerals and Waste Local Plan 2015-2030	<p><b>No.</b> The HRA associated with the plan considers the potential impacts of increased disturbance and habitat loss on Morecambe Bay from mineral workings and waste management developments.</p> <p>It was concluded that the plan's policies will not adversely affect the integrity of Morecambe Bay. At the stage when detailed development proposals are being considered, it is concluded that a large number of the proposed sites are likely to require 'appropriate assessment'. This would be to assess the mitigation measures that could be needed to ensure that they do not adversely affect the integrity the designated site. However, none of the mitigations that are considered likely to be needed, set out in planning permission conditions or in Environment Agency permits, would involve measures that are not common practice. No residual effects were identified.</p>
Lancashire County Council	Joint Lancashire Minerals and Waste Development Framework Core Strategy DPD, and Joint Lancashire Minerals and Waste Local Plan Site Allocations and Development Management Policies	<p><b>No.</b> The Minerals and Waste Local Plan for Lancashire is an over-arching plan which covers all of the other Local Plans within Lancashire. The allocations within the associated Policies Map coincide with developments already considered within the individual Local Plans. Therefore, to avoid repetition, the sites shown on the policies map will be assessed when considering the individual Local Plans.</p>
Shoreline Management Plan 2	North West Shoreline Management Plan	<p><b>No.</b> The Shoreline Management Plan is a high level study. Due to the fact that it is about Policy setting, rather than proposing specific options at a scheme or project level, where specific details about construction or engineering proposals will be detailed, it is very difficult to determine the exact effects any proposal would have on the integrity of Morecambe Bay, especially in the long term. HRAs would need to be undertaken at strategy/project level when more detail was available.</p>
Cumbria County Council	Cumbria Coastal Strategy	<p><b>No.</b> The Strategy will be a plan to evaluate and manage the risks related to coastal flooding and erosion along the Cumbrian coastline on a long-term scale. Following on from the North West Shoreline Management Plan which covered the coastline from the Great Orme in North Wales to the Scottish Border, the need for a more focused Strategy was identified. The strategy will assess the existing condition of land and flood defences along the coastline, identifying where potential future interventions are required</p> <p>The HRA for this strategy is at the draft stage. There is currently uncertainty regarding any residual effects therefore we are unable to determine if the strategy would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before adopting the strategy.</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
Lancaster City Council	19/00541/OUT Outline application for the erection of up to 250 dwellings with associated access at Lundsfield Quarries, Lundsfield, Kellet Road, Carnforth	<p><b>No.</b> No HRA has been undertaken. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Lancaster City Council	18/01593/OUT Erection of 9 dwellings land at Middleton Towers Leisure Club, Natterjack Lane, Middleton	<p><b>No.</b> A shadow HRA has been submitted to the council, no residual effects were identified. At this time the council hasn't adopted the shadow HRA. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Lancaster City Council	19/00689/FUL Retrospective application for site levelling and introduction of gabions along south site boundary Middleton Towers Leisure Club, Natterjack Lane, Middleton	<p><b>No.</b> The shadow HRA submitted for the proposal doesn't relate to this application. No HRA has been undertaken by the council. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Lancaster City Council	19/00758/EIO EIA Scoping request for the demolition of existing buildings/structures and proposed construction of major mixed use leisure development in association with Eden Project etc. Central promenade site, including Morecambe Bay, land North of Marine Road etc.	<p><b>No.</b> The proposal is at an early stage in the planning process, we are unable to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals when the application is at a more detailed stage.</p>
Lancaster City Council	19/00438/FUL Erection of 36 dwellings, creation of vehicular access and associated landscaping, regarding of land levels and provision of surface water drainage scheme and public open space at Land Off Marsh Lane and Main Street, Cockerham	<p><b>No.</b> No HRA has been undertaken. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Lancaster City Council	19/00332/OUT Erection of up to 95 residential dwellings with associated access Land To The South Of Lawsons Bridge Site, Scotforth Road	<p><b>No.</b> A shadow HRA has been submitted to the council, no residual effects were identified. At this time the council hasn't adopted the shadow HRA. The proposal is not</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		<p>at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Lancaster City Council	18/00978/EIO. Scoping opinion for creation of new wetland habitats on fields. Warton Mires, Warton	<p><b>No.</b> The proposal is at an early stage in the planning process, we are unable to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals when the application is at a more detailed stage.</p>
Lancaster City Council	18/01520/OUT Outline application for the erection of up to 250 dwellings with associated vehicular and cycle/pedestrian accesses	<p><b>No.</b> No HRA has been undertaken. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Wyre Council	Preesall underground gas storage. Construction of underground caverns for the storage of natural gas along with gas pipeline at Preesall Saltfield, Preesall	<p><b>No.</b> This is a Nationally Significant Infrastructure Project (NSIP). Mitigation has been included in the proposal that avoids the risk of disturbance to the designated features. No residual effects were identified.</p>
Wyre Council	19/00167/FULMAJ Erection of 49 dwellings and associated works Land At Arthurs Lane, Hambleton	<p><b>No.</b> The submitted HRA concludes no adverse effects on site integrity, no residual effects were identified</p>
Wyre Council	19/00347/FULMAJ Erection of 42 dwellings etc. Site of Thornton Cleveleys Football Club, Bourne Road, Thornton, Cleveleys.	<p><b>No.</b> No HRA has been undertaken. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Fylde Council	19/0318 Mixed use tourism and leisure development involving a 9-hole golf course, siting of 495 holiday lodges, erection of hotel. Land north of Garstang Road at junction with Windy Harbour Road, Singleton	<p><b>No.</b> No HRA has been undertaken. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>



Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
Fylde Council	18/0655 Change of use of land to allow the siting of an additional 81 static caravans for holiday use, Windy Harbour Holiday Centre, Windy Harbour Road, Little Eccleston with Larbeck, Poulton le Fylde	<p><b>No.</b> A shadow HRA has been submitted to the council, no residual effects were identified. At this time the council hasn't adopted the shadow HRA. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Fylde Council	A585 Windy Harbour to Skippool Improvement Scheme (5km new road)	<p><b>No.</b> This is a NSIP. Mitigation has been included in the proposal that avoids the risk of disturbance to the designated features. No residual effects were identified.</p>
Fylde Council	19/0478 Redevelopment of the Meadfoot Caravan Park, Meadfoot and Hurst Lee Caravan Site, Cartford Lane, Little Eccleston with Larbreck, Preston	<p><b>No.</b> No HRA has been undertaken. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p> <p>It will be for the competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before determining the application.</p>
Barrow Borough Council	18/2017/0628 construction of a Helipad, a flight operations building (incorporating an office and crew facilities), refuelling facilities, car parking, diesel generator and associated infrastructure. land off Sandscale Park/Partylite Manufacturing	<p><b>No.</b> Although this application was approved in 2018, the Appropriate Assessment includes a bird mitigation and monitoring plan (BMMP) where intensive monitoring is to be undertaken for at least the first 2 years of operation with a view to potentially decreasing monitoring effort in the remainder of the five year operational period. This monitoring plan would observe bird behaviour in response to helicopter movements and verify that significant disturbance does not occur. The BMMP includes an Adaptive Management Plan which includes mechanisms modifying how aircraft operations are undertaken to reduce any future potential disturbance if identified.</p> <p>Proposals for future modifications to helicopter movements would need to consider any in-combination effects from the Coastal Path.</p>
Natural England	SSSI Consent from Leroy Holden for continuation of wildfowling shooting activities on Tomlinson Marsh within Lune Estuary SSSI / Morecambe Bay	<p><b>No.</b> This licence is under review, no HRA available at present and there is therefore uncertainty at this stage about residual effects. From what we understand, the new licence will provide for a similar level of shooting activity as currently.</p> <p>It will be for Natural England as competent authority for the licence to assess how any residual effects arising from the new licence could interact with the England Coast Path proposals before concluding the Appropriate Assessment for that licence.</p>
Natural England	Implementation of coastal access on Walney Island	<p><b>No.</b> The proposals for Walney Island have been subject to an Access Sensitive Features Assessment. An in-combination was carried out and concluded no residual impacts, no adverse effect on integrity was determined.</p>
Natural England	SSSI consent to alleviate substantial winter flooding in neighbouring arable fields at Aldcliffe Marsh within the Lune Estuary	<p><b>No.</b> The consent has not been issued at the time of writing this assessment, no HRA has been undertaken. The proposal is not at a stage where we are able to determine if there would be residual effects that would act in-combination.</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		It will be for Natural England, as competent authority to assess how any residual effects arising from the proposal could interact with the England Coastal Path proposals before issuing the consent.
Natural England	SSSI Consent from Network Rail to install an I-beam steel retaining wall on existing sea wall defences that is showing signs of failure and requires remediating within Morecombe Bay SSSI (Unit 15)	<b>No.</b> The associated HRA concludes no likely significant effects, no residual effects were identified.
Natural England	SSSI Assent from Network Rail for Draft Renewal 5 Year Site Management Plan (Jan 2019 - Jan 2024) for Duddon Estuary SSSI	<b>No.</b> The associated HRA concludes no likely significant effects, no residual effects were identified.
Natural England	SSSI Assent from Network Rail for Draft Renewal 5 Year Site Management Plan (Jan 2019 - Jan 2024) for Morecambe Bay SSSI	<b>No.</b> The associated HRA concludes no likely significant effects, no residual effects were identified.
Marine Management Organisation	MLA/2019/00073 Consultation 2 - amended Maintenance Dredge Protocol and Water Framework Directive for Heysham 1 & 2 dredging activities	<b>No.</b> The submitted HRA concludes no adverse effects on site integrity, no residual effects were identified
Marine Management Organisation	MLA/2018/00432 - CBC1 W16107 Leven Viaduct River Leven	<b>No.</b> The submitted HRA concludes no likely significant effects, no residual effects were identified
Marine Management Organisation	MLA/2019/00320 - Head Cragg Marsh Embankment Coastal Defence Design at Head Cragg Marsh Embankment, Kirby Pool, Near Wall End	<b>No.</b> The submitted HRA concludes no adverse effects on site integrity, no residual effects were identified
Marine Management Organisation	MLA/2018/00542 - Jubilee Bridge painting works at Jubilee Bridge, Walney Island, Barrow-on-Furness	<b>No.</b> The submitted HRA concludes no adverse effects on site integrity, no residual effects were identified

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

**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, no further in-combination assessment is required

## **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 Morecambe Bay and Duddon Estuary SPA, Morecambe Bay SAC, Duddon Estuary Ramsar site, Morecambe Bay 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 Silecroft and Cleveleys 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 by:**

Sarah Wiseman

Coastal Access Lead Adviser

Date: 04/12/2019

#### **HRA approved by:**

Mark Hesketh

Deputy Area Manager

Date: 04/12/2019

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# Appendices

## Appendix 1

### Integrity Assessment – Saltmarsh Features

- Atlantic Saltmeadows
- Salicornia and other annuals colonising mud

Integrity attributes taken from the Morecambe Bay SAC Conservation Advice Package

Integrity Attributes	Target	Impact	Conclusion
Distribution of the feature, including associated transitional habitats, within the site.	Maintain the range and continuity of the habitat and its natural transitions within saltmarsh types and to other habitats seaward and landward.	Saltmarsh is present in numerous areas of the SAC and in a variety of forms. These occur as large expanses of open marsh to small areas of fringing marsh to the small patches and clumps formed in low energy areas. To retain the integrity of the SAC the full mosaic and distribution of these marsh areas and types need to be retained. Whilst the ECP will result in some loss and degradation of saltmarsh, this will largely occur within the narrow 2m corridor of the path as it traverses the margin of the SAC. Therefore the impact will be widely distributed across the SAC meaning localised impacts on marsh condition will be small. There will be no loss of any individual marsh or patch of marsh, meaning that at the scale of the SAC as a whole there will be no loss in the existing mosaic and distribution of marsh habitats. The ecological functions and opportunities created by the individual areas of marsh will be maintained and distributed in the same way.	Minor reduction in localised saltmarsh habitat distribution, however the impact will not be significant on an SAC scale.
Extent of the feature within the site.	Maintain the total extent and ability to achieve long-term	A total of 147m <sup>2</sup> (0.0147 hectares) of SAC habitat will be lost under infrastructure. This is 0.0004% of the estimated 2013 saltmarsh extent in Morecambe Bay SAC, this figure includes both saltmarsh features 1) Salicornia	Minor reduction in extent of saltmarsh however the impact

Integrity Attributes	Target	Impact	Conclusion
<p>Future extent of habitat within the site and ability to respond to seasonal changes.</p>	<p>fluctuations in the extent of habitat in response to coastal processes.</p>	<p>and other annuals colonising mud and 2) the Atlantic Salt Meadows feature. This percentage loss is very small and will be distributed across the whole SAC, likely reducing severity of the impact.</p> <p>The path will not form a physical barrier preventing the movement of animals, the spreading of plants or movement of water or sediment. Thus any future change in zonation or distribution of saltmarsh types will not be limited in any way by the path.</p>	<p>will not be significant in relation to the overall extent of the feature in the SAC.</p>
<p>Structure and function (including its typical species): key structural, influential and distinctive species.</p> <p>Structure and function: vegetation community composition.</p> <p>Structure and function: vegetation structure - zonation of salt marsh vegetation.</p>	<p>Maintain the species composition of component vegetation communities and associated transitions, allowing for successional changes in response to natural processes.</p>	<p>Along the ECP route areas which experience moderate to heavy footfall will see a change in vegetation structure when compared to a 'none walked' baseline. These areas will see a reduction in the density of those species with a lower resilience to physical disturbance and tramping. There will also be a reduction in vegetation/sward height and areas of bare ground may be created where the ground becomes poached or heavily disturbed.</p> <p>The majority of the ECP route aligns with existing public rights of Way (PRoW) or routes which are regularly used by walkers. In these areas physical disturbance will have occurred for many years meaning changes to vegetation structure and composition will already be visible. In the majority of cases, further usage of these existing routes is not predicted to cause further impacts on the vegetation structure of composition. An exception is where the existing walking route is not regularly used and the ECP is likely to bring significantly more walkers into areas where impacts to vegetation and soil structure have historically been low. Where this exception is a specific consideration is the stretch between Kirkby Pool and Kirkby in Furness station.</p> <p>Where the path is aligned on saltmarsh and there is no existing route walked, the alterations to vegetation composition and structure will be considered a negative impact on the feature.</p>	<p>There will be an increased impact on saltmarsh vegetation structure and community composition along the route of the path where usage is currently low. Due to the dispersed nature of the impact across the SAC the effect it will have on the site will be minor.</p>



Integrity Attributes	Target	Impact	Conclusion
		<p>Saltmarsh in the spreading room is unlikely to experience significant changes in saltmarsh vegetation composition or structure due to the irregularity of the footfall compared to the path.</p> <p>The total area of saltmarsh expected to experience impacts to vegetation composition and structure equates to the total length of path aligned on saltmarsh where there is no existing path. Included in this total are areas of saltmarsh where there is an existing walked route but current usage of the site is low. Though the width of the path will vary depending on terrain and use, we have calculated the width of expected impact as 2 metres.</p>	
<p>Structure and function: presence and patterning of creeks and salt pans.</p> <p>Structure and function: presence of un-vegetated surfaces.</p> <p>Structure and function: surface elevation and topography.</p> <p>Supporting processes: morphological setting.</p>	<p>Maintain any desirable variation in elevation and/or topography across the site that supports the habitat type. Maintain naturally-occurring patterns of creeks and salt pans. Maintain the degree of patterning of patches of bare mud of varying sizes in a mosaic with saltmarsh vegetation.</p>	<p>The ECP will install infrastructure to facilitate walkers over difficult terrain. Some of this infrastructure will include bridges over creeks and channels where avoidance is not possible. There is a risk that some of this bridge infrastructure could constrain or alter the channel/creek morphology. However to avoid this risk all the bridges will be constructed in such a way that abutments and structures are placed well back from the channel edge meaning the bridge structure will not interact with the active channel or any potential future channel positions.</p>	<p>Effects will not be significant.</p>
<p>Structure and function: vegetation - undesirable species.</p>	<p>The frequency/cover of undesirable species are maintained at acceptable levels and are not encouraged.</p>	<p>Undesirable species may be introduced on the shoes of walkers however the risk is low.</p>	<p>Effects will not be significant.</p>

Integrity Attributes	Target	Impact	Conclusion
<p>Structure and function: sediment size and availability</p> <p>Supporting processes: sedimentary processes.</p> <p>Supporting processes: tidal processes.</p> <p>Supporting processes: functional connectivity with wider coastal sedimentary system.</p>	<p>Maintain the availability and size range of those sediments typical of the feature at the site.</p> <p>Maintain the sedimentary processes (suspended sediment, sediment transfer, etc.) that sustain the elevation and topography of the marsh surface.</p>	<p>The path will not have a significant interaction with sedimentary processes.</p>	<p>Effects will not be significant.</p>
<p>Supporting processes: air quality.</p>	<p>Maintain concentrations and deposition of air pollutants at below the site-relevant Critical Load.</p>	<p>The path will not cause a significant increase in concentrations of airborne pollutants.</p>	<p>Effects will not be significant.</p>
<p>Supporting processes: adaptation and resilience.</p>	<p>Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change.</p>	<p>The path will not form a hard or physical barrier. Where the ECP requires stepping stones or surfaces these will allow water to drain and flow across the path naturally. Plants and vegetation communities will be able to spread across the path. Consequently the evolution and transition of saltmarsh habitats/communities will not be hindered meaning sites will retain the ability to adapt to change.</p>	<p>Effects will not be significant.</p>
<p>Supporting processes: conservation measures.</p>	<p>Maintain the management measures (either within and/or outside the site boundary as</p>	<p>There will be no alteration to grazing or other management regimes.</p>	<p>Effects will not be significant.</p>

Integrity Attributes	Target	Impact	Conclusion
	appropriate) that are necessary to maintain the structure, functions and supporting processes associated with the feature.		
Supporting processes: sediment nutrient status and nutrient cycling.	Maintain both the sediment nutrient status to within typical values for the habitat and the processes that sustain effective nutrient cycling by the saltmarsh feature.	There will be no change in nutrient cycling.	Effects will not be significant.
Supporting processes: water quality.	Where the feature is dependent on estuarine water, ensure water quality and quantity is maintained to a standard that provides the necessary conditions to support the feature.	There will be no change in water quality.	Effects will not be significant.

## Appendix 2

### Integrity Assessment – Sand Dune Features

- Atlantic decalcified fixed dunes (Calluno-Ulicetea)
- Dunes with *Salix repens* Ssp. *argentea* (Salicion *arenariae*)
- Embryonic shifting dunes
- Fixed dunes with herbaceous vegetation (“Grey dunes”)
- Shifting dunes along the shoreline with *Ammophila arenaria* (“White dunes”)

Integrity attributes amended from the Morecambe Bay SAC Conservation Advice Package to be representative of all dune habitats

Integrity Attribute	Target	Impact	Conclusion
<p>Extent of the feature within the site.</p> <p>Distribution of the feature, including associated transitional habitats, within the site.</p>	<p>Maintain the total extent of the feature.</p> <p>Maintain the distribution and continuity of the feature, including where applicable its component vegetation types and associated transitional vegetation types, across the site.</p>	<p>The majority of alignment through sand dunes is on existing paths, with minimal infrastructure (signage and sleeper bridges over drains/streams).</p> <p>There will be a total of 500m of new path created through sand dunes near Sandscale in the Duddon Estuary, with minimal infrastructure (signage, kissing gates).</p> <p>Any impact will come from trampling of vegetation, not through habitat loss due to infrastructure and path construction.</p>	<p>The use of existing paths and creation of new paths through sand dunes as the route of the ECP is unlikely to lead to a reduction in extent or distribution of the sand dune features.</p> <p>Where the path is aligned through dunes, we avoid aligning in embryonic, white and yellow dunes, as these are sensitive to changes in access.</p> <p>We have aligned the ECP through vegetated, stable dunes towards the back of the dune system where possible. Many of these dunes have experienced impacts of over-stabilisation and there is potential for trampling to be used as a means of re-invigorating surface movement of sand to restore some of the necessary dynamism of this habitat for some of the more diverse vegetation types.</p>

Integrity Attribute	Target	Impact	Conclusion
			It is not expected that levels of access, and therefore trampling damage, will increase within the areas of sand dune that fall within the Coastal margin.
<p>Structure and function (including its typical species): key structural, influential and distinctive species.</p> <p>Structure and function: vegetation structure diversity.</p> <p>Structure and function: vegetation community composition.</p>	<p>Maintain the abundance of the relevant key species to enable each of them to be a viable component of the Annex I habitat feature.</p> <p>Maintain variation to sward structure mixture of heights.</p> <p>Ensure the component vegetation communities of the feature are referable to and characterised by the relevant National Vegetation Classification types listed for each annex 1 dune habitat.</p>	<p>Changes in conservation grazing as a result of livestock being disturbed by people and dogs as a result of the proposals could lead to changes in vegetation communities.</p> <p>In order to reduce the risk of disturbance of grazing animals, ‘dogs on leads’ restrictions are proposed in the margin and on the trail through the grazing enclosures at Haverigg.</p> <p>There may be some changes in structure and function due to trampling of sensitive species.</p>	<p>The proposals have been designed to reduce the risk of changes in conservation grazing patterns and mitigation measures are in place.</p> <p>The ECP is not aligned through areas of dune that are sensitive to trampling. Therefore there is a low risk of sensitive species being trampled by people using the ECP.</p> <p>It is not expected that levels of access, and therefore trampling damage, will increase significantly compared with current levels within the areas of sand dune that fall within the Coastal margin.</p>
Structure and function: functional connectivity with landscape.	Any supporting features within the local landscape which provide a critical functional connection with the site are maintained in terms of their overall extent, quality and function.	The path will not cause a hydrological or physical barrier meaning animal and plant species, water and sediment will continue to freely cross the line of the path. Therefore existing levels of connectivity and transition with the surrounding environment will be maintained.	No impact.

<b>Integrity Attribute</b>	<b>Target</b>	<b>Impact</b>	<b>Conclusion</b>
Structure and function: presence of unvegetated surfaces.	Maintain an appropriate cover of bare ground or sand, which is typically between 5-20 % and in patches in a mosaic with vegetated surfaces where this is appropriate.	Permanent path surfacing and infrastructure could reduce the areas of bare ground.	There is no path surfacing and minimal infrastructure proposed, except in one section south of Askam where an existing 26m section of aggregate surface will be replaced. Therefore the proposals will not lead to a reduction in bare ground or sand.
Structure and function: soils, substrate and nutrient cycling.	Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal:bacterial ratio, to within typical values for the habitat.	There will be some compaction of the soil/substratum along the route of the path where new routes are proposed. However the total coverage of new routes in the dune system are small.	Minor impact.
Structure and function: topography of dune.	Maintain a natural topography to the dune feature.	The ECP will not interfere with natural topography. Where the path is aligned through mobile dunes, no infrastructure or surfacing is proposed (other than signage), and the route of the ECP will move if the dunes move.	No pathway for impact.
Structure and function: vegetation - undesirable species.	Cover of the following undesirable species are maintained at within acceptable and manageable levels and are not encouraged by changes in surface condition, soils, nutrient levels or changes to hydrology: Rosa species, Cirsium arvense.	Typically problematic species such as Rosa rosgosa and Cirsium arvense are not typically spread by walkers, other vectors are predominant.	No pathway for impact.

<b>Integrity Attribute</b>	<b>Target</b>	<b>Impact</b>	<b>Conclusion</b>
Supporting processes: adaptation and resilience.	Maintain the feature's ability, and that of its supporting processes, to adapt or evolve to wider environmental change, either within or external to the site.	The ECP will not interfere with supporting processes. Where the path is aligned through mobile dunes, no infrastructure or surfacing is proposed (other than signage), and the route of the ECP will move if the dunes move.	No pathway for impact.
Supporting processes: aeolian (wind-blown) processes	Maintain the ability of wind-blow processes to transport sand from the beach plain to the foredune.		No pathway for impact.
Supporting processes: air quality.	Restore concentrations and deposition of air pollutants to below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System.		No pathway for impact.
Supporting processes: conservation measures.	Maintain the management measures (either within and / or outside the site boundary as appropriate) that are necessary to maintain the structure, functions and supporting processes associated with the feature.	Changes in conservation grazing as a result of livestock being disturbed by people and dogs (especially off lead) as a result of the proposals leads to changes in vegetation communities.  In order to reduce the risk of disturbance of grazing animals, dogs on leads restrictions are proposed in the margin and on the trail through the grazing enclosures at Haverigg.	Only minor impacts are expected thanks to mitigation measures restricting free running dogs in areas of conservation grazing. The proposals have been designed to reduce the risk of changes in conservation grazing patterns.
Supporting processes: hydrology.	At a site, unit and/or catchment level, maintain natural hydrological processes to provide the		No pathway for impact.

<b>Integrity Attribute</b>	<b>Target</b>	<b>Impact</b>	<b>Conclusion</b>
	conditions necessary to sustain the feature within the site.		
Supporting processes: water quality.	Where the feature is dependent on surface water and/or groundwater, ensure water quality and quantity is maintained to a standard which provides the necessary conditions to support the feature.		No pathway for impact.