Assessment of England Coast Path proposals between Bamburgh and the Scottish Border, including Holy Island

on

Northumbria Coast Special Protection Area (SPA), Northumbria Coast Ramsar site, Northumberland Marine SPA, Lindisfarne SPA, Lindisfarne Ramsar site, North Northumberland Dunes Special Area of Conservation (SAC), Berwickshire & North Northumberland Coast SAC and Tweed Estuary SAC

15th January 2020

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I) Introduction

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

Natural England has a statutory duty under the Marine and Coastal Access Act 2009 to improve access to the English coast. This assessment considers the potential impacts of our detailed proposals for coastal access from Bamburgh to the Scottish Border, including Holy Island, on the following sites of international importance for wildlife:

- Northumbria Coast Special Protection Area (SPA)
- Northumbria Coast Ramsar site
- Northumberland Marine SPA
- Lindisfarne SPA
- Lindisfarne Ramsar site
- Berwickshire & North Northumberland Coast Special Area of Conservation (SAC)
- North Northumberland Dunes SAC
- Tweed Estuary SAC

As part of the integral planning of coastal access proposals areas of saltmarsh and mud flat at Holy Island Sands, Fenham Flats and Chesterhill Slakes in Budle Bay as part of the Berwickshire and North Northumberland Coast SAC and supporting habitat to Lindisfarne SPA features, are considered unsuitable for public access and excluded from the new coastal access rights at all times regardless of any other considerations and are not included in this assessment.

For this document, the phrase 'Holy Island' refers to the island itself (in line with the preference of residents) and the phrase 'Lindisfarne' refers to the title names of the nature conservation designations.

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

https://www.gov.uk/government/publications/england-coast-path-from-bamburgh-to-the-scottish-border-including-holy-island-comment-on-proposals

II) Background

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

Table 1: Summary of the main wildlife interest in the Bamburgh to the Scottish Border, including Holy Island, England Coast Path proposal

Summary of the main wildlife interest in the Bamburgh to the Scottish Border, including Holy Island, England Coast Path proposal	
Wildlife interest	**Description**
Breeding seabirds, including little tern	Breeding seabirds, mainly nest on Coquet Island and the Farne Islands, as well as on cliff faces on the mainland, such as at Needles Eye. The England Coast Path proposal contains little tern nesting sites at Black Law, Wide Open and Cheswick Sands with sites in Budle Bay within Lindisfarne National Nature Reserve (NNR) being actively managed to encourage further nesting. The dynamic nature of the nesting grounds from coastal processes mean these potential and active nesting sites are crucial to this qualifying feature.
Non breeding seabirds and waterbirds	During winter the Northumberland coast supports a wide range of foraging and resting water and seabirds, which are present in internationally and nationally important numbers, either on the rocky outcrops surrounding Berwick-upon-Tweed or the intertidal mudflats in Lindisfarne NRR, specifically at Fenham Flats, Holy Island Sands and Budle Bay.
Non breeding geese	Lindisfarne NNR is very important for overwintering light-bellied brent and greylag geese. For feeding, the geese use a combination of Zostera beds in the intertidal habitat at low tide and inland grass or cereal fields at high tide. Several farmers along the coast are actively managing fields with rye grass leys to support the feeding geese during the winter season.
Grey seals	The main haul out areas within this proposal are at Black Law, Guile Point and Long Ridge, which are small spits of land between the southern point of Holy Island and the mainland.
Sand dunes	The sand dunes within this proposal are found on the mainland at Budle Point and Ross Links in the south and Goswick and Cheswick Links north of Beal, with two further dune systems on Holy Island. Most are publicly accessed with the exception of Ross Links. The sand dunes contain a number of habitats and establishment phases from embryonic, shifting sands through to fixed dunes with herbaceous vegetation and humid dune slacks.
Intertidal habitats	The north Northumberland coastline has extensive ranges of rock platforms and headlands forming sea caves and reefs going north from

	Cocklawburn beach to the Scottish Border and the southern and eastern edges of Holy Island. There are large shallow inlets and bays between Holy Island and the mainland and at Budle Bay with accreting saltmarsh, extensive areas of mudflat and wave exposed sand within Lindisfarne NNR. The intertidal sediments at these locations support a very high abundance of invertebrates, the largest intertidal eelgrass beds on the east coast of England, and the infauna within the sediments provide food for a range of internationally important birds. Saltmarsh is a relatively new habitat within Lindisfarne National Nature Reserve where is it has been developing for approximately 50 years.

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.

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

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

The conclusions of 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.

A key consideration in developing coastal access proposals for Bamburgh to the Scottish Border, including Holy Island, has been the possible impact on:

- Established little tern nesting sites at Black Law and Wide Open
- Sites actively managed for nesting little tern in Budle Bay and at Cheswick Sands
- Inland grass fields for foraging geese at Ross, Elwick and Easington
- Grey seals at Black Law, Guile Point and Long Ridge
- Overwintering waterbirds, including geese, at Fenham Flats and Budle Bay
- Saltmarsh
- Dune habitat

Objectives for design of our detailed local proposals have been to:

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

V) Conclusion

We have considered whether our detailed proposals for coastal access from Bamburgh to the Scottish Border, including Holy Island, might have an impact on:

- Northumbria Coast SPA
- Northumbria Coast Ramsar site
- Northumberland Marine SPA
- Lindisfarne SPA
- Lindisfarne Ramsar site
- Berwickshire & North Northumberland Coast SAC
- North Northumberland Dunes SAC
- Tweed Estuary SAC

In Part C of this assessment we identify some possible risks to the relevant qualifying features and conclude that proposals for coastal access, without incorporated mitigation, may have a significant effect on these sites. In Part D we consider these risks in more detail, taking account of avoidance and mitigation measures incorporated into our access proposal and conclude that there will not be an adverse effect on the integrity of either site. These measures are summarised in Table 2 below.

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

Summary of risks and consequent mitigation built in to our proposals			
Location	**Report Reference**	**Risk**	**Mitigation**
Budle Bay (Kiln Point)	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **breeding little tern**, 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 proposed trail will move away from the current foreshore alignment, creating new access, and into the adjacent permanently fenced grass field for approximately 750m. All CRoW public access rights from the nesting area will be excluded under S26 CRoW Act 2000 from 1st April until 31st August each year. Access management infrastructure within 100m of the restricted breeding area boundary will be installed from 1st September to 31st March during the establishment phase.
Budle Bay (north)	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **breeding little tern**, 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 proposed trail will move inland from the foreshore (map BBS 1d, trail section BSS-1-S044), creating new access, to increase the separation from the potential nesting site. All CRoW public access rights from the

Summary of risks and consequent mitigation built in to our proposals			
Location	**Report Reference**	**Risk**	**Mitigation**
			nesting area will be excluded under S26 CRoW Act 2000 from 1st April until 31st August each year. Access management infrastructure within 100m of the restricted breeding area boundary will be installed from 1st September to 31st March during the establishment phase.
Chesterhill Slakes and mid Budle Bay	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **foraging or resting non-breeding waterbirds, including geese**, 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 to the mudflats will be excluded under S25A CRoW Act 2000, as unsuitable for access. Access management infrastructure within 200m of the landward boundary of Budle Bay, Ross Links and Fenham Flats will be installed between 1st June and 31st July.
Saltmarsh foreshore at Chesterhill Slakes	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **foraging or resting non-breeding waterbirds, including geese**, as a result of the access proposal, leads to reduced fitness and/or contraction in the distribution of qualifying features within the site.	Access to the saltmarsh, will be excluded all year round under S26 CRoW Act 2000. The proposed route will provide a seasonal alternative route* to be used between 1st August and 31st May each year. The proposed route between 1st June and 31st July each year will be in a grass field fenced from

Summary of risks and consequent mitigation built in to our proposals			
Location	**Report Reference**	**Risk**	**Mitigation**
			the foreshore to ensure dogs do not roam onto the foreshore and mudflats. Access management infrastructure within 200m of the landward boundary of Budle Bay, Ross Links and Fenham Flats will be installed between 1st June and 31st July.
Outer Budle Bay	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **foraging or resting non-breeding waterbirds, including geese,** as a result of the access proposal, leads to reduced fitness and/or contraction in the distribution of qualifying features within the site.	Under S26 of the CRoW Act 2000 dogs will be kept on a lead all year round. Access management infrastructure within 200m of the landward boundary of Budle Bay, Ross Links and Fenham Flats will be installed between 1st June and 31st July.
Inland fields at Ross, Elwick and Easington	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance of **foraging light-bellied brent geese and greylag geese** on farmland functionally linked to the Lindisfarne SPA, 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 proposed route will provide a seasonal alternative inland route to be used between 1st August and 31st May each year.
Ross Links	Report BBS 1: Bamburgh to Holy Island Causeway	More frequent access in areas of sand dunes, as a result of the access	The trail proposal follows way-marked public rights of way or existing walked

Summary of risks and consequent mitigation built in to our proposals			
Location	**Report Reference**	**Risk**	**Mitigation**
		proposal leads to the spread of invasive species (pirri-pirri burr) and reduces the structure and function (including its typical species) of the qualifying features within the site.	routes mainly over firm grassed surfaces where the habitat is more resilient to pirri-pirri burr establishment. On previously un-accessed dune the CRoW access rights have been removed to mitigate the risk of spreading pirri-pirri burr. Prior to opening the route, where the trail proposal deviates from the monitored Northumberland Coast Path, a 4m cross section of the route will be surveyed across the dunes. Any pirri-pirri plants found will be removed before the path is opened to minimise the risk of spread and so that cover and frequency of pirri-pirri burr are within levels as stated in the supplementary advice for the conservation objectives. Continuing monitoring and control of pirri-pirri burr will continue through the NNR and the Coast Care volunteer team.
Wide Open and Old Law	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **breeding little tern**, as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the	The proposed trail will move away from the foreshore, creating new access, and into the adjacent permanently fenced grass field for approximately 450m. All CRoW public access rights

Summary of risks and consequent mitigation built in to our proposals			
Location	**Report Reference**	**Risk**	**Mitigation**
		distribution of qualifying features within the site.	from the nesting area will be excluded under S26 CRoW Act 2000 from 1st April until 31st August each year. Access management infrastructure within 100m of the restricted breeding area boundary will be installed from 1st September to 31st March during the establishment phase.
Saltmarsh at Fenham Flats and north Budle Bay	Report BBS 1: Bamburgh to Holy Island Causeway	New access and increased footfall in areas of developing **saltmarsh,** as a result of the access proposal leads to the reduction in distribution, extent, structure and function of the qualifying features within the site.	As part of the mitigation to prevent disturbance to foraging and resting non-breeding waterbirds and to minimise impact from trampling on the saltmarsh access to the saltmarsh is excluded from 1st August to 31st May each year. Although no adverse effect has been concluded, as this is developing saltmarsh with no previous access an early warning monitoring programme (appendix 3) will be implemented. This is due to the potential risk for an increase in footfall than the numbers predicted due to the high numbers visiting Lindisfarne NNR and the fact that this area has not previously been accessed. If this is the case then this may invalidate this assessment's conclusion.

Summary of risks and consequent mitigation built in to our proposals			
Location	**Report Reference**	**Risk**	**Mitigation**
			Triggers will be set in order for a review of the assessment and further mitigation measures implemented before any adverse effect on site integrity arises.
Fenham Flats and Holy Island Sands	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **foraging or resting non-breeding waterbirds,** 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 to the mudflats will be excluded under S25A CRoW Act 2000, as unsuitable for access. Access management infrastructure within 200m of the landward boundary of Budle Bay, Ross Links and Fenham Flats will be installed between 1st June and 31st July.
Fenham Flats	Report BBS 1: Bamburgh to Holy Island Causeway	Increased disturbance to **key high tide roosts for non-breeding waterbirds,** 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 proposed trail will provide a seasonal alternative inland route from 1st August to 31st May each year. Access management infrastructure within 200m of the landward boundary of Budle Bay, Ross Links and Fenham Flats will be installed between 1st June and 31st July.
Cheswick Sands	Report BBS 3: Holy Island Causeway to Berwick-upon-Tweed	Increased disturbance to **breeding little tern**, as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the	The proposed trail follows an existing walked behind the dune ridge, which separates it from the nesting site. All CRoW public access rights from the nesting area will be excluded under S26 CRoW

Summary of risks and consequent mitigation built in to our proposals			
Location	**Report Reference**	**Risk**	**Mitigation**
		distribution of qualifying features within the site.	Act 2000 from 1st April until 31st August each year. Access management infrastructure within 100m of the restricted breeding area boundary will be installed from 1st September to 31st March during the establishment phase.

The directions to restrict coastal access under the CRoW Act can be seen in full with maps in the Bamburgh to Scottish Border, including Holy Island Overview report.

https://www.gov.uk/government/publications/england-coast-path-from-bamburgh-to-the-scottish-border-including-holy-island-comment-on-proposals

The geographic extent of the access restriction can be seen at appendix 2; map 1.

NB: The phrase 'seasonal alternative' route is used to be consistent with wording from the CRoW Act 2000 and England Coast Path proposal overview and reports. The main trail route will be closed during the times stated and the seasonal alternative route will be the only route available for the England Coast Path.

VI) Implementation

Once a route for the trail has been confirmed by the Secretary of State, we will work with Northumberland 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 Lindisfarne Joint Advisory Committee, Northumberland Coast AONB Partnership, Northumberland County Council, RSPB, National Trust and to other organisations and local experts whose contributions and advice have helped to inform the development of our proposals.

Special thanks are due to the following individuals, for their generous contributions of time and invaluable knowledge of the dynamics of local bird populations: George Dodds and Tom Cadwallender.

PART A: Introduction and information about the England Coast Path

A1. Introduction

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

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

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

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

Natural England's approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in section 4.9 of the Coastal Access Scheme.

A2. Details of the plan or project

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

Our proposals for coastal access have two main components:

- Alignment of the England Coast Path; and,
- Designation of coastal access margin.

England Coast Path

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

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 Access Margin

An area of land associated with the proposed trail will become coastal access margin, including all land seaward of the trail down to mean low water and any cliff, bank, barrier, dune, beach, flat or area of section 15 land landward of the trail that either touches the foreshore itself at some point or connects indirectly with it by touching another part of the coastal margin that itself touches the foreshore at some point. This is explained in chapter 4 of our Coastal Access Scheme

Coastal access margin is typically subject to new coastal access rights, though there are some obvious exceptions to this. The nature and limitations of the new rights, and the key types of land excepted from them, are explained in more detail in chapter 2 of our Coastal Access Scheme. Where there are already public or local rights to do other things, these are normally unaffected and will continue to exist in parallel to the new coastal access rights. The exception to this principle is any pre-existing open access rights under Part 1 of the Countryside and Rights of Way (CRoW) Act 2000 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 areas of saltmarsh and mudflat at Holy Island Sands, Fenham Flats, Chesterhill Slakes and mid Budle Bay as part of the Berwickshire and North Northumberland Coast SAC and supporting habitat for Lindisfarne SPA, are considered unsuitable for public access and will be excluded from the new coastal access rights at all times regardless of any other considerations. The geographic extent of the restrictions are at appendix 2, map 1. The directions to restrict coastal access under the CRoW Act can been seen in full with maps in the Bamburgh to Scottish Border, including Holy Island Overview report.

https://www.gov.uk/government/publications/england-coast-path-from-bamburgh-to-the-scottish-border-including-holy-island-comment-on-proposals

Maintenance of the England Coast Path

The access proposals provide for the permanent establishment of a trail and associated access management 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.

National Trails pass through some habitats and places where the cost of maintaining the route is higher due to environmental sensitivity, which is often combined with remoteness and/or exacting maintenance prescriptions. As such an uplift of the maintenance funding grant for sections that pass through Sites of Special Scientific Interest is included in the calculation. Delivery is through local partnerships and it is the role of the trail partnership/managers to prioritise the grant spend, but due regard should be given to any mitigation listed in the HRA.

The Lindisfarne NNR and Northumberland Coast AONB partnership, including the Coast Care volunteer team, have a well-established presence on this coast and will continue to do so following this project implementation. In particular the organisations work together to provide an established shore bird wardening programme. Within this proposal all little tern nesting sites are on land managed by the NNR, however the NNR staff and volunteers work with the AONB, and the National Trust at Long Nanny Burn in Beadnell Bay. The Coast Care volunteer team supported by the Northumberland Coast AONB partnership and the NNR have been involved in active management of the coast in many aspects from education to direct habitat management, including the mitigation for pirri-pirri burr surveying and removal. This support and participation in habitat management will continue with newly proposed signage and communications designed to work in parallel with wardening, volunteer and engagement activities.

Responding to future change

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

Establishment of the trail

Establishment works to improve access and guide users will be carried out before the new public rights come into action on this stretch. The infrastructure, including signs, conform to the National Trails standards. Particular attention is paid to the location, design and installation of access management infrastructure on sites of conservation value. The approach is to always ensure that any establishment works are undertaken in the way that has least impact on other uses and features of the land in question.

Details of the works to be carried out and the estimated cost are provided in the access proposals. The cost of establishment is met by Natural England and will be completed by Northumberland County Council, subject to any further necessary consents being obtained, including to undertake operations on a SSSI. Natural England will provide further advice to the local authority carrying out the work as necessary.

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

Table 3: Geographical Extent of European Designated sites from Bamburgh to the Scottish Border, including Holy Island

England Coast Path Stretch	**Bamburgh to the Scottish Border, including Holy Island**			
Proposal Reports / **European Designated Site**	Report BBS 1: Bamburgh Castle golf course to Holy Island causeway	Report BBS 2: Holy Island causeway to Beal	Report BBS 3: Beal to Berwick-upon-Tweed	Report BBS 4: Berwick-upon-Tweed to Marshall Meadows
Northumberland Marine SPA	✓	✓	✓	
North Northumberland Dunes SAC	✓	✓	✓	
Northumbria Coast SPA	✓		✓	
Northumbria Coast Ramsar site	✓		✓	
Berwickshire & North Northumberland Coast SAC	✓	✓	✓	✓
Lindisfarne SPA	✓	✓	✓	
Lindisfarne Ramsar site	✓	✓	✓	
Tweed Estuary SAC			✓	✓

Maps of the geographic extent for European designated sites and proposal reports from Bamburgh to the Scottish Border, including Holy Island with proposed trail can be seen at appendix 2; map 2 and 3.

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

- Northumberland Marine Special Protection Area (SPA) is the newest European designation on this coast, being classified in 2017. It supports a wide range of marine habitats and important breeding colonies of seabirds. The surrounding waters are used for foraging and maintenance activities, such as bathing and preening.

- North Northumberland Dunes SAC has a range of successional dune stages present from embryonic shifting dunes to fixed dunes with herbaceous vegetation. This site supports a number of specialised rare flora, including petalwort *Petalophyllum ralfsii.*

- The Northumbria Coast SPA & Ramsar site supports internationally important populations of overwintering purple sandpiper and turnstone and two breeding colonies of little tern within Lindisfarne NNR.

- The Berwickshire & North Northumberland Coast SAC contains a complex of marine habitat types, associated species and communities, which is unusually diverse for the North Sea, in both a UK and European context. The site contributes to an important range of intertidal mudflats and sandflats in the UK as the best example of east coast clean sand and seagrass beds, and of moderately exposed reefs. Intertidal and submerged sea caves also contribute significantly to the site's overall habitat diversity and international importance. The site covers 115 km of coastline and extends out to sea for four nautical miles to encompass 645 square kilometres of shore and sea.

- Lindisfarne SPA & Ramsar site qualifies by supporting a wide range of overwintering waterbirds, including light-bellied brent geese, for which it holds 50% of the world population. It is also noted for its overwintering waterbird assemblage and breeding little tern colonies. The extensive mudflats, including eelgrass and mussel beds, saltmarsh, sand and rocky foreshore habitats all support the SPA features, as a source of food, as well as roosting and nesting habitat.

- The Tweed Estuary SAC is a long narrow estuary with intertidal mudflats and sandflats. The SAC supports a population of both river and sea lamprey with the water quality classified as excellent throughout.

Table 4: Qualifying Features of European Designated Sites from Bamburgh to the Scottish Border, including Holy Island

European Designated Site / **Qualifying Features**	**Northumberland Marine SPA**	**North Northumberland Dunes SAC**	**Northumbria Coast SPA**	**Northumbria Coast Ramsar site**	**Berwickshire & North Northumberland Coast SAC**	**Lindisfarne SPA**	**Lindisfarne Ramsar site**	**Tweed Estuary SAC**
A038 Whooper swan *Cygnus cygnus* (non-breeding)						✓		
A043 Graylag goose *Anser anser* (non-breeding)						✓	✓	

European Designated Site / Qualifying Features	Northumberland Marine SPA	North Northumberland Dunes SAC	Northumbria Coast SPA	Northumbria Coast Ramsar site	Berwickshire & North Northumberland Coast SAC	Lindisfarne SPA	Lindisfarne Ramsar site	Tweed Estuary SAC
A048 Common shelduck *Calidris alba* (non-breeding)						✓		
A050 Wigeon *Anas penelope* (non-breeding)						✓	✓	
A063 Common eider *Somateria mollissima* (non-breeding)						✓		
A064 Long-tailed duck *Clangula hyemalis* (non-breeding)						✓		
A065 Common scoter *Melanitta nigra* (non-breeding)						✓		
A069 Red-breasted merganser *Mergus serrator* (non-breeding)						✓		
A137 Ringed plover *Charadrius hiaticula* (non-breeding)						✓	✓	
A140 Golden plover *Pluvialis apricaria* (non-breeding)						✓		
A141 Grey plover *Pluvialis squatarola* (non-breeding)						✓		
A144 Sanderling *Calidris alba* (non-breeding)						✓		
A149 Dunlin *Calidris alpina alpina* (non-breeding)						✓		
A157 Bar-tailed godwit *Limosa* (non-breeding)						✓	✓	
A162 Redshank *Tringa totanus* (non-breeding)						✓	✓	
A169 Turnstone *Arenaria interpres* (non-breeding)			✓	✓				
A191 Sandwich tern *Sterna sandvicensis* (breeding)	✓							
A192 Roseate tern *Sterna dougallii* (breeding)	✓					✓		
A193 Common tern *Sterna hirundo* (breeding)	✓							
A194 Arctic tern *Sterna paradisaea* (breeding)	✓		✓					
A195 Little tern *Sterna albifrons* (breeding)	✓		✓	✓		✓		

European Designated Site / Qualifying Features	Northumberland Marine SPA	North Northumberland Dunes SAC	Northumbria Coast SPA	Northumbria Coast Ramsar site	Berwickshire & North Northumberland Coast SAC	Lindisfarne SPA	Lindisfarne Ramsar site	Tweed Estuary SAC
A199 Common guillemot *Uria aalge* (breeding)	✓							
A204 Atlantic puffin *Fratercula arctica* (breeding)	✓							
A670 Purple sandpiper *Calidris maritima* (non-breeding)			✓	✓				
A674 Light-bellied brent goose *Branta bernicla hrota* (non-breeding)						✓	✓	
H1130 Estuaries								✓
H1140 Mudflats and sandflats not covered by seawater at low tide					✓			✓
H1160 Large shallow inlets and bays					✓			
H1170 Reefs					✓			
H2110 Embryonic shifting dunes		✓						
H2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes')		✓						
H2130 Fixed dunes with herbaceous vegetation ('Grey dunes')		✓						
H2170 Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae)*		✓						
H2190 Humid dune slacks		✓						
H8330 Submerged or partially submerged sea caves					✓			
S1095 Sea lamprey *Petromyzon marinus*								✓
S1099 River lamprey *Lampetra fluviatilis*								✓
S1364 Grey seal *Halichoerus grypus*					✓			
S1395 Petalwort *Petalophyllum ralfsi*		✓						
Seabird assemblage	✓							
Waterbird assemblage						✓	✓	

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;

The definitive list of qualifying features for each site (including any priority features) will be included within the relevant European Site Conservation Objectives, which can be found here at http://publications.naturalengland.org.uk/category/4698884316069888

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

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

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

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

Conclusion:

As the plan or project is not either directly connected or necessary to the management of all of the European site(s)'s qualifying features, and/or contains non-conservation elements, further Habitats Regulations assessment is required. **[Continue to C2]**

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

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

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

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

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

C2.1 Risk of Significant Effects Alone

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

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

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

Table 5: Qualifying feature grouping for likely significant effect assessment

N.B. not all designated sites contain all qualifying features

Qualifying feature grouping for likely significant effect assessment		
Designated sites	**Feature group**	**Qualifying feature(s)**
Northumbria Coast SPA and Ramsar site, Northumberland Marine SPA, Lindisfarne SPA	Breeding little terns	Little tern
Northumberland Marine SPA, Lindisfarne SPA	Breeding seabirds	Arctic tern Atlantic puffin Common guillemot Common tern Roseate tern Sandwich tern Seabird assemblage[1]
Northumbria Coast SPA and Ramsar site	Turnstone Purple sandpiper	Turnstone Purple sandpiper
Lindisfarne SPA and Ramsar site	Non-breeding waterbirds, including geese	Greylag goose Light-bellied brent goose Whooper swan Shelduck Wigeon Common eider Long-tailed duck Common scoter Red-breasted merganser Ringed plover Golden plover Grey plover Sanderling Bar-tailed godwit Redshank Dunlin Waterbird assemblage[2]

Qualifying feature grouping for likely significant effect assessment		
Designated sites	**Feature group**	**Qualifying feature(s)**
Berwickshire and North Northumberland Coast SAC	Seals	Grey seal
Berwickshire and North Northumberland Coast SAC	Intertidal mud, sand and saltmarsh	Large shallow inlets and bays Mudflats and sandflats not covered by seawater at low tide
Berwickshire and North Northumberland Coast SAC	Intertidal rocky habitat	Submerged or partially submerged sea caves Reefs
North Northumberland Dunes SAC	Sand dunes	Embryonic shifting dunes Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) Fixed dunes with herbaceous vegetation (grey dunes) Dunes with *Salix repens ssp. argentea (Salicion arenariae*) Humid dune slacks
North Northumberland Dunes SAC	Petalwort	Petalwort *Petalophyllum ralfsi*
Tweed Estuary SAC	Tweed Estuary and lamprey	Estuaries Mudflats and sandflats not covered by seawater at low tide (within the Tweed SAC) Sea lamprey River lamprey

[1] Breeding seabird assemblage consists of the 7 named qualifying features plus great cormorant *(Phalacrocorax carbo)*, European shag *(Phalacrocorax aristotelis*), black-headed gull *(Chroicocephalus ridibundus)* and black-legged kittiwake *(Rissa tridactyla)*, as main components of the assemblage. In addition to the main components, the assemblage also includes the following species: northern fulmar, great black-backed gull *(Larus marinus),* lesser black-backed gull *(Larus fuscus),* herring gull *(Larus argentatus)* and razorbill *(Alca torda).*

[2] The main components of the waterbird assemblage include overwintering whooper swan, golden plover, greylag geese, light-bellied brent geese, shelduck, wigeon, eider, long-tailed duck, common scoter, red-breasted merganser, ringed plover, grey plover, sanderling, dunlin, bar-tailed godwit and redshank.

Table 6: Assessment of likely significant effects alone

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
Breeding little tern	Disturbance of breeding and foraging birds.	Breeding little tern in the vicinity of a coastal path and within the coastal access margin are highly sensitive to disturbance by access on foot on foot, including walking with a dog and the installation of access management infrastructure during the establishment phase of the trail.	Nesting and foraging little tern would be in the vicinity of the trail proposal and open to access within the coastal access margin. An increase in access would reduce the time adults spend on the nest, increase the potential for predation and reduce the success rate of the nests. Little tern mainly forage off shore giving enough spatial separation between path users and the birds. The presence of people on the shore may discourage birds from feeding close to the shore at times, but is unlikely to compromise foraging activity. The last breeding record for roseate tern at Lindisfarne NNR was in the 1990s. There is no current activity to encourage roseate tern nesting sites.	Yes
Breeding little tern	Permanent loss of supporting habitat through installation of access.	The supporting habitats of the qualifying features may be permanently lost due to the installation of access management infrastructure.	New access management infrastructure will be installed in the supporting habitats for the Lindisfarne SPA features to provide clear way-marking and an easy to follow trail. The level of risk is higher where there is a permanent and irreversible loss of the extent of supporting habitat which the birds depend on.	Yes

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
	management infrastructure			
Breeding seabirds	Disturbance of nesting birds.	Low sensitivity, as Sandwich, roseate and common tern and Atlantic puffin only breed on Coquet Island and the Farne Islands, whilst northern fulmar, herring gull, lesser black-backed gull, common guillemot, European shag, blacked-legged kittiwake and razorbill can be found, as part of the breeding seabird assemblage, nesting on inaccessible cliffs north of Berwick-upon-Tweed.	The trail proposal follows the promoted Northumberland Coast Path on public rights of way and existing walked routes on this highly accessed coastline. There is sufficient spatial separation between England Coast Path proposal and the mainland nesting locations, due to the nature of the cliffs, to not affect the site conservation objectives. Coquet Island, the Farne Islands and the North Sea are not affected by the coastal access proposals, being beyond mean low water. The seabirds forage at sea, outside the scope of the coastal access proposal, but within the Northumberland Marine SPA.	No
Breeding seabirds	Permanent loss of supporting habitat through installation of access	The supporting habitats of the qualifying features may be permanently lost due to the installation of access management infrastructure.	New access management infrastructure (0.324m^2) will be installed within the boundary of Northumberland Marine SPA on dune habitat to provide clear way-marking and an easy to follow trail. The supporting habitat for the qualifying features is the water column, which is out of scope for the proposal and therefore will not affect the integrity of the site.	No

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
	management infrastructure.			
Non-breeding waterbirds, including geese	Disturbance of feeding or resting birds.	Overwintering waterbirds, feeding and resting on the foreshore and intertidal habitat in the vicinity of a coastal path and within the coastal access margin may be disturbed by access on foot, including walking with a dog, and the installation of access management infrastructure during the establishment phase of the trail.	The Northumberland coast is already well accessed in places, especially during summer months. The England Coast Path proposals use a mix of existing walked routes as well as creating new routes and coastal access margin bringing users into closer proximity with the birds, including the functionally linked farmland, used by overwintering light-bellied brent and greylag geese, increasing the risk of disturbance that may affect the conservation objectives. Areas of soft mud and sand supporting the birds at Fenham Flats, Holy Island Sands, Chesterhill Slakes and mid Budle Bay are considered unsuitable for access under section 25A of the CRoW Act, therefore no new access rights will be created in these areas from the trail proposal. This assessment considers other areas of supporting habitat that are deemed suitable for access and that the access proposals may cause disturbance to non-breeding waterbirds, including geese.	Yes
Non-breeding	Permanent loss of	The supporting habitats of the qualifying features may be	New access management infrastructure will be installed in the supporting habitats for the Lindisfarne SPA features to	Yes

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
waterbirds, including geese	supporting habitat through installation of access management infrastructure.	permanently lost due to the installation of new access management infrastructure to manage the trail.	provide clear way-marking and an easy to follow trail. The level of risk is higher where there is a permanent and irreversible loss of the extent of supporting habitat which the birds depend on. The installation of new infrastructure also falls within the designated sites of Berwick and North Northumberland Coast SAC and North Northumberland Dunes SAC.	
Purple sandpiper and turnstone	Disturbance of feeding or resting birds.	Overwintering waders, feeding and resting on the rocky foreshore in the vicinity of a coastal path and within the coastal access margin may be disturbed by access on foot on foot, including walking with a dog.	The Northumberland coast is already well accessed in places, especially during summer months. The birds are found on the exposed rocky foreshore of the Northumbria Coast SPA and Ramsar site at Harkess Rocks, near Bamburgh and Saltpan Rocks, near Spittal. The England Coast Path proposals at these locations use a promoted public right of way, which travels landward of the SPA boundary, so putting the site into the coastal access margin. The proposals may increase the risk of disturbance affecting the conservation objectives to restore abundance of these two bird species. No infrastructure is to be installed within the Northumbria Coast SPA, so no risk to disturbance from this activity or permanent loss of habitat.	Yes to disturbance from recreational activity, including walking and walking with a dog.

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
Seals	Disturbance of resting grey seals in haul out areas.	Resting seals on the foreshore and intertidal habitat near a coastal path and/or coastal access margin may be disturbed by access on foot, including walking with a dog.	It is recognised through the conservation objectives that seals are vulnerable to noise and visual disturbance. The haul out points concerned with this proposal at Long Ridge, Guile Point and Black Law are difficult to access with Long Ridge being cut off from the mainland and Holy Island with Guile Point and Black Law being intertidal. Currently they have a low or no level of access, however there is visitor interest in the seals, which are viewed from Holy Island, so introducing coastal access would have a level of risk on the conservation objectives.	Yes
Intertidal mud, sand and saltmarsh	Physical damage and/or loss of habitat.	Intertidal habitat, including vegetation, may be damaged or lost through recreational activities, including walking and/or permanently lost by the installation of new access management infrastructure.	The mud, sand and saltmarsh within Lindisfarne NNR offer significant supporting habitat to non-breeding waterbirds, as well as being qualifying features themselves. As part of the integral planning for the coastal access proposal areas of soft mud and sand that have been considered not suitable for access will have no new access rights created under section 25A of the CRoW Act. These are Fenham Flats, Holy Island Sands, Chesterhill Slakes and mid Budle Bay. These areas will not be considered further.	Yes for mudflat and saltmarsh (not restricted under S25A of the CRoW Act), as a sub feature of large shallow inlets and bays and supporting

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
			Cheswick Sands, Goswick Sands and Ross Back Sands are drier areas accessed as beach and have a low sensitivity to disturbance, so not considered for further assessment. The remaining areas of intertidal mud, sand and saltmarsh currently have no or low levels of access. This could increase with the introduction of the England Coast Path proposals. The mudflat and saltmarsh (not restricted under S25A of the CRoW Act) will be considered further. As part of the establishment new access management infrastructure will be installed to provide clear way-marking and an easy to follow trail. This could lead to the permanent loss of habitat within the designated site.	habitat for Lindisfarne SPA.
Intertidal rocky habitat	Physical damage and/or loss of habitat.	Intertidal habitat may be damaged or removed by recreational activities, including walking. The conservation advice package states that walking, including walking with dogs is low risk and low sensitivity to	The intertidal habitats along the Northumberland coast are already open to access or difficult to reach being subject to tidal influence. They offer supporting habitat to non-breeding waterbirds, as well as being qualifying features themselves. The features north of Berwick are inaccessible being separated from the path by tall vertical cliffs. Strava global heatmap website for Cocklawburn and Holy Island indicate	No

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
		disturbing the qualifying habitat features. Submerged sea caves and reefs are beyond the scope of the coastal access proposals.	the rocks are unappealing with access directed to the nearby beaches or attractions. Intertidal sea caves and rocky reefs are subject to natural tidal erosion and are at a scale such that features are able to withstand access by foot and as such continue to function as a designated habitat. It is predicted that the coastal access proposals will not increase or change the pattern of use, so therefore will not be considered further.	
Sand dunes	Physical damage and/or loss of habitat.	The qualifying sand dune habitats may be damaged through increased visitor impacts, including walking and/or permanently lost by the installation of new access management infrastructure.	Where the trail proposal passes through designated dunes it mainly follows public rights of way and existing walked routes (some surfaced) through fixed dune habitat which is more resilient to visitor impacts. The proposal doesn't alter or add to the existing paths or entry/exit points across the dunes, however the introduction of the England Coast Path in areas with lower levels of access have the potential to alter and increase the pattern of use, as well as introducing coastal access margin at Ross Links not previously accessed by the public.	Yes

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
			As part of the establishment new access management infrastructure will be installed to provide clear way-marking and an easy to follow trail. This could lead to the permanent loss of habitat within the designated site. The level of risk is higher where there is a permanent and irreversible loss.	
Sand dunes	Spreading of invasive non-native species (pirri-pirri burr).	Pirri-pirri burr in North Northumberland Dunes SAC is subject to management and considered a concern, as it forms dense vegetation preventing native plants from establishing affecting the structure and function (including typical species) of qualifying natural habitats.	Pirri-pirri burr is found within the highly accessed areas of Bamburgh Dunes to the south and the Holy Island Dunes. The risk of spread to new locations in dunes not previously accessed by the public remains high, as the burrs can travel stuck to clothes and/or animal fur for distances greater than 5km.	Yes
Petalwort	Disturbance of petalwort through increased	Possible disturbance of petalwort and supporting habitat by access on foot, including walking with a dog.	Petalwort is recorded mainly in the highly accessed dunes on Holy Island, as well as an isolated location at the northern point of Ross Links, which lies beyond the England Coast Path proposals. This plant favours humid dune slack and tolerates light shading and light trampling.	No

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
	visitor impacts.		The dunes at Holy Island currently have high levels of access, so the proposal here will have a neutral impact on the current distribution of the plant within the coastal access margin and at Ross Links the location of the petalwort remains unaffected by the proposals.	
Tweed estuary and lamprey	Physical damage and/or loss of qualifying habitat and habitat disturbance of species.	The estuarine habitat and substrates are highly mobile and already well accessed from the towns of Berwick upon Tweed and Spittal close by. The 'Advice on Operations' as part of the supplementary advice for the conservation objectives state that walking, including walking with a dog is low risk and low sensitivity to disturbing the qualifying habitat features. Lamprey spp. use the water column of the Tweed estuary for migration & feeding, which is outside the scope of coastal	The coastal access proposal uses Berwick Bridge as the crossing point and travels around the estuary on public highways and existing walked routes that are mainly outside the SAC boundary. The estuary is considered as part of the coastal access margin. The path does not create any new access points to reach the estuary and by the nature of the landscape is spatially separated from the estuary, apart from an approximately 200m length at Sandstell Point on an existing walked route. Sandstell Point is a popular recreational area, being close to Spittal and is not accessible at high tide. No increase in access from current levels is predicted with the establishment of the England Coast Path. Therefore not considered further.	No

Assessment of likely significant effects alone				
Feature grouping	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone?**
		access proposal and therefore not relevant to this activity.	The coastal access proposals do not affect lamprey spp., as they use the water column of the estuary, and are therefore outside the scope of this HRA.	

Conclusion:

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

: **[Go to C.3]**

For the risk of disturbance to birds by access on foot, by the installation of new access management infrastructure during the establishment phase and the permanent loss of supporting habitat through the installation of new access management infrastructure:

- Breeding little tern
- Non-breeding greylag goose, light-bellied brent goose, whooper swan, shelduck, wigeon, common eider, long-tailed duck, common scoter, red-breasted merganser, ringed plover, golden plover, grey plover, sanderling, bar-tailed godwit, redshank, dunlin and waterbird assemblage

For the risk of disturbance by access on foot:

- Non-breeding purple sandpiper and turnstone
- Non-breeding grey seals

For the damage or loss through visitor impacts and the permanent loss of habitat through the installation of access management infrastructure:

- Mudflats and sandflats not covered by seawater at low tide (not restricted under S25A of the CRoW Act 2000), as a feature of Berwickshire and North Northumberland Coast SAC
- Atlantic salt meadows and Salicornia and other annuals colonising mud and sand (saltmarsh), as a sub-feature of large shallow inlets and bays in the Berwickshire and North Northumberland Coast SAC and supporting habitat for Lindisfarne SPA
- Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), fixed dunes with herbaceous vegetation (grey dunes), dunes with *Salix repens* ssp. *argentea (Salicion arenariae*) and humid dune slacks

For the risk of spread of invasive non-native species (pirri-pirri burr):

- Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), fixed dunes with herbaceous vegetation (grey dunes), dunes with *Salix repens* ssp. *argentea (Salicion arenariae*) and humid dune slacks

The plan or project alone is unlikely to have a significant effect on the following qualifying features groups:**[Go to C2.2]**

- None

The following qualifying features are not considered sensitive to the access proposal and no further assessment is required: **[Go to C.3]**

- Breeding Arctic tern, Atlantic puffin, common guillemot, common tern, roseate tern, Sandwich tern and seabird assemblage
- Submerged or partially submerged sea caves and reefs
- Estuaries, mudflats and sandflats not covered by seawater at low tide (Tweed SAC), sea lamprey and river lamprey
- Petalwort

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

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

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

Step 1 – Are there any appreciable risks from the access proposals that have been identified in C2.1 as not significant alone?

Further to the risks identified as being significant alone (in C2.1), it is considered that there are no other residual and appreciable risks likely to arise from this project which 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.

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. **[go to Part D3]**

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:

All features are assessed 'alone' as part of the initial Appropriate Assessment. Residual 'in-combination' effects will be considered at a later stage of the assessment.

Table 7: Scope of appropriate assessment

Scope of appropriate assessment			
Designated site(s)	**Qualifying feature(s) affected**	**Environmental threat**	**Risk to conservation objectives**
Northumbria Coast SPA & Ramsar site, Northumberland Marine SPA, Lindisfarne SPA	Little tern	Disturbance of nesting birds by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure.	Visual disturbance and above water noise from people walking and walking with dogs, as well as the construction phase for installing the access management infrastructure, as part of the project, are risks to the conservation objectives, affecting the population of the qualifying features by reducing the time adults spend on the nest, increasing the risk of predation and reducing the success rate of the nests. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature.
Northumbria Coast SPA & Ramsar site, Northumberland Marine SPA, Lindisfarne SPA	Little tern	Permanent loss of supporting habitat through the installation of access management infrastructure.	The installation of access management infrastructure may lead to a permanent loss of supporting habitats reducing the extent and distribution of the qualifying features.

Scope of appropriate assessment			
Designated site(s)	**Qualifying feature(s) affected**	**Environmental threat**	**Risk to conservation objectives**
Northumbria Coast SPA & Ramsar site	Purple sandpiper and turnstone	Disturbance of foraging and resting birds by access on foot, including walking with a dog, from the proposals.	Visual disturbance and above water noise from people walking and walking with dogs are risks to the conservation objectives with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature.
Lindisfarne SPA & Ramsar site	Light-bellied brent geese, greylag geese, Whooper swan, shelduck, wigeon, common eider, long-tailed duck, common scoter, red-breasted merganser, ringed plover, golden plover, grey plover, sanderling, bar-tailed godwit, redshank, turnstone, purple sandpiper, dunlin waterbird assemblage	Disturbance of foraging and resting birds by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure.	Visual disturbance and above water noise from people walking and walking with dogs, as well as the construction phase for installing the access management infrastructure, as part of the project, are risks to the conservation with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature.
Lindisfarne SPA & Ramsar site	Light-bellied brent geese, greylag geese Whooper swan, shelduck, wigeon common eider, long-tailed duck	Permanent loss of supporting habitat through installation of access management infrastructure.	The installation of access management infrastructure may lead to a permanent loss of supporting habitats (mudflats and saltmarsh) reducing the extent and distribution of the qualifying features.

Scope of appropriate assessment			
Designated site(s)	**Qualifying feature(s) affected**	**Environmental threat**	**Risk to conservation objectives**
	common scoter, red-breasted merganser, ringed plover, golden plover, grey plover, sanderling, bar-tailed godwit, redshank, dunlin waterbird assemblage		
Berwickshire and North Northumberland Coast SAC	Grey seal	Disturbance of resting seals on the foreshore and intertidal habitat by access on foot, including walking with a dog, from the proposals.	Grey seals are highly mobile and occur throughout the protected site. On the Northumberland coast they notably haul out at Lindisfarne NNR and the Farne Islands. The haul out points are used year round. Public access and wildlife tourism has identified a threat potentially disturbing and causing displacement of marine mammals affecting the population and distribution of this qualifying feature.
Berwickshire and North Northumberland Coast SAC	Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows and Salicornia and other annuals colonising mud and sand (saltmarsh), as a sub-feature of large shallow bays and inlets	Damage or loss of intertidal habitat, including vegetation, by access on foot, including walking with a dog and/or permanently lost by the installation of new access management infrastructure	More frequent trampling in areas of mudflat, sandflat and saltmarsh (outside of those areas identified as unsuitable for access), as a result of the access proposal, leads to a change in distribution, extent, structure, and function of the qualifying features within the site. The installation of access management infrastructure may lead to a permanent loss of habitat reducing the extent and distribution of the qualifying features.
North Northumberland Dunes SAC	Embryonic shifting dunes, shifting dunes along the	Increased risk from the proposals of spreading invasive non-native species	Within the SAC pirri-pirri burr is present within Lindisfarne NNR, as well as further south in Bamburgh dunes, as a result of the access

Scope of appropriate assessment			
Designated site(s)	**Qualifying feature(s) affected**	**Environmental threat**	**Risk to conservation objectives**
	shoreline with *Ammophila arenaria* (white dunes), fixed dunes with herbaceous vegetation (grey dunes), dunes with *Salix repens ssp. argentea (Salicion arenariae),* humid dune slacks	(pirri-pirri burr) by access on foot, including walking with a dog.	proposal, the threat of spreading pirri-pirri burr to dunes with low or no current access leads to a change the structure and function (including typical species) of qualifying natural habitats.
North Northumberland Dunes SAC	Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), fixed dunes with herbaceous vegetation (grey dunes), dunes with *Salix repens ssp. argentea (Salicion arenariae*), humid dune slacks	Damage or loss of dune habitat through increased visitor impacts, including walking, from the proposals.	Visitor impacts on the soil substrate from human activity and dogs strongly influence the colonisation, growth and distribution of plant species. Changes to natural soil properties may therefore affect the ecological structure, function and processes associated with these qualifying features by possible increase in nutrient enrichment (from dog fouling) and areas of bare ground (from repeated trampling), above the target of 5-20% on fixed dunes.
North Northumberland Dunes SAC	Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), fixed dunes with herbaceous	Permanent loss of habitat through installation of access management infrastructure.	The installation of access management infrastructure may lead to a loss of habitat reducing the extent and distribution of the qualifying feature.

Scope of appropriate assessment			
Designated site(s)	**Qualifying feature(s) affected**	**Environmental threat**	**Risk to conservation objectives**
	vegetation (grey dunes)		

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

D2.1 Northumbria Coast SPA & Ramsar site, Lindisfarne SPA and Northumberland Marine SPA

D2.1.1 Breeding little tern

There are several established little tern nesting sites along this stretch, all within the Lindisfarne NNR at Wide Open, Black Law and Cheswick Sands. Breeding numbers on the reserve have decreased over the last 26 years from 42 pairs to 30 pairs. The Lindisfarne SPA has a target to halt this decline and restore the breeding population to previous levels. To do this the reserve is actively encouraging two new breeding sites in Budle Bay; roping off the areas and wardening to avoid human disturbance and using decoys. A third site is also being manged this way at Cheswick Links also on the NNR. The established sites have previously been funded through the EU LIFE project, which contributed to the funding of wardens to manage these sites against disturbance from walkers and walkers with dogs. They continue to be wardened through partnership working with the Northumberland Coast AONB and National Trust.

Within this proposal the established colonies predominantly forage between the westernmost point of Holy Island and the mouth of Budle Bay.

Little tern also breed nearby at Long Nanny Burn in Beadnell Bay, the Farne Islands and Coquet Island. On occasion breeding little terns relocate nesting sites from Lindisfarne NNR to Long Nanny Burn. All breeding colonies of terns are sensitive to disturbance in their breeding season (April – August) and links between nesting and offshore foraging areas need to be maintained.

D2.2 Lindisfarne SPA and Ramsar site

D2.2.1 Light-bellied brent goose

When Lindisfarne SPA was classified in 1990, the non-breeding population of light-bellied brent geese was 2,700 individuals, which represented 77% of the British wintering population, and 68% of the total population for this species. In 2016, the Lindisfarne population had increased to 3,411. This overwintering population is the East Atlantic flyway population, which breed during the summer months at Svalbard. The majority of light-bellied brent geese occur on the Fenham Flats from Ross Point to Beal Point and on Holy Island Sands, arriving in September with numbers peaking in October and November and leave during March. The geese generally feed on eel-grass *Zostera spp*. until Christmas when they switch to using inland functionally linked land (see D2.2.3), feeding on arable crops and grassland adjacent to the reserve and the SPA.

The Lindisfarne population is nationally and internationally important, as they are the only population of Svalbard light-bellied brent geese within the British Isles. The conservation objective is to maintain population abundance and maintain safe passage of birds moving between roosting and feeding areas by restricting human disturbance.

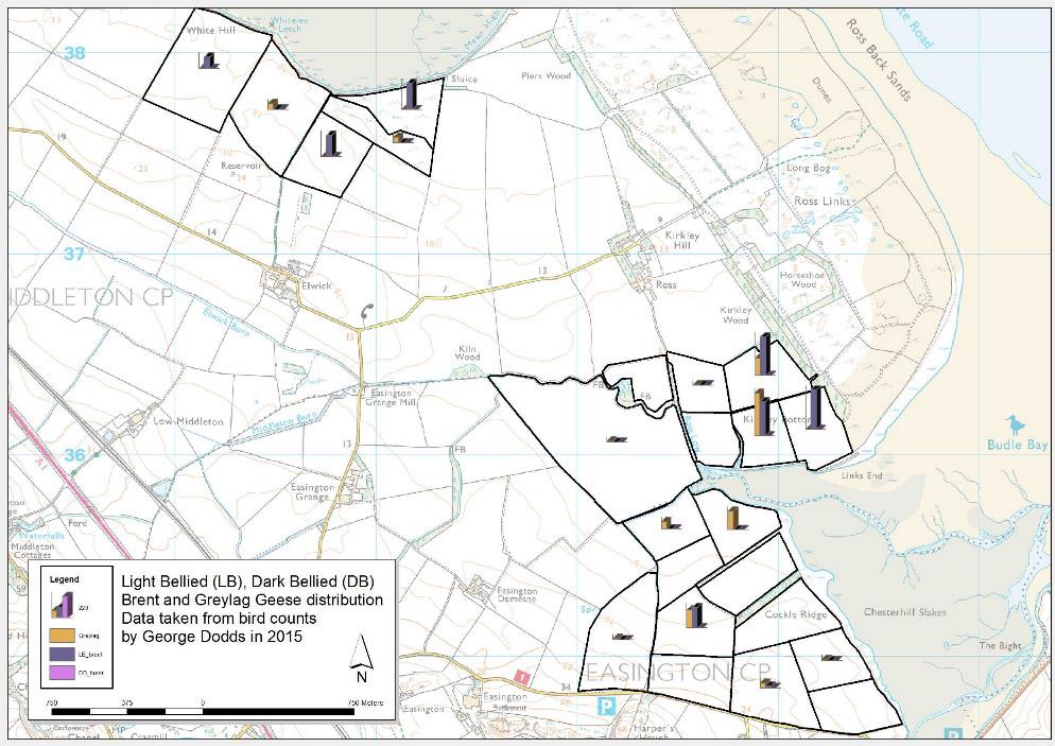
D2.2.2 Greylag goose

Greylag geese found in Lindisfarne NNR are either winter visitors from Iceland or part of the UK breeding population. Numbers have fallen since the SPA was classified from a non-breeding population of 3,500 individuals in 1990 to 566 individuals in 2016. The overall wintering population in UK is 140,000 British resident birds and 88,000 overwintering birds from Iceland. The dramatic fall in greylag numbers using the site in the last 5-10 years is mirrored with a large increase in these birds recorded on Orkney (08/09 census 60,000+). The conservation objective is to restore population abundance and maintain safe passage of birds moving between roosting and feeding areas by restricting human disturbance.

D2.2.3 Functionally linked land for light-bellied brent geese and greylag geese

Periodically since 2006, the numbers of light-bellied brent and other species of geese have been monitored between December and the end of February on land, which sits outside the landward boundary of Lindisfarne SPA, but supports populations of geese for which the site is classified for, therefore functionally linking the land to the site, as it provides a (potentially important) role in maintaining or restoring the protected populations at favourable conservation status. These numbers along with an assessment of sward height and the number of goose droppings have shown which fields and crops the geese favour. Geese regularly use functionally linked land at Beal Point, Elwick Farm and the fields around Ross Low. Bird counts completed by George Dodds, on behalf of Natural England, to monitor the effect of several agri-environmental schemes in the area show that the fields (figure 1) close the mean high water mark are regularly used. Research has shown that the geese will favour a ryegrass ley to graze on in preference to any surrounding cereal crops. Current management of these fields is such that ryegrass leys are sown in rotation on the fields in figure 1.

Figure 1: Grazing geese distribution on functionally linked land at Budle Bay and Fenham Flats



D2.2.4 Whooper swan, common shelduck, wigeon, common eider, long-tailed duck, common scoter, red-breasted merganser, ringed plover, golden plover, grey plover, sanderling, bar-tailed godwit, dunlin and redshank and waterbird assemblage

At classification in 1990, the SPA's non-breeding waterbird assemblage was 61,135 individuals. Using the BTO's wetland bird survey (WeBS) core count data, this has since decreased to 39,953 individuals (5 year peak mean count 2011/12-2015/16). Declines can be seen in common scoter, red-breasted merganser, long-tailed duck, bar-tailed godwit, grey plover**,** dunlin, whooper swan, common eider and redshank with dunlin, whooper swan, common eider and redshank declines fitting with national trends.

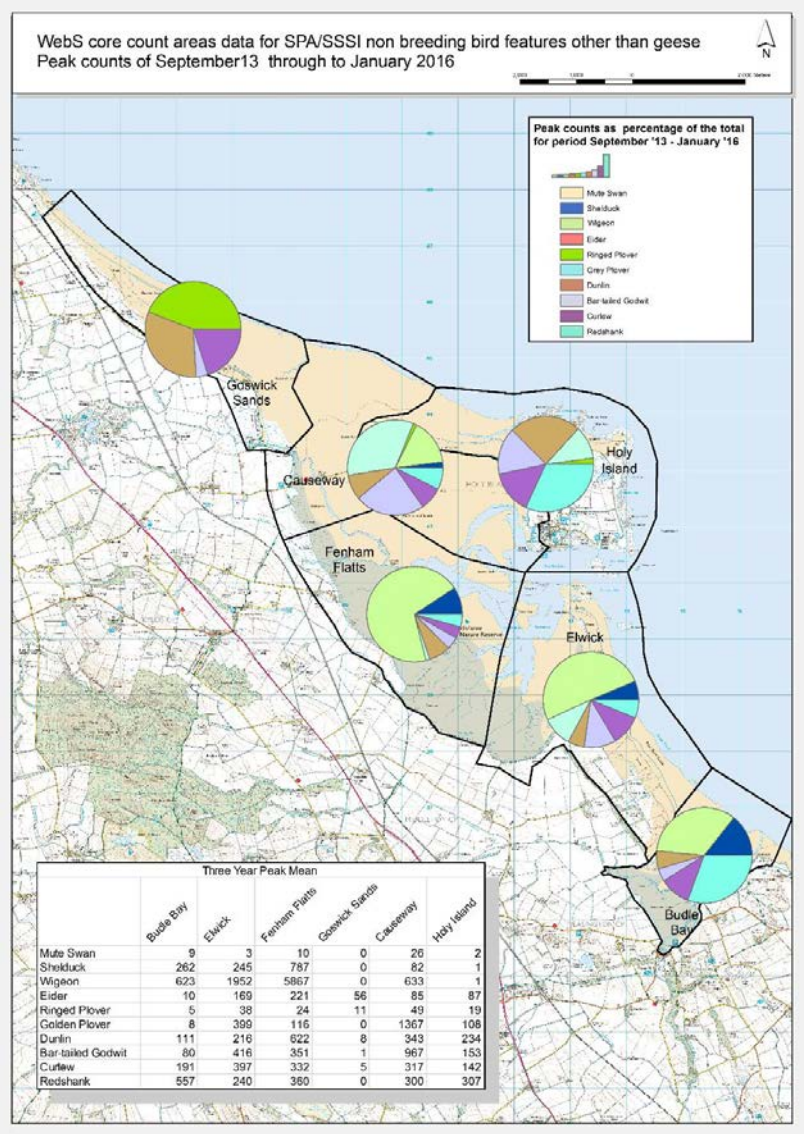
A fall in numbers of dunlin, redshank and bar-tailed godwit reflect an eastward shift of these species during the last 10 years or so, with increasing numbers now recorded at the Wadden Sea.

Common eider, long-tailed duck, common scoter and red-breasted merganser are all diving ducks favouring deeper water. Low tide counts carried in 2011/12, as part of the BTO's wetland bird survey, indicate the birds in sub-tidal waters, which are unaffected by the proposals.

From WeBS data and monitoring on the NNR the following qualifying waterbirds, not including geese, have increased in numbers: wigeon, ringed plover, golden plover, shelduck and sanderling, showing the features to be in a good condition and/or currently un-impacted by human activities.

The last time roseate terns were noted to breed on Lindisfarne was 1991. Roseate terns successfully breed on the nearby Coquet Island SPA, which is the largest roseate tern breeding colony in the UK.

Figure 2: WeBS core count data for overwintering waterbirds, excluding geese on Lindisfarne NNR
(Frost, T.M., Austin, G.E., Calbrade, N.A., Mellan, H.J., Hearn, R.D., Robinson, A.E., Stroud, D.A., Wotton, S.R. and Balmer, D.E. 2019. Waterbirds in the UK 2017/18: The Wetland Bird Survey. BTO/RSPB/JNCC. Thetford.)



	Budle Bay	Elwick	Fenham Flatts	Goswick Sands	Causeway	Holy Island
Mute Swan	9	3	10	0	26	2
Shelduck	262	245	787	0	82	1
Wigeon	623	1952	5867	0	633	1
Eider	10	169	221	56	85	87
Ringed Plover	5	38	24	11	49	19
Golden Plover	8	399	116	0	1367	108
Dunlin	111	216	622	8	343	234
Bar-tailed Godwit	80	416	351	1	967	153
Curlew	191	397	332	5	317	142
Redshank	557	240	360	0	300	307

As set out in the formal conservation advice package for Lindisfarne SPA, the following qualifying features have a conservation target of **maintain**:

- Common scoter *Melanitta nigra*
- Golden plover *Pluvialis apricaria*
- Light-bellied brent goose *Branta bernicla hrota*
- Red-breasted merganser *Mergus serrator*

- Ringed plover *Charadrius hiaticula*
- Sanderling *Calidris alba*
- Shelduck *Tadorna tadorna*

As set out in the formal conservation advice package for Lindisfarne SPA, the following qualifying features have a conservation target of **restore**:

- Bar-tailed godwit *Limosa lapponica*
- Dunlin *Calidris alpina alpina*
- Eider *Somateria mollissima*
- Grey plover *Pluvialis squatarola*
- Greylag goose *Anser anser*
- Little tern *Sternula albifrons*
- Long-tailed duck *Clangula hyemalis*
- Redshank *Tringa totanus*
- Roseate tern *Sterna dougallii*
- Whooper swan *Cygnus cygnus*
- Wigeon *Mareca penelope*
- Internationally important assemblage of waterfowl

Through the Lindisfarne NNR management plan the site is managed for non-breeding bar-tailed godwit, golden plover, grey plover, ringed plover, redshank, sanderling, shelduck, whooper swan and wigeon, as well as breeding little tern. Eider, long-tailed duck and red-breasted merganser numbers are also monitored monthly as detailed in the management plan.

The IPENs Site Improvement Plan lists public disturbance, amongst others, as threats to these features stating: wildlife tourism is identified as a moderate threat in Lindisfarne SPA and Northumbria Coast SPA, due to loss of foraging habitat for birds, and also disturbance / displacement of birds by dog walkers and water sports. Understanding the impacts and accruing evidence has been recommended along with action to manage the cumulative impacts of the many types of recreational activities (bait digging, dog walking, watersports), which cause disturbance to the qualifying features, such as improved signage, better dissemination of code of conduct leaflets and wardening.

D2.2.4 Lindisfarne SPA supporting habitats

There are a wide range of coastal habitats within the Lindisfarne SPA, which support a large assemblage of waterbirds. Large intertidal mud and sandflats provide an important food source for overwintering waterbirds, such as the grey plover, bar-tailed godwit, redshank and dunlin. The light-bellied brent geese and wigeon also feed upon the *Zostera* spp. and *Ulva* spp. which grow upon the mudflats. Saltmarsh and pioneer saltmarsh provide supporting habitat both in the exposed and

flooded states for a range of species that act as a food source for both wintering and breeding birds. Saltmarsh can be found at the interface between the SACs of North Northumberland Dunes and Berwickshire and North Northumberland Coast, where it is being considered as a sub-feature of the qualifying feature: large shallow inlets and bays. (For further information see D2.4.1 and D2.4.2)

D2.3 Northumbria Coast SPA & Ramsar site

D2.3.1 Purple sandpiper & turnstone

Purple sandpiper and turnstone inhabit the rocky foreshore and strandlines of the Northumberland coast. Purple sandpiper are present from October until April and turnstone from August to May.

WeBS alerts show that numbers of purple sandpiper and turnstone overwintering on Northumbria Coast SPA appear to track regional and British trends, with purple sandpiper being stable in the short-term having previously declined and turnstone decreasing in the long-term. The increasing proportion of regional purple sandpiper numbers supported by this designated site suggest the environmental conditions remain relatively favourable and also indicates that it is becoming increasingly important on a regional scale for this species. For turnstone, the similarity between the declining site trend and the regional and British trends suggests that the declining numbers underpinning the alert result from broad-scale population trends.

WeBs core count data shows that Purple Sandpiper numbers are centred further south between Boulmer and Bamburgh with a regular wintering flock of up to 120 birds can be seen at the Harkess Rocks, near Budle Point, Bamburgh. From Cocklawburn to Spittal a 5 year peak average (2012/13 – 2017/18) is 20 individuals, with numbers for the same period at Lindisfarne averaging 14, though none were found in 3 years out of the 5. Numbers for turnstone are spread across this stretch with 5 year peak average (2012/13 – 2017/18) of 119 individuals at Lindisfarne and 26 at Cocklawburn to Spittal, which is the northern boundary of the SPA. The conservation objective is to restore population abundance for purple sandpiper and turnstone.

D2.4 Berwickshire and North Northumberland Coast SAC

D2.4.1 Grey seals

Grey seals were recorded as breeding on the Farne Islands as early as the 7th Century. In the late 1950s a programme of counting the seals began and has provided one of the most consistent and long running data sets for any pinniped's population.

Grey seals haul out around Holy Island and do not rest elsewhere on the Northumberland coast. A growing population of approximately 4500 seals in 2017 use the intertidal areas all year round between Holy Island and the mainland. This forms a certain attraction for visitors to the area, but Long Ridge remains inaccessible due to ground conditions and the nature of the tide. Other haul out areas at Black Law and Guile Point are accessible at low tide and low level disturbance currently exists. The population abundance of this qualifying feature has a conservation objective of 'Maintain.'

D2.4.2 Mud and sandflats not covered by water at low tide

The Northumberland coast supports a very extensive range of intertidal mudflats and sandflats, ranging from wave-exposed beaches, used for recreation, to sheltered muddy flats with rich infaunal communities. The mudflats in the Lindisfarne NNR are the most extensive in north-east England. They support a diverse infauna, including the largest intertidal beds of narrow-leaved eelgrass *Zostera angustifolia* and dwarf eelgrass *Z. noltei* on the east coast of England and some large beds of mussels *Mytilus edulis*. The intertidal eelgrass beds are located in areas already restricted as unsuitable for access and the mussels beds are located beyond mean low water, so out of scope of the proposals. The mudflats at Lindisfarne NNR are also of international importance providing supporting habitat for overwintering waterbirds.

Mud and sandflats not covered by water at low tide consists of the following sub-features: intertidal sand and muddy sand 2480 ha; intertidal mud 110 ha; Intertidal coarse sediment 49 ha; intertidal mixed sediment 103 ha; and supports 614 ha of intertidal seagrass beds and the extent, distribution, structure and function are to be maintained for the conservation objectives.

D2.4.3 Large shallow inlets and bays; sub-feature – Atlantic salt meadows and Salicornia and other annuals colonising mud and sand

Berwickshire and North Northumberland Coast SAC has several characteristic, sediment-dominated large shallow inlets and bays, two of which are within this proposal: Lindisfarne and Budle Bay. This feature within the designated site consists of the following sub-features: intertidal sand and muddy sand 2480 ha; subtidal coarse sediment 0.51 ha; subtidal sand 1897 ha; subtidal mud; and subtidal mixed sediment 2 ha. The extent of saltmarsh is approximately 233.79 ha. The extent figure provided combines both saltmarsh habitats (*Salicornia* and other annuals colonising mud and sand, and Atlantic salt meadows), as there is no data available that differentiates between the two habitats.

Low-energy bays within the Northumberland coast that are able to support saltmarsh habitats are extremely rare, therefore the presence of saltmarsh represents an important habitat in the north east. Saltmarsh is present to the south-west of Holy Island and on the mainland extending from Goswick Sands across Fenham Flats to Ross Links. There are patches of saltmarsh at Ross Back Sands and in Budle Bay. Saltmarsh is a relatively new habitat in areas of the SAC, particularly around Lindisfarne where is it has been developing for approximately 50 years.

Salicornia and other annuals colonising mud and sand are found predominantly in the pioneer saltmarsh, where there is a transition from the extensive intertidal sand and mudflats to the distinctive salt meadows. The main expanses of pioneer marsh are located around Lindisfarne (on the western side encompassing Goswick Sands, Beal Sands, Fenham Flats and on Holy Island) and along Ross Back Sands and into Budle Bay.

To allow the natural expansion of the habitats the conservation targets are to maintain the extent, distribution, structure and function of the sub-features, as well as the overall qualifying feature of large shallow inlet and bays. This includes a target to maintain the conservation management measures, as a supporting process on both saltmarsh habitats, as Natural England's supplementary

advice to the conservation objectives considers active and ongoing conservation management is needed to protect, maintain or restore this feature at this site.

No new coastal access margin will be created in Lindisfarne Bay south of Holy Island causeway and the lower half of Budle Bay, as these areas are considered unsuitable for access and integral to the plan. However new trail access is considered across areas of developing saltmarsh from Links End in north Budle Bay to Lowmoor Point on Fenham Flats.

D2.5 North Northumberland Dunes SAC

D2.5.1 Sand dunes

The trail proposal crosses all the designated dunes from Bamburgh north, on public rights of way or existing walked routes, apart from Ross Links where the trail introduces new coastal access margin. The other dune ranges are accessed at Holy Island, Goswick and Cheswick Links providing access to the beach, as well as a desire lines through the dunes to complete a circular route. At Goswick and Cheswick Links the public rights of way also form part of the promoted Northumberland Coast Path and the popular Coast and Castles cycle route. For the most part the proposed trail follows on the more resilient firm grassy surfaces of fixed dunes for ease of onward travel. The dunes are in a mix of ownership and managed under agri-environment schemes to carry out extensive grazing, allow bare ground and to control scrub and invasive species. All the qualifying dune habitat has a conservation target to maintain.

D2.5.2 Pirri-pirri burr

The invasive non-native species is found throughout rural Northumberland with hotspots in semi-natural habitats within the uplands, as well as on the coast at Lindisfarne National Nature Reserve (NNR) and Bamburgh dunes, both highly visited places. The infestations centre on tourist spots where people move between locations to experience Northumberland spreading the spiked burrs, which attach to their clothing or their pet's fur. The conservation objectives look to maintain or reduce the frequency and cover of the burr and prevent changes in surface condition, soils, nutrient levels or hydrology, which may encourage their spread. The attribute is periodically monitored as part of Natural England's site condition assessments.

D2.6 Recreational Access

D2.6.1 Current recreational access

Tourism is one of the major contributors to the economy for the area with this stretch of the Northumberland coast drawing large numbers of visitors every year, attracted by the natural and historic environment and recreational opportunities, such as golf, water sports, angling, bird and wildlife watching, walking and cycling. There are a number of promoted well-established long-distance walks and cycleways, such as the Northumberland Coast Path, St Oswald's Way and the Coast and Castles cycleway.

The main visitor attractions on this length of coast, not including its beaches, are Bamburgh Castle, Holy Island with Lindisfarne Priory and Castle and Berwick-upon-Tweed, with its historic walls. Bamburgh Castle attracts 150,000 visitors annually, with approximately 600,000 visiting Holy Island each year. The sandy beaches are well accessed at Spittal, Cheswick and Holy Island.

Table 8: Breakdown of proposed coastal access from Bamburgh to the Scottish Border, including Holy Island

Type of Route	Length, excluding alternative route (km)	Percentage of total length (%)
Total length of trail section	61.4	100
On road	19.6	31.9
Off road	41.8	68.1
Public right of way	38.7	63.0
Promoted regional routes	31.1	50.6
Existing walked routes	10.5	16.4
Proposed new access	12.7	20.7

D2.6.1 Lindisfarne NNR access management

Lindisfarne NNR welcomes visitors and to alleviate the impact on the wildlife and manages recreational activities by having clearly defined zones for wildfowling, horse-riding, bait collecting and watersports. There are byelaws in place to restrict:

- dogs to be under close control
- watersports from 1st April until 31st October, apart from a small area within Budle Bay
- bait collecting apart from a small voluntary bait-collection zone, which sits either side of the causeway
- horse-riding to an area of Holy Island Sands and Goswick Sands.

For the wildfowling season (1st September to 20th February) there is no bag limit and the area is set to north of the causeway between Beal Point and the Snook, Holy Island Sands and Fenham Flats from the causeway to Lowmoor Point, so leaving the rest of the reserve as a refuge area.

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

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

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

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

In this section of the assessment we describe our overall approach to the issues and the main mitigation measures proposed to address the impacts and risks.

D3.1.2 Access assessment

In drawing up the proposals, within the criteria of the Coastal Access Scheme, it was agreed with Natural England statutory access colleagues that some areas of the proposed coastal access margin were unsuitable for access, so restricted under section 25(A) of the CRoW Act. As these are integral to the plan, they will not be considered further in the appropriate assessment.

To inform our risk assessment, we have reviewed how the coast is currently used for recreation and how the established patterns and levels of access might be affected by the proposed improvement to access. The predictions made from this work are informed by available information, including:

- Strava on-line data, which shows aggregated public recreational activities (walking and running) over the past 2 years. It can be viewed on the Strava global heatmap website
- Aerial photography
- Travel and visitor information
- Site visits
- Input from local stakeholders, Northumberland County Council Access Team, Northumberland Coast AONB Partnership and Natural England access colleagues.
- Anecdotal observations and feedback from local residents and managers.

The findings of this work are incorporated into the assessments below, as the access assessment.

We also met with key stakeholders from Natural England, National Trust, RSPB, BTO, Northumberland County Council and Northumberland Coast AONB Partnership to highlight sensitive locations, scope out an acceptable trail alignment with access infrastructure and to see whether any mitigation infrastructure was required in the design.

It is understood that the Northumberland coast, including foreshore, is currently highly accessed all year round, although levels of use unsurprisingly peak during summer months. In striking a balance between access and nature conservation it was agreed to follow existing public rights of way or walked routes in the most sensitive locations and to consider limiting access at the most sensitive times, if an alternative route couldn't be found.

On the stretch of coast there are notable exceptions to the above at Budle Bay, Fenham Flats and to a lesser extent Ross Back Sands. These areas currently have very limited accessibility. Public rights of way are also very limited and north from Waren Mill to Fenham Mill are all perpendicular to the coast forming dead-end routes. At Fenham Flats some of these are culminated by bird hides installed by the NNR, which act as a control measure to access on the foreshore. At Ross Back Sands, a single right of way does provide access, however the beach is approx. 1 mile from the nearest car park, which in itself is quite remote. Despite this inaccessibility the beach is becoming increasingly popular

with NNR staff noting (anecdotally) a noticeable increase in use over recent years. At Budle Bay, and in particular, the Ross Low estuary current access is very limited with no rights of way and landowners managing the area exclusively for their paying holiday cottage customers.

The proposals have been developed with the NNR's Joint Advisory Committee, which have provided valuable insight into the needs of this area of coast. The committee made up of landowners and partners, such as the Northumberland Coast AONB partnership, have given their advice and knowledge of the area, helping the England Coast Path team in the development of the proposals.

The Northumberland Coast AONB partnership, Lindisfarne NNR and their volunteer teams have also provided valuable insight about managing this designated landscape for people and nature.

D3.1.2 Access management, including signage and interpretation panels

The key nature conservation issues for the Bamburgh to the Scottish Border, including Holy Island is the protection of:

- non-breeding waterbirds
- protecting and enhancing little tern nesting sites
- sensitive habitats

As new and seasonal alternative access form part of the proposal, the project seeks to positively influence new and existing users at an early stage to improve visitor confidence, so that they follow the correct route and to embed understanding of the importance of the site, the risk of disturbance and how to avoid it. Using appropriate signage walkers would be asked to avoid leaving the path and keep their dogs on leads at sensitive locations, as well as explaining the need for no access at certain times of the year. These areas will be clearly defined as part of the interpretation and signage. The current access management using the NNR and Northumberland Coast AONB Coast Care teams will continue and be supported by new signage to introduce sensitive features and restricted access.

As part of the mitigation proposed, the main focus will be on signage to influence and manage the behaviour of walkers with dogs in the newly accessible areas. Specialist advice was provided to Natural England from a leading consultant, who provides evidence based advice and co-wrote Natural England guidance on managing access for people with dogs in the countryside. The advice is 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 walking and walking with dogs 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 locations chosen carefully assessed for effectiveness. There will be on-going management by the Access Authority with significant support from the NNR, once the access rights on the England Coast Path commence.

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

In this part of the assessment we consider key locations along the coast between Bamburgh and the Scottish Border, including Holy Island, where establishing the England Coast Path and associated coastal access rights may impact on qualifying features of a European site. We explain how the detailed design of our proposals at these locations take account of possible risks.

Table 9: Key nature conservation issues from the coastal access proposals for the Bamburgh to the Scottish Border, including Holy Island

European designation	Assessment section	Qualifying Feature	Risk from the proposals to be assessed
Northumbria Coast and Ramsar site, Northumberland Marine SPA, Lindisfarne SPA	**D3.2.1**	**Breeding little tern**	Disturbance to nesting birds by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure at Black Law, Wide Open and three sites (Cheswick Sands, Kiln Point and north Budle Bay) managed for breeding little tern.
Lindisfarne SPA and Ramsar site	**D3.2.2**	**Overwintering waterbirds**	Disturbance to overwintering waterbirds in mudflats outside those restricted as unsuitable for access and inland functionally-linked land at Elwick, Ross and Chesterhill by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure.
Northumbria Coast SPA and Ramsar site	**D3.2.3**	**Overwintering purple sandpiper and turnstone**	Disturbance to foraging and resting birds by access on foot, including walking with a dog, whilst on the rocky outcrops along the foreshore.
Berwickshire and North Northumberland Coast SAC	**D3.2.4**	**Grey seals**	Disturbance to resting seals on the foreshore and intertidal habitat by access on foot, including walking with a dog.
Berwickshire and North Northumberland Coast SAC	**D3.2.5**	**Intertidal mud, sand and saltmarsh**	Damage or loss of intertidal habitat, including vegetation, by access on foot, including walking with a dog, outside

European designation	Assessment section	Qualifying Feature	Risk from the proposals to be assessed
			the mudflats and saltmarsh restricted as unsuitable for access.
North Northumberland Dunes SAC	**D3.2.6**	**Dune habitat**	Damage or loss of dune habitat through increased visitor impacts, and increased risk of spreading invasive non-native species (pirri-pirri burr) by access on foot, including walking with a dog.
North Northumberland Dunes SAC, Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site	**D3.2.7**	**Qualifying features and supporting habitats**	Permanent loss of habitat with the installation of proposed new access management infrastructure.

D3.2.1 Northumbria Coast and Ramsar site, Northumberland Marine SPA, Lindisfarne SPA: Breeding little tern - risk from the proposals to cause disturbance to nesting birds by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure at Black Law, Wide Open and three sites (Cheswick Sands, Kiln Point and north Budle Bay) managed for breeding little tern.

D3.2.1a Baseline situation

The nesting sites and sites managed for breeding little tern are within the Lindisfarne NNR and are managed to increase breeding productivity in line with the conservation objectives. These areas are roped off during the breeding season, made suitable for nesting little tern and have scheduled wardening visits. Without this intervention it is unlikely that nesting will take place. The sites are linked to the nesting site at Long Nanny Burn in Beadnell Bay with breeding little terns moving between sites, if nesting fails at a particular location. Wide Open and Old Law sites have a low level of access and are mainly used by local walkers. The managed site at Kiln Point has moderate levels of access with a public bridleway providing access to the foreshore. At north Budle Bay the area is quite remote from access points with the nearest car park around 2 miles away and access from the south impeded by Waren Burn, this therefore has very low levels of access. Cheswick Sands is used locally for walking and walking with dogs with car parks close by and a large expanse of beach. The conservation objective is to restore the abundance of breeding little tern.

D3.2.1b Detailed design features of the access proposal

i. <u>Kiln Point and North Budle Bay</u>

The England Coast Path proposal travels around Budle Bay, where sites are actively managed to encourage nesting little tern, on a mix of newly created access, existing walked routes and public

rights of way. At Kiln Point the trail moves inland into the adjoining grass field, providing a stable surface for easy onward travel, with a permanent boundary fence to separate walkers from the nesting area. The field rises away from the bay, so walkers are not silhouetted on the skyline and there is also a line of scrub along the coastline to provide a barrier and screening from the potential nesting site. At north Budle Bay the trail is sited behind a dune ridge so providing a natural separation between walkers and the potential nesting little terns. It also moves slightly inland at trail section BBS-1-S044, the southern edge of Ross Links to increase the distance between walkers and the potential nesting site and in doing so creates new trail access. The design of the trail proposal avoids disturbance from walkers, however the sites managed for little tern remain in the coastal access margin.

ii. Black Law and Wide Open

The proposed trail at Wide Open moves inland into the adjoining grass field at trail sections BBS-1-S046 and BBS-1-S047, providing a stable surface for easy onward travel, and behind a permanent boundary fence to provide separation between the nesting site and trail. Black Law is distant from the trail, but remains in the coastal access margin with Wide Open.

iii. Cheswick Sands

The trail, on an existing walked route through fixed dune habitat, sits behind the dune ridge and travels along stable grassy surfaces, so providing natural separation between walkers on the trail and the potential nesting site, as well as providing easy onward access, so that walkers do not linger in the vicinity of the potential nesting site.

iv. Construction phase of new infrastructure in the vicinity of the nesting sites

The nesting sites around Budle Bay and at Wide Open have a number of infrastructure items to be installed to guide walkers efficiently through the sensitive areas and to explain the wildlife interests and the access restrictions that will apply. This is part of a wider partnership to manage visitors to Lindisfarne NNR, including managing the access for the seasonal alternative route, designed for overwintering waterbirds.

D3.2.1c Risk assessment

i. Nesting Sites

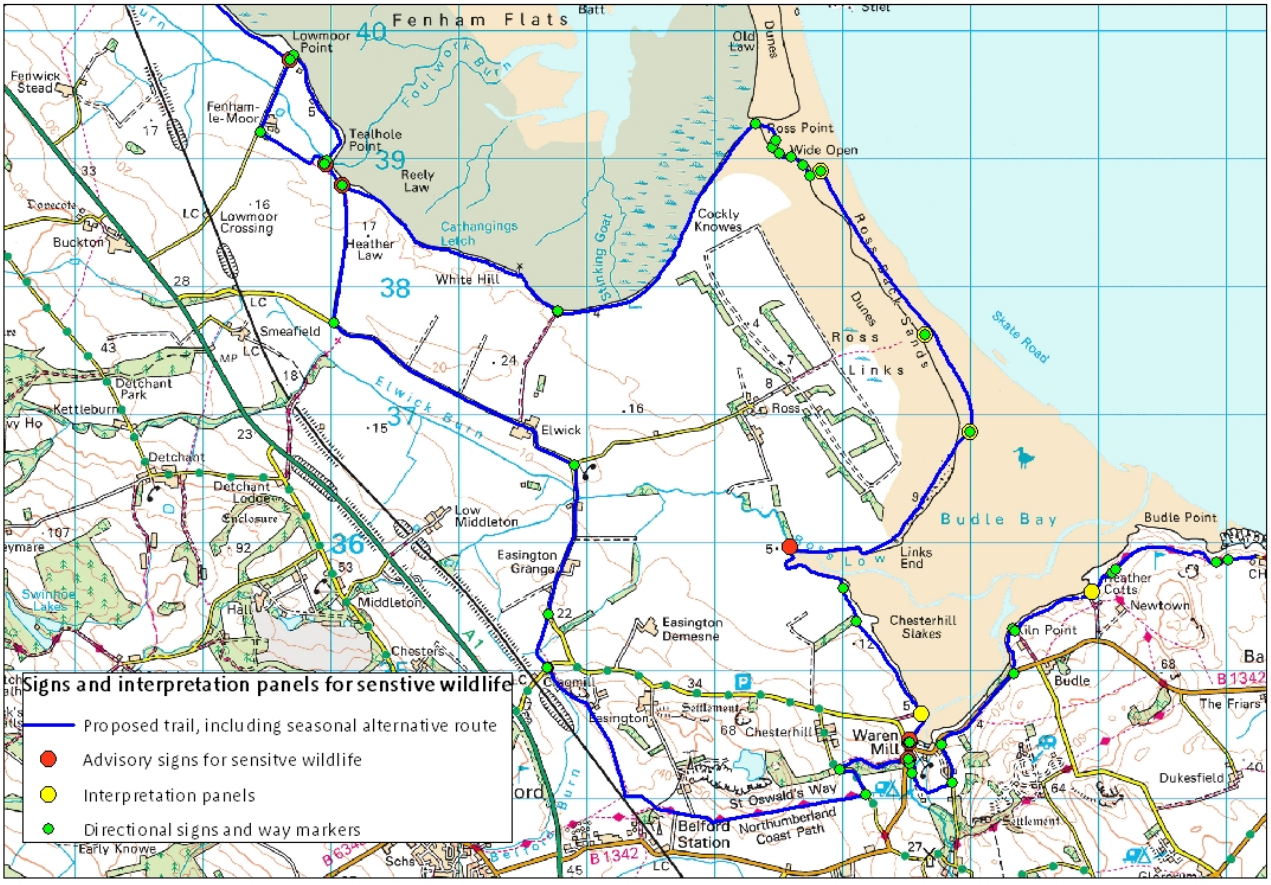
The access assessment predicts an increase in the levels of use for the proposed trail at Kiln Point, north Budle Bay, Wide Open and Cheswick Sands with a smaller increase in the coastal access margin in all, but Cheswick Sands, which remains unchanged, as this area is more widely used for walking and walking with dogs with car parks close by and a large expanse of beach. The other sites have lower levels of access. (See D3.1.2 and table 9: summary of access on designated dunes and predicted change from England Coast Path proposals).

Nesting and prospecting little tern over the nesting sites are highly sensitive to disturbance and while the design of the trail limits disturbance using the landscape to naturally separate walkers from the nesting sites they remain inaccessible in the coastal access margin. The sites are all actively managed by being roped off during the breeding season and by having scheduled wardening visits, which without this intervention it is unlikely that successful breeding will take place and may affect the conservation objectives.

To mitigate these areas being available to access during the breeding season, and to complement the current practice of wardening the sites, the CRoW access rights will be restricted to no public access from 1st April until 31st August each year. This restriction complements the one at Long Nanny, near Beadnell Bay to provide the same level of protection for birds moving between the sites. It should also be noted that the sites at Wide Open and Black Law are managed in tandem with access discouraged during nesting season.

Throughout this stretch the trail will have clear way-markers and finger posts to ensure the route is clear and easy to follow (figure 3), giving the walker confidence to continue along the trail and not linger at sensitive locations. This will be supported using temporary and permanent interpretation panels (figure3) at key locations throughout Budle Bay and Ross Links, with consistent messages designed in collaboration with the NNR and Northumberland Coast AONB partnership. This is part of a wider partnership to manage visitors to Lindisfarne NNR, including managing the access for the seasonal alternative route, designed for overwintering waterbirds.

Figure 3: Locations of interpretation panels and advisory and directional signs for sensitive wildlife around Budle Bay and Ross Links



ii. Installation of access management infrastructure

The access management infrastructure does not affect the conservation objective of the habitat and will not adversely affect the continuity and functioning of the habitat as a whole, however timing of installation may have an adverse effect in disturbing the breeding little tern population with above ground noise and visual disturbance. Therefore to mitigate against this, access management infrastructure within 100m of the restricted breeding area boundary will be installed between 1st September and 31st March during the establishment phase.

D3.2.1d Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, considers that no new significant disturbance will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.2.2 Lindisfarne SPA and Ramsar site: overwintering waterbirds - risk from the proposals to cause disturbance to overwintering waterbirds on mudflats outside those restricted as unsuitable for access and inland functionally-linked land at Elwick, Ross and Chesterhill by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure.

D3.2.2a Baseline situation

Non breeding waterbirds, including light-bellied brent and greylag geese, overwinter in the vicinity of Holy Island foraging on the mudflats and for light-bellied brent geese, specifically the eelgrass beds within Lindisfarne NNR. The geese move onto inland farmland to forage on functionally linked ryegrass leys around Ross, Elwick and Chesterhill from December to March, as well as using these areas as a high tide roosts. None of the functionally linked land has any informal or formal access, except for a public bridleway at Elwick, which has low levels of use linking a bird hide with the road.

The main area of mud, including the eelgrass beds, and saltmarsh between Holy Island and the mainland is unsuitable for access, so the coastal access margin is restricted to no public access under section 25A of the CRoW Act. Chesterhill Slakes up to mid Budle Bay, including the eelgrass beds, is unsuitable of access and is restricted on the same grounds.

There is a narrow strip of saltmarsh (Lindisfarne SPA supporting habitat) at Chesterhill Slake in Budle Bay that is assessed as suitable for access, which is currently not accessed, as indicated from the Strava global heatmap website.

The outer reaches of Budle Bay are only available at low tide for walkers and foraging overwintering waterbirds. Part of this area around Budle Point is also the only area open to watersports, within Lindisfarne NNR. Observation of current access from the online Strava global heatmap shows walkers walking out at the mouth of the bay from either Budle Point or Ross Back Sands.

D3.2.2b Detailed design features of the access proposal and risk assessment

i. Proposed trail

Taking into account the sensitivity of foraging and roosting overwintering waterbirds, including light-bellied brent and greylag geese, and the respective functionally linked land the trail proposal is to avoid these areas at the most sensitive times. To mitigate against disturbance by human activity for overwintering waterbirds, including light-bellied brent and greylag geese, the trail takes a more seaward route from 1st June until 31st July each year around Chesterhill Slakes, the northside of Budle Bay and at Fenham Flats until Lowmoor Point with an inland seasonal alternative route from 1st August to 31st May each year. This seasonal alternative route mainly follows public rights of way and considers the extent of the functionally linked land, avoiding these fields by approximately 500m along a double hedged minor public road at the closest point. This route does not create an access margin, so the fields will not be subject to CRoW public access rights.

The seasonal alternative route will be managed with lockable pedestrian gates, appropriate interpretative signage at key locations and clear way-marking (figure 3) to ensure the route is well defined and easy to follow; giving the walker confidence to continue along the designated trail at the correct times and to understand the need for seasonal closures. The entry/exit points of the seasonal alternative route have been carefully assessed to allow for closures, being the only access point available at these locations, so that visitors can clearly identify the start/end point. The seasonal alternative route will be managed by the NNR team; locking the gates, maintaining the interpretation panels, and embedding and enforcing compliance with seasonal information through wardening and various media, such as their Facebook page, twitter feed and promotional leaflets.

ii. Coastal access margin

The supporting habitat within coastal access margin, not restricted under S25A CRoW Act, consists of:

- a narrow strip of saltmarsh at Chesterhill Slakes in Budle Bay
- outer half of Budle Bay

The area at Chesterhill Slakes isn't separated from the already access restricted mudflat and gradually transitions from one habitat to another allowing walkers to be in closer contact with the overwintering waterbirds using mudflats. To mitigate against this disturbance the CRoW access rights will be restricted to no public access year round to complement the mudflat.

The outer half of Budle Bay is available for access, where overwintering foraging waterbirds at low tide are present, therefore both walkers and waterbirds have an opportunity to interact during this time. The access assessment predicts an increase in trail and coastal access margin on the northern side of Budle Bay with no increase from Budle Point, as this is already accessible and well-used.

With the possible increase in walkers and walkers with dogs over this expanse of mudflat a risk that dogs may not be under close control and be allowed to roam further towards the more sensitive areas for bird disturbance in Budle Bay has been identified. To minimise this risk and to contribute to the maintain or restore target for the overwintering waterbirds, individually and as an assemblage, a CRoW restriction to keep dogs on the lead in outer Budle Bay will be applied along with signs to promote responsible dog walking by putting dogs on leads will be added at Ross Back Sands and close to Heather Cottages. This mitigation has been reached in consultation with the

Lindisfarne NNR Senior Reserve Manager, Northumberland County Council, Natural England's Responsible Officer and using specialist advice as described in part D3.1.

This is further supported by interpretation boards and clear signage (figure 3), as part of the access arrangement across the NNR, as well as information produced in visitor guides and on websites promoting responsible dog-ownership on the Northumberland Coast.

iii. Installation of access management infrastructure

The access management infrastructure does not affect the conservation objective of the habitat and will not adversely affect the continuity and functioning of the habitat as a whole, however timing of installation may have an adverse effect in disturbing the Lindisfarne SPA overwintering waterbird population with above ground noise and visual disturbance. Therefore to mitigate against this access management infrastructure within 200m of the landward boundary of Budle Bay, Ross Links and Fenham Flats will be installed between 1st June and 31st July.

D3.2.2c Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.2.3 Northumbria Coast SPA and Ramsar site: overwintering purple sandpiper and turnstone - risk from the proposals to cause disturbance to foraging and resting birds by access on foot, including walking with a dog, whilst on the rocky outcrops along the foreshore.

D3.2.3a Baseline situation

WeBS alerts show that numbers of purple sandpiper and turnstone overwintering on Northumbria Coast SPA appear to track regional and British trends, with purple sandpiper being stable in the short-term having previously declined and turnstone decreasing in the long-term.

WeBs data shows that Purple Sandpiper numbers are centred further south mainly between Boulmer and Budle Point, with a regular wintering flock of up to 120 birds at the Harkess Rocks, Bamburgh. From Cocklawburn to Spittal the 5 year peak average is 15 individuals, with 7 at Lindisfarne. Numbers for turnstone are centred at Lindisfarne with 110 individuals and 26 for Cocklawburn to Spittal. The conservation objective is to restore population abundance for purple sandpiper and turnstone.

The Northumbria Coast SPA and Ramsar site on this stretch of coast covers the northern half of Harkess Rocks (approximately 500m) at Bamburgh Castle golf course and from Cocklawburn to the southern edge of Spittal.

D3.2.3b Detailed design features of the access proposal and risk assessment

The trail proposal at Harkess Rocks from Bamburgh Castle golf course follows promoted public right of way and an existing walked route to avoid the playing area of the golf course and lies approximately 100m from the landward boundary of the designated site

At Cocklawburn to the southern edge of Spittal, the trail proposal sits landward of the Northumbria Coast SPA boundary, by approximately 30 - 40m. The route follows the promoted public right of way and is also route 1 of the National Cycle Network.

The trail is naturally separated from the designated site by the nature of the landscape, lying on a gradually sloping rise with the beach and rocks to the seaward side of the trail falling away more steeply. The area is subject to the coastal access margin, and current observations from online Strava global heatmap indicates low levels of access on the rocks with walkers preferring the adjacent sandy beaches. This is unlikely to alter with the inclusion of the coastal access margin as indicated by the access assessment and the Northumberland Coast AONB partnership coastal dog-walker survey where 75% of respondents didn't walk on the rocky shore, citing it as too dangerous, slippery or uneven and stating that they preferred the easier walking on the sandy beach.

Although turnstone is not a qualifying feature of the Lindisfarne SPA where numbers are situated, the mitigation for Lindisfarne SPA will also protect them from disturbance.

D3.2.3c Conclusion

Natural England has considered the possible risks to qualifying features at this location and consider that no new significant disturbance will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.2.4 Berwickshire and North Northumberland Coast SAC: grey seals - risk from the proposals to cause disturbance to resting seals on the foreshore and intertidal habitat by access on foot, including walking with a dog.

D3.2.4a Baseline situation

Grey seals haul out around Holy Island and do not rest elsewhere on the Northumberland coast. A growing population of approximately 4500 in 2017 seals use the intertidal areas all year round and is focussed on Long Ridge, Black Law and Guile Point at the south east tip of Holy Island. Long Ridge remains inaccessible with Black Law and Guile Point accessible at low tide, where low level disturbance currently exists from walkers. The population abundance of this qualifying feature has a conservation objective of 'Maintain.'

D3.2.4b Detailed design features of the access proposal and risk assessment

At Long Ridge the area is beyond mean low water, so out of scope of the coastal access proposal and so not subject to coastal access rights. Black Law and Guile Point remain mostly inaccessible from the proposals with restricted unsuitable access under 25A of CRoW Act to the east of Old Law Dunes, restricted access during little tern nesting season (1st April to 31st August each year) to the west of

Old Law Dunes, restricted access of Old Law Dunes due to a danger from livestock (1st September to 31st March each year) and the trail itself some distance away, but only open from Wide Open at the southern end of Old Law Dunes during 1st June to 31st July each year.

D3.2.4c Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.2.5 Berwickshire and North Northumberland Coast SAC: intertidal mud, sand and saltmarsh

- risk from the proposals to cause damage or loss of intertidal habitat, including vegetation, by access on foot, including walking with a dog, outside the areas restricted as unsuitable for access.

D3.2.5a Baseline situation

i. Mudflat

The intertidal mud and sand within this assessment covers the outer half of Budle Bay in the coastal access margin as other areas of mud and sand are either considered unsuitable for access under the CRoW Act or not sensitive to the proposals.

The outer reaches of Budle Bay is formed as the sandy shore of Ross Back Sands to the north deposits sediment and extends southwards to form a low sandy spit across its mouth and to the south; Budle Point is formed by dunes banked against a hard-rock cliff. The mid to lower reaches grade from sand to soft mud as the tidal action reduces, supporting a diverse infauna, beds of narrow-leaved eelgrass (*Zostera angustifolia)* and dwarf eelgrass (*Z. noltei*), as well as key foraging habitat for overwintering waterbirds. The whole bay is subject to tidal inundation and is only available to access at low tide. The conservation objective for this feature is to maintain the extent, distribution, structure and function.

From online Strava global heatmaps it can be seen that the outer reaches of the bay are currently accessed from both sides along the sand spits with no access in the mid-reaches. No new coastal access margin will be created in Lindisfarne Bay south of Holy Island causeway and the lower half of Budle Bay, as these areas are considered unsuitable for access and integral to the plan.

i. Saltmarsh

The trail proposal from Links End in north Budle Bay to Lowmoor Point on Fenham Flats traverses saltmarsh between 1st June and 31st July each year, with the longest section (BBS-1-S048) at approximately 1700m between Wide Open and Cockly Knowes in report BBS 1. At Beal in report BBS 3 the saltmarsh directly north of the causeway is within the coastal access margin.

Saltmarsh has started to develop on the mainland at the sheltered edges of Budle Bay, Fenham Flats and Goswick Sands in the past 50 years. The conservation objectives are set to maintain the

distribution, extent, structure and function of these areas of saltmarsh habitat, as sub-features of the qualifying feature: large shallow inlets and bays.

At Beal the saltmarsh is highly accessible with a public right of way, as part of the promoted Northumberland Coast Path, crossing part of it and the Coast and Castles cycle route passing close by. There is also a 'pull' to the area from a local café and a former car park. Strava Global Heatmap indicates walkers using the public rights of way, with very low levels of access on the saltmarsh itself at this location.

There are a number of pressures threatening the habitats in this area including poor water quality, which is unrelated to the access.

D3.2.5b Detailed design features of the access proposal and risk assessment

i. Mudflat - Budle Bay

The coastal access margin within the bay is either restricted as unsuitable for access to protect overwintering waterbirds from disturbance under the CRoW Act. The route from Waren Mill to Lowmoor Point is proposed to be open from 1st June until 31st July each year to avoid disturbing overwintering waterbirds, with Ross Back Sands being available for access all year round.

The proposal is likely to increase the level of current access to the accessible part of coastal access margin for Budle Bay. These wave exposed areas have a low sensitivity to disturbance by trampling, being highly mobile and dynamic, with no vegetation growing in this area. Any trampling through walking will be localised and restricted to low tides, therefore minimising any potential damage.

ii. Saltmarsh - Links End to Lowmoor Point

It is understood that the trail will increase footfall on the saltmarsh, as this will be creating new public access in an area of interest, even though the location is remote and difficult to reach with no facilities nearby.

Although this new route is only open from 1st June to 31st July each year, as part of the mitigation to avoid disturbing over-wintering waterbirds, it has the potential to draw a high number of users with new views of Holy Island and Lindisfarne NNR, as well as creating new accessibility for wildlife watching linking with established bird hides and rights of way on the coast.

It is predicted that the potential for damage from trampling will be limited and temporary with the saltmarsh being at its most resilient and the plants actively growing during the trail's open period, and that closure of the trail from the 1st August to 31st May each year allows for sufficient recovery time and is also closing at a time when the vegetation is better able to recolonise from any damage. However this is influenced by the levels and patterns of access and the risk will increase depending on the scale and intensity of the footfall and the sensitivity of the saltmarsh at this location.

The saltmarsh currently receives no or very low levels of footfall. This is predicted to rise with the introduction of the trail, however there is medium confidence as to the levels and pattern of access in the short-term. Therefore, an early warning monitoring programme will be introduced to ensure that mechanisms are in place to trigger re-assessment should footfall be higher than predicted. If

this is the case, further mitigation measures will be implemented before any adverse effect arises. The methodology for the programme is at appendix 3.

iii. Saltmarsh - Beal

At Beal the trail creates new access moving away from the saltmarsh and into the adjacent field, so avoiding any pressure on the saltmarsh from the England Coast Path. Once open, the trail may alleviate any current pressure by being more attractive to use than the public right of way with a drier, more resilient grass surface and improved coastal views, which will alleviate any pressure on the saltmarsh and allow this area to recover, if required

Despite the high level of access around the saltmarsh, the area is currently not accessed, as indicated from online Strava Global Heatmap data and personal conversations with the NNR team. Walkers are more attracted to Holy Island itself and Goswick Sands for recreation, so bypassing this habitat. It is expected that this pattern of access will not alter with the introduction of the England Coast Path and therefore is it reasonable to conclude that England Coast Path will not impact on this area of saltmarsh.

D3.2.5c Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.2.6 North Northumberland Dunes SAC: dune habitat - risk from the proposals to cause damage or loss of dune habitat through increased visitor impacts, and increased risk of spreading invasive non-native species (pirri-pirri burr) by access on foot, including walking with a dog.

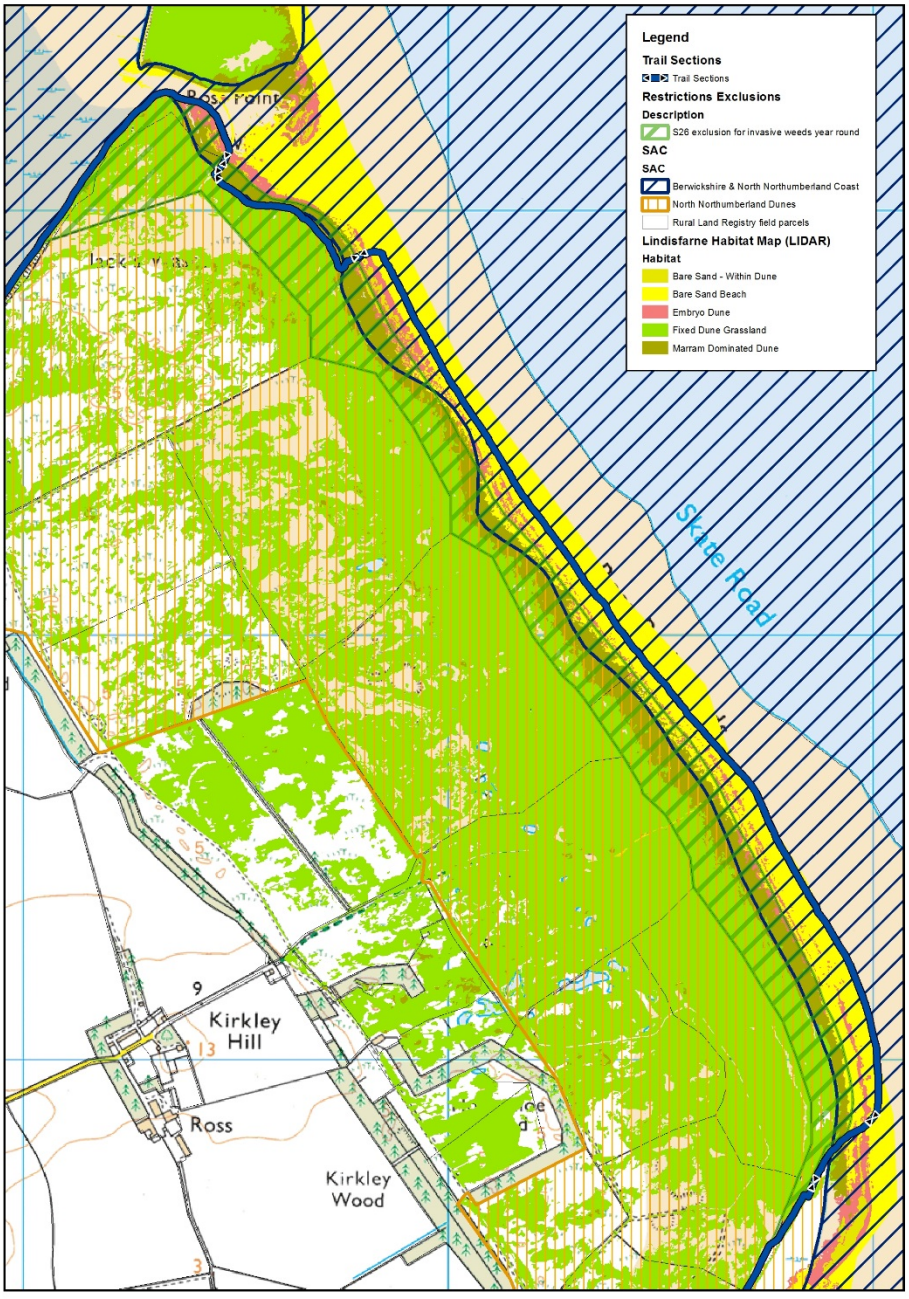
D3.2.6a Baseline situation

i. Overview of dune habitat

The dune habitat at Budle Point runs from the northern edge of Harkess Rocks to Kiln Point, although the North Northumberland Dunes SAC designation carries on around the edge of Budle Bay to link with Ross Links. The dunes form a narrow strip between the playing area of the golf course and mud and sandflats at the outer reaches of Budle Bay.

Holy Island Dunes and Ross Links are more mature with dune slacks dominated by creeping willow *Salix repens* ssp.. The dune slacks of Ross Links are used as grazing fields and are not included in the coastal access proposal limiting the landward coastal access margin. The Ross Links dune system is accreting and the transitional interface between dynamic coastal habitats straddles the boundaries of North Northumberland Dunes SAC and Berwickshire and North Northumberland Coast SAC, so that embryonic and white dune qualifying features of North Northumberland Dunes SAC are now contained within the Berwickshire and North Northumberland Coast SAC. These habitats will be considered as part of the North Northumberland Dunes SAC. (See figure 4)

Figure 4: Habitat assessment of Ross Links showing the proposed trail, designated SAC sites and the excluded access mitigation area.



Goswick and Cheswick Links are a narrow strip of dune between the beach and open farmland or golf course and the East Coast mainline. Very little landward coastal access margin is included here, due to this land usage adjacent to the trail. The northern end of the Links has very little strandline dune due to the natural erosion sweeping sand south along the coast. They're considered unfavourable recovering with no threats to their condition. It was previously recorded as unfavourable due to the grazing regime.

The dunes are in a mix of ownership with all, expect Budle Point, managed under agri-environment schemes to carry out extensive grazing to allow bare ground and to control scrub and invasive species. The conservation objective is to maintain the total extent of this feature.

ii. Current and predicted change in access from England Coast Path proposals

Table 10: Summary of access on designated dunes and predicted change from England Coast Path proposals

Summary of access on designated dunes and predicted change from England Coast Path proposals							
Dune location	**Report map reference**	**Type of access**	**Surface of trail**	**Current levels of trail access on dune**	**Predicted trail changes on dune**	**Current levels of wider access on dune**	**Predicted changes in dune coastal access margin**
Budle Point	BBS 1a	Public right of way & existing walked route	Grass	High	No change	Medium	No change
Ross Links	BBS 1d, BBS 1e and BBS 1f	Existing walked route on Ross Back Sands	Beach	Not on dune	Not on dune	None	Increase (default landward margin)
Holy Island Dunes	BBS 2b and BBS 2c	Public right of way	Tarmac	High	No change	High	No change
Goswick Links	BBS 3a and BBS 3b	Public right of way & existing walked route	Grass	Medium	Slight increase	Medium	No change
Cheswick Links	BBS 3c, BBS 3d and BBS 3e	Public right of way & existing walked route	Grass	Medium	Slight increase	Medium	No change

D3.2.6b Detailed design features of the access proposal and risk assessment

The trail proposal affects all the designated dunes within this proposal, apart from Ross Links where the trail is situated along the beach. New landward coastal access margin is introduced at Cheswick before the dune becomes part of the playing area for Goswick golf course and part of the fixed dune and white dunes at Ross Links.

For the most part the proposed trail follows on tarmacked road at Holy Island and the more resilient firm grassy surfaces of fixed dunes at Budle Point, Goswick and Cheswick Links for ease of onward travel.

The trail will replace and install new way-markers and infrastructure providing a clearly defined, easy to use path to guide walkers and reduce the current spread of impacts.

The access assessment (Table 9) foresees:

- no change in access for Holy Island Dunes and Budle Point
- a slight increase in access for the trail at Goswick and Cheswick Links, but no increase from the current levels of access within the coastal access margin
- an increase in the use of the trail on Ross Back Sands and the default landward margin at Ross Links.

i. Increased risk of spreading pirri-pirri burr

This increase in footfall from the proposal adds to the risk of spreading pirri-pirri burr at Goswick, Cheswick and Ross Links. Current dune management and evidence encourages light trampling to benefit species that depend on areas of open ground and bare sand; this also increases the risk of spread for pirri-pirri burr. The objective for fixed dunes within the supplementary advice is to prevent further spread within the SAC and maintain or reduce the frequency of undesirable species and prevent changes in surface condition, soils, nutrient levels or hydrology which may encourage their spread.

Holy Island Dunes are a known source of pirri-pirri burr and the NNR has a programme of control within its management plan. To evaluate and minimise the risk of pirri-pirri burr spreading it has been agreed to work with the Northumberland Coast AONB Partnership and their Coast Care volunteer team to survey a 4m corridor of the proposed trail, where it crosses the designated dunes. Any pirri-pirri plants found will be removed before the path is opened to minimise the risk of spread.

The detection and control of pirri-pirri burr along the trail once opened will continue, seeking funding through the local National Trails Partnership.

At Ross Links, to reduce the risk of pirri-pirri burr spreading to this previously un-accessed area of white and fixed dune, the CRoW access rights have been restricted to no public access all year round (figure 4). The embryo dunes along the strandline are currently accessed as part of the beach. They will remain accessible to allow for the natural function of the dune system, which is critically dependent on no interruption of sand movement to and from the fore dunes and the beach.

ii. Damage or loss of habitat through increased visitor impacts

The area at risk of damage from visitor impacts, including walking with dogs, can be very narrow along paths and concentrated in other particularly favoured locations, such as close to car parks and urban centres. The increase in pressure from visitor impacts to the dune habitat brought about by the coastal access proposals focuses on the newly proposed landward margin of Ross Links and the trail at Cheswick and Goswick Links. The increase in footfall encourages bare ground and possible

nutrient enrichment from dogs to reduce the extent and distribution of the features, as well as altering the structure and function of the dune.

Where possible the trail is routed on surfaces, which are more resilient to trampling and to changes in surface condition minimising the impacts from visitors (Table 9).

a. Ross Links

The proposed trail travels along Ross Back Sands beach. The landward coastal access margin, includes the qualifying features of white and fixed dune and have had the CRoW access rights restricted to no public access all year round to mitigate the risk of spreading pirri-pirri burr to the previously un-accessed dune. This will also remove the risk of damage to the habitat through visitor impacts.

The available landward margin is approximately 50 to 80 m in width and 2500 m long, with the embryo dunes being approximately 0 to 2 m width along the highly mobile dune / beach interface. At Ross Links this area is currently accessible as part of the beach and will remain so, to allow for the natural processes of dune development. The increased risk of damage through visitor impacts from England Coast Path is low, as walkers prefer to use the large expanse of beach seaward of the trail with flatter, firmer sand rather than loose sloping sand. Where walkers are pushed toward the dune during high tide there is enough space to avoid interaction with the habitat and if any interaction does occur this will be localised and infrequent.

b. Goswick & Cheswick Links

The proposed trail crosses approximately 8km of Goswick and Cheswick Links with approximately 5km on promoted public rights of way for Northumberland Coast Path and Sustrans route NCN 1, as part of the Coast and Castles route. The proposed route deviates from these to take a more seaward route and follows an existing walked route in the middle section of the dunes between Cheswick and Beachcomber House for approximately 3km.

With the northern and southern trail sections currently heavily promoted, as long distance routes and on public rights of way, the introduction of the England Coast Path proposals is not foreseen to increase the level of access. However the middle section may receive more footfall, as walkers move to this path from the more landward promoted route.

Two car parking areas are located in the middle section, which are regularly used by local walkers and walkers with dogs to access the beach and dunes, with a number of de facto paths radiating from these areas. The proposed trail is on the more resilient surface of fixed dune grassland, so more able to withstand increased levels of access without creating further bare ground.

Bare ground on dune habitat can be positive for invertebrates and is considered favourable between 5 – 20% in fixed dune habitat. From a 2017 Natural England drone survey, levels of dune bare ground within the Lindisfarne SSSI, which covers all the dunes within this proposal, was 0.9%. The predicted increase in access levels from the England Coast Path proposals will not increase above the 20% threshold.

The areas of nutrient enrichment are narrow with evidence (Lowen et al) showing that dogs usually urinate/defecate within 400m of the starting a walk and within 1m adjacent to the path. The proposal doesn't alter or add to any existing entry/exit point or change any of the routes on the ground, so it can be surmised that as these areas already have a higher nutrient status than the soil within the un-accessed areas of dune and therefore already have reduced species diversity. The introduction of the proposals and the foreseen slight increase in footfall across Cheswick and Goswick Links will not significantly impact on the dune system.

D3.2.6c Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.2.7 Lindisfarne SPA and Ramsar site, Berwickshire and North Northumberland Coast SAC and North Northumberland Dunes SAC: Qualifying features and supporting habitats - risk from the proposals to cause permanent loss of habitat with the installation of proposed new access management infrastructure.

D3.2.7a Baseline situation

In creating the proposed route from Bamburgh to the Scottish Border, including Holy Island, new access management infrastructure is required to help guide walkers and also to protect sensitive nature, minimising the risk of disturbance to little tern nesting areas and overwintering waterbirds, where a seasonal alternative route is implemented (see section D3.1). This includes signage, steps and kissing gates to improve user confidence and experience.

New access management infrastructure is proposed within the landward boundaries of Lindisfarne SPA and Ramsar site, North Northumberland Dunes SAC and Berwickshire and North Northumberland Coast SAC and centred on Budle Bay and Ross Links, Holy Island and Cheswick and Goswick Links in the coastal access reports:

https://www.gov.uk/government/publications/england-coast-path-from-bamburgh-to-the-scottish-border-including-holy-island-comment-on-proposals

- BBS 1 - Bamburgh to Holy Island Causeway (maps BBS 1a to BBS 1i)
- BBS 2 – Holy Island (maps BBS 2e and BBS 2f)
- BBS 3 – Holy Island Causeway to Berwick-upon-Tweed (maps BBS 3b, BBS 3c and BBS 3d)

Maps of the new infrastructure locations are at appendix 2, maps 4a to 4f.

See section D2 for conservation objectives and site condition for the designations.

There is no new infrastructure to be installed within the boundary of the Northumbria Coast SPA and the new infrastructure (0.342m^2) within Northumberland Marine SPA has been ruled out at

screening, as the supporting habitat for the qualifying features is water column and the items will be installed on land, so not affecting the Northumberland Marine SPA site integrity.

Information on the new infrastructure within the Northumberland Marine SPA has been included in the assessment for completeness.

D3.2.7b Detailed design features of the access proposal and risk assessment

The European designation boundaries overlap, so some items will be installed within a number of designations. The assessment will evaluate the items for each designation. Table 10 shows where the items have overlapping boundaries, the type of infrastructure, quantity and the estimated amount of habitat loss per designation. The standard measurements for each item used in the calculations are included in appendix 1.

Table 11: Potential area of habitat loss from the installation of new access management infrastructure within the European designated sites

		Area of new infrastructure occurring within each European designations (items installed in overlapping designations)			
New infrastructure item	**Quantity**	**North Northumberland Dunes SAC (m^2)**	**Berwick and North Northumberland Coast SAC (m^2)**	**Lindisfarne SPA and Ramsar site (m^2)**	**Northumberland Marine SPA (m^2)**
Multi-finger post	2	0.02			
Back filled steps	1 x 5m x1m	5			
Stock fence	1 x 236m	0.303		0.303	
Foot bridge	1	0.062		0.062	
Kissing gates	5	0.435		0.435	
Interpretation board	1	0.04		0.04	
Multi-finger post	9	0.09		0.09	
Waymark post	4	0.04		0.04	
Back filled steps	1 x 5m x 1m	5		5	
Back filled steps	1 x 30m x 1m	30		30	
Kissing gate	2	0.174	0.174	0.174	
Interpretation panel	3		0.12	0.12	0.12
Kissing gate	2		0.174	0.174	0.174
Multi-finger post	2		0.02	0.02	0.02
Multi-finger post	1	0.01		0.01	0.01
	Total area (m^2)	**41.174**	**0.488**	**36.468**	**0.324**

Consideration for permanent habitat loss on site integrity has been given for each new infrastructure item, location and habitat type within the combinations of designated sites below. The England Coast Path proposal report maps show new infrastructure items, such as kissing gates, steps, footbridges and interpretation panels can be seen on the report proposal maps. Multi-finger posts and waymarkers are not indicated on the proposal report maps.

Table 12: North Northumberland Dunes SAC - Consideration for new infrastructure and permanent habitat loss

North Northumberland Dunes SAC - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1a	Multi-finger post	1	0.01	Dune	The multi-finger post at Bamburgh Castle golf course is on the well-used public right of way.	In this location the post is considered to be in an area that has to be legitimately maintained and managed as non-contributory land for statutory purposes or by legal right, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave.
BBS 2e	Multi-finger post	1	0.01	Improved Grass	The post is located next to a public right of way track on Holy Island with permanently-modified vegetation of little or no nature conservation value.	In this location the posts are considered to be in an area that has to be legitimately maintained and managed as non-contributory land for statutory purposes or by legal right, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave.
BBS 2e	Back filled steps	1	5	Improved Grass	The steps in this location on Holy Island are located on a public right of way track with permanently-modified vegetation of little or no nature conservation value.	In this location the posts are considered to be in an area that has to be legitimately maintained and managed as non-contributory land for statutory purposes or by legal right, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave.

The majority of the new infrastructure falls within the boundaries of **North Northumberland Dunes and Lindisfarne SPA and Ramsar site**. The qualifying features are mainly fixed and white dune habitat, with saltmarsh and coastal & floodplain grazing marsh, as supporting features of Lindisfarne SPA.

Table 13: North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1a	Interpretation panel	1	0.04	Dune	The interpretation panel is beside a bare earth public right of way and the popular Heather Cottages caravan park. It will contain the access restrictions.	In this location the panel is considered to be in an area of permanently-modified vegetation of little or no nature conservation value and therefore will not contribute to an adverse effect to the site integrity.
BBS 1a	Multi-finger post	1	0.01	Dune	The multi-finger post is located adjacent to the interpretation board and the well-used public right of way in map BBS 1a.	In this location the post are considered to be in an area that has to be legitimately maintained and managed as non-contributory land for statutory purposes or by legal right, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave.

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1a	Back filled steps	1	30	Improved grass	The back filled steps at Kiln Point are located within a permanent grass field above the saltmarsh habitat.	In this location the steps are considered to be in an area of permanently-modified vegetation of little or no nature conservation value and therefore will not contribute to an adverse effect to the site integrity.
BBS 1b	Multi-finger post	1	0.01	Improved grass	The post is located beside a public right of way with permanently-modified vegetation of little or no nature conservation value.	In this location the post is considered to be in an area that has to be legitimately maintained and managed as non-contributory land for statutory purposes or by legal right, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave.
BBS 1b	Kissing gate	1	0.087	Improved grass	The kissing gate at Kiln Point is located in an existing fence line between a track and a permanent grass field.	In this location the steps are considered to be in an area of permanently-modified vegetation of little or no nature conservation value and therefore will not contribute to an adverse effect to the site integrity.

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1c	Footbridge	1	0.062	Rough grass	The footings for the bridge are located at the edge of Budle Bay sitting on an area of rough grass and scrub. The footbridge will enable the continued flow of water and protect the channel and adjacent saltmarsh from the risk of increased sedimentation due to increased footfall from the proposals, if a bridge wasn't provided.	The grass isn't a qualifying habitat within the designated sites and can be considered as non-contributory land and therefore will not contribute to an adverse effect to the site integrity
BBS 1d	Stock fence	1	0.303	Improved grass	The proposed stock fence is to be installed along the sea defence at Ross Links, which is used for grazing and where an existing route is already formed. The trail will be fenced, so not to allow access to Budle Bay. This will protect the potential little tern nesting site and pioneer saltmarsh from the risk of access impacts due to the England Coast Path proposals.	The location of the stock fence on a man-made structure with an improved grass surface and close to an already accessed route isn't a qualifying habitat within the designated sites and can be considered as non-contributory land and therefore will not contribute to an adverse effect to the site integrity.

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1d	Back filled steps	1	5	Fixed dune grassland	The back filled steps are to be installed approximately 100m north of the stock fence to allow for easy onward travel across the fixed dune at the southern edge of Ross Links. The steps will cover approximately $5m^2$ on the bare earth and be backfilled with soil taken from the installation. The steps will provide a clearly defined route, encouraging walkers to take a single line rather than multiple routes and efficiently move walkers away from the sensitive potential little tern nesting area.	The location of the back filled steps will not adversely affect the functioning and continuity of the habitat as a whole, being placed on an already accessed route and on a man-made structure.
BBS 1f	Waymark post	4	0.04	Fixed dune grassland / white dune	At this location the 4 waymark posts at the interface between fixed dune grassland and white dune habitat provides a clearly guided route, where the proposed trail moves inland, to protect further saltmarsh and mudflat habitat and the Wide Open little tern nesting site from disturbance.	There is approximately 600ha of fixed dune and 76ha of white dune habitat within the designated site and at that the scale of loss ($0.04m^2$) can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1f	Multi-finger post	1	0.01	White dune	The multi-finger post provides a clearly guided route to protect wider saltmarsh habitat and the Wide Open little tern nesting site from disturbance.	There is approximately 76ha of dynamic white dune habitat within the designated site with a conservation objective to maintain the extent and distribution of the feature and at that the scale of loss ($0.01m^2$) can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 1f	Multi-finger post	1	0.01	Saltmarsh	The multi-finger post is to be installed on upper-saltmarsh habitat, just above the mean high water mark to protect the Wide Open little tern nesting site and further saltmarsh habitat from disturbance/damage by providing a clearly guided route.	BBS 1f and BBS 1i. At such a scale the 0.02 m^2 of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 1i	Multi-finger post	1	0.01	Saltmarsh	The multi-finger post directs walkers on an existing trail to a public right of way at Lowmoor Point. It is located at the landward edge of the saltmarsh, where the proposed	BBS 1f and BBS 1i. At such a scale the 0.02 m^2 of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature,

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
					trail moves inland away from greater stretches of saltmarsh and mudflat protecting further habitat from disturbance/damage.	and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 1i	Kissing gate	1	0.087	Coastal & floodplain grazing marsh	The kissing gate is to be installed in an existing boundary fence of a permanent grass field (8.8ha) identified as coastal and floodplain grazing marsh and a supporting habitat for Lindisfarne SPA. The field is not species rich and is managed as wet grassland grazing. The gate allows for seasonal alternative access during June and July.	The positioning of the gate within an existing boundary will not affect the integrity of the supporting habitat and the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 2f	Multi-finger post	1	0.01	Fixed dune grassland	The multi-finger post is to be installed adjacent to a well-used public right of way on Holy Island on fixed dune grassland.	In this location the post is considered to be in an area that has to be legitimately maintained and managed as non-contributory land for statutory purposes or by legal right, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave.

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 3b	Multi-finger post	2	0.02	Fixed dune grassland	Two multi-finger posts are to be installed on an existing walked route at Goswick Links, where the proposed trail follows the edge of a grazed grass field and fixed dune habitat. The existing route is low in species diversity being well walked and linking promoted public rights of ways.	The installation of two multi-finger posts will not reduce the conservation objectives thresholds for the extent and distribution of habitat nor limit the structure and function of the dune and can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 3b	Kissing gate	1	0.087	Fixed dune grassland / improved grass	The kissing gate is to be installed in an existing fence line, adjacent to a field gate, as the trail passes into an improved grass field in order to cross a sluice.	The positioning of the gate within existing boundary and on an existing walked route will not affect the integrity of the fixed dune habitat and the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 3c	Multi-finger post	1	0.01	Dune	The multi-finger post will be installed adjacent to the bare ground access track to the dunes car park to direct walkers.	This can be considered non-contributory land, as a long established track with permanently-modified vegetation, adjacent to it, of little or no nature conservation value. Therefore the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 3c	Kissing gate	2	0.174	Fixed dune grassland	The two kissing gates are to be installed in existing fence lines to allow for continued grazing management of the fixed dune grassland and to replace step stiles.	The positioning of the gates within existing boundaries and on existing walked routes will not affect the integrity of the fixed dune habitat and the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.

North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 3d	Multi-finger post	1	0.01	Improved grass	The post is located beside a public right of way with permanently-modified vegetation of little or no nature conservation value.	In this location the posts are considered to be in an area that has to be legitimately maintained and managed as non-contributory land for statutory purposes or by legal right, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave.

The proposed trail traverses the boundary of Berwickshire and North Northumberland Coast and North Northumberland Dunes SACs at Ross Back Sands and the dune habitat is accreting. The infrastructure within Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA, is sandflats and dune habitat. Dune is not a qualifying feature of Berwickshire and North Northumberland Coast SAC nor a supporting habitat of Lindisfarne SPA, however fixed dunes with herbaceous vegetation ("grey dunes") is considered as an annex 1 priority habitat of the Habitats Directive.

Table 14: Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss

Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area(m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1d	Interpretation panel	1	0.04	Sandflats	The interpretation panel at this location is temporary to be installed each year to include shore bird information. The posts will be removed along with the panel.	As the panel is in position for only two months per year this will not create a permanent loss of qualifying habitat.
BBS 1e	Interpretation panel	1	0.04	Sandflats	This interpretation panel will be a permanent feature and located on Ross Back Sands at the entry/exit point of the adjoining Ross Links path. The panel will be on the upper levels of the sands at the interface between the sandflats and the accreting dune.	The positioning of the panel will not affect the integrity of the sites, as intertidal sand and muddy sand area covers 2480 ha and the scale of loss (0.04m^2) can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 1f	Interpretation panel	1	0.04	Sandflats	The interpretation panel at this location is temporary to be installed each year to include shore bird information. The posts will be removed along with the panel.	As the panel is in position for only two months per year this will not create a permanent loss of qualifying habitat.

Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area(m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1f	Kissing gate	2	0.174	White dune / Fixed dune grassland	The two kissing gates are to be installed in existing fence lines to allow for dune grazing by cattle to continue whilst moving the proposed trail inland to protect the nesting little tern site at Wide Open. Although within the Berwickshire and North Northumberland Coast SAC the habitat where the kissing gates are located is white dune habitat.	The existing field boundary and associated habitat isn't a qualifying feature within the designated sites, however fixed dune is an annex 1 priority habitat. The positioning of the gates within existing boundaries will not affect the integrity of the sites and the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.
BBS 1f	Multi-finger post	2	0.02	White dune	The two multi-finger posts are located close by the kissing gates at Wide Open; one adjacent and one approximately 18m further north to guide walkers inland at a junction with an existing access track. Although	The location of the two multi-finger posts within white dune isn't a qualifying habitat within the designated sites. The positioning of the multi-finger posts will not affect the

Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area(m^2)**	**Habitat**	**Consideration**	**Conclusion**
					within the Berwickshire and North Northumberland Coast SAC the habitat where the multi-finger posts are located is white dune habitat.	integrity of the sites and the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.

Table 15: North Northumberland Dunes SAC, Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss

North Northumberland Dunes SAC, Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1g	Kissing gate	1	0.087	rough grass / arable boundary	The kissing gate is located on the landward boundary of the designations in an existing fence line, where the trail moves between the rough grassland edges of Fenham Flats at Whitelee Letch into an arable field.	The field boundary and associated vegetation isn't a qualifying habitat within the designated sites, however the seaward edge has the potential to be used by overwintering waders, as part of transitional habitat between saltmarsh and agricultural fields. The positioning of the gate within existing boundary and on an existing walked route will not affect the integrity of the and the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.

North Northumberland Dunes SAC, Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site - Consideration for new infrastructure and permanent habitat loss						
Report map reference	**Item**	**Quantity**	**Area (m^2)**	**Habitat**	**Consideration**	**Conclusion**
BBS 1h	Kissing gate	1	0.087	rough grass / improved grass boundary	The kissing gate is located on the landward boundary of the designations in an existing fence line, where the trail moves between the rough grassland edges of Fenham Flats at Cathangings Letch into an improved grass field.	The field boundary and associated vegetation isn't a qualifying habitat within the designated sites, however the seaward edge has the potential to be used by overwintering waders, as part of transitional habitat between saltmarsh and agricultural fields. The positioning of the gate within existing boundary and on an existing walked route will not affect the integrity of the and the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.

D3.2.7c Overall Conclusion for permanent habitat loss

Natural England has considered the possible risks to qualifying features due to the installation of new access management infrastructure from Bamburgh to the Scottish Border, including Holy Island and consider that the scale of loss can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitats as a whole. The final location of the multi-finger posts and waymarker posts and installation methods will be finalised at the establishment stage. Assessment of possible impacts on the European site will need to be checked and confirmed as part of the SSSI assenting process prior to works being carried out.

Table 16: Summary of habitat loss within European designations

Summary of habitat loss within European designations				
Justification	**North Northumberland Dunes SAC**	**North Northumberland Dunes SAC and Lindisfarne SPA and Ramsar site**	**Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site**	**North Northumberland Dunes SAC, Berwickshire and North Northumberland Coast SAC and Lindisfarne SPA and Ramsar site**
Non-contributory land - Public right of way	5.02	0.04		
Non-contributory land - established track / permanently modified vegetation		0.097		
Non-contributory land as the fabric of the designation		35.365		0.174
Temporary installation			0.08	

Qualifying feature		0.331[1]	0.04[2]	
Supporting habitat		0.107[3]		
Annex 1 habitat not as a qualifying feature			0.194[4]	

[1] Dune
[2] Sandflat
[3] Saltmarsh (0.02m^2), Coastal and floodplain grazing marsh (0.087m^2)
[4] White dune and fixed dune grassland

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

Table 17: Assessment of adverse effect on site integrity alone

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained?** **(Yes/No) Give reasons.**	**Residual effects?**
Disturbance to breeding little terns, as a result of the access proposal, leads	• The proposed route aligns inland creating new access in 3 of the 5 locations to avoid the sensitive areas. • The new alignments are separated from the nesting sites by permanent fencing.	Yes – no adverse effect. Breeding success of the colonies within the Lindisfarne SPA and Ramsar site and Northumberland Marine SPA rely on intervention	No

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained?** **(Yes/No) Give reasons.**	**Residual effects?**
to reduced breeding success and reduction in population and/or contraction in the distribution of qualifying features within the site.	• At 2 of the 5 locations the trail has sufficient separation to minimise the risk to disturbance. • CRoW access rights will be restricted for no public access within the nesting area during the breeding season from 1st April to 31st August every year. • Installation of new interpretation boards at key access points to indicate where this restriction applies. • Installation of access management infrastructure to take place outside the most sensitive times.	to reduce disturbance and predation. The design offers separation of the nesting site from the proposed trail. The restriction offers protection to the nesting terns in the coastal access margin during breeding season.	
Disturbance to breeding overwintering waterbirds, including geese, as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the distribution of	• The mud and sandflats of Fenham Flats, Holy Island Sands and Chesterhill Slakes are restricted for under S25 of the Crow Act, as unsuitable for access. • The proposed route aligns around the low lying coast of Lindisfarne NNR between 1st June and 31st July each year to avoid the most sensitive times of the year. • The proposed seasonal alternative route (1st August to 31st May) aligns considerably inland along existing public rights of ways and highways to avoid functionally linked land used by light-bellied brent geese. • New access management infrastructure installed to manage the routes.	Yes – no adverse effect. The design proposal considers all aspects of the overwintering waterbird populations, moving walkers and walkers with dogs away from sensitive areas at the most sensitive times of the year, providing an alternative route, which will be managed by the NNR staff. Large areas of mudflat used by the birds have been restricted as part of the integral planning of the project. At key locations temporary and permanent interpretation panels are to be used to explain	

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained?** **(Yes/No) Give reasons.**	**Residual effects?**
qualifying features within the site.	• Installation of access management infrastructure to take place outside the most sensitive times. • Areas of Budle Bay not restricted under S25 of the CRoW Act are restricted to avoid disturbance either by removing CRoW access rights or by requiring dogs to be on a lead. • Installation of new and temporary interpretation boards at key access points to indicate where this restriction applies.	the reasoning. The use of temporary panels at the correct times refreshes the users mind, increasing the compliance rate of the instructions.	
Disturbance to overwintering purple sandpiper and turnstone, 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.	• Alignment of the trail is on highly accessed public rights of ways that are promoted as the Northumberland Coast Path. • The nature of the coast at the locations where purple sandpiper and turnstone are found are sufficiently separated from the trail, being difficult to access from the trail and from the open coast. • Clear way marking to guide people along the coast and help reduce the spread of current impacts.	Yes – no adverse effect. Northumbria Coast SPA birds move around the Northumberland coastline to utilise feeding opportunities and can be found in more abundance further south between Boulmer and Bamburgh. There is no significant change predicted in the use and pattern of access from the proposals and there is a natural segregation between walkers and purple sandpiper and turnstone, since the majority of the rocky foreshore where purple sandpiper and turnstone prefer to forage is	No

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.**	**Residual effects?**
		difficult terrain and unfavourable for walking, with walkers sticking to the path or the sandy beach.	
Disturbance to grey seal, 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 haul out area at Long Ridge is beyond mean low water, so out of scope of the coastal access proposal and so not subject to coastal access rights. • Black Law and Guile Point haul out areas remain mostly inaccessible from the coastal access margin proposals with restricted access at: o East of Old Law Dunes – unsuitable access under 25A of CRoW Act o West of Old Law Dunes - restricted during little tern nesting season (1st April to 31st August each year), o Old Law Dunes - restricted due to danger from livestock (1st September to 31st March each year) • The trail being some distance away, but only open from Wide Open at the southern end of Old Law Dunes during 1st June to 31st July each year.	Yes – no adverse effect. Although wildlife tourism has been identified as a risk to the conservation objectives for grey seals, the areas that that are used to haul out are protected by the coastal access restrictions as part of the integral planning of the project and as mitigation for other wildlife concerns.	No

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained?** **(Yes/No) Give reasons.**	**Residual effects?**
Damage to intertidal mud, sand and saltmarsh, as a result of the access proposal, leads to a long term contraction in the extent, distribution, structure and function of qualifying features within the site.	<u>Intertidal mud and sand</u> • The majority of the mud in the coastal access margin is restricted as unsuitable for access under S25 of the CRoW Act. • The proposals only concern the outer reaches of Budle Bay. • The proposal is likely to increase the level of access on the trail and the accessible part of coastal access margin. <u>Saltmarsh – Links End to Lowmoor Point</u> • The trail traverses the saltmarsh and will increase footfall, as it mostly provides new access. • The saltmarsh in the coastal access margin is restricted all year round under the CRoW Act. • The trail is available to use from 1st June until 31st July each year. • Multi-finger posts and waymark posts will be used to guide people over the sensitive habitat. • An early warning monitoring programme is included to address some uncertainty as to whether predicted footfall is exceeded and therefore, minimise the risk of adverse effect.	<u>Intertidal mud and sand</u> Yes – no adverse effect. The outer reaches of Budle Bay is highly mobile and dynamic sandflats, only available at low tide. This habitat has low sensitivity to disturbance by trampling, as any damage is very localised; limited to the footprint of the walkers. Any damage occurring would be temporary and has the capacity to recover quickly, so not adversely affected by the proposals. <u>Saltmarsh – Links End to Lowmoor Point</u> Yes – no adverse effect The proposed trail on the saltmarsh has the potential to damage the habitat by trampling. It is predicted that as the path is only open between 1st June and 31st July the potential for damage will be limited and temporary; being open during its most resilient time and allowing for a sufficient recovery period. The saltmarsh currently receives no or very low levels of footfall. This is predicted to increase with the introduction of the	No

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.**	**Residual effects?**
	<u>Saltmarsh - Beal</u> • A public right of way crosses the saltmarsh. • The trail creates new inland access to avoid any damage from the proposal. • The trail is on a drier grass surface and slightly raised providing improved views of the coast. • The saltmarsh within the coastal access margin is currently available for access, but not used. No change in use is predicted and it will remain accessible. • Multi-finger posts and waymark posts will be used to guide people from the sensitive habitat.	trail, however there is medium confidence as to the levels and pattern of access in the short-term. Therefore an early warning monitoring programme will be introduced to ensure mechanisms are in place, if footfall should increase from the levels predicted and further mitigation measures implemented, if required to ensure no adverse effect on site integrity. <u>Saltmarsh – Beal</u> Yes – no adverse effect. The trail does not encroach onto the saltmarsh and potentially relieves pressure on the saltmarsh from the public right of way with the England Coast Path providing a more attractive clear way-marked route with improved coastal views and on a more stable and a resilient grass surface.	
More frequent access in areas of sand dune, as a result of the access proposal, leads	• Alignment of the trail follows a mix of access from highly accessed public rights of ways, including the promoted Northumberland Coast Path, walked routes and new access.	Yes – no adverse effect. There is predicted change in the access use from the proposal, where new access is created and on	Yes - to the risk of spreading

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained?** **(Yes/No) Give reasons.**	**Residual effects?**
to damage of the habitat and the increased risk of spreading invasive species (pirri-pirri burr) reducing the structure and function (including its typical species) of the qualifying features within the site.	• The trail does not cross Budle Point and Ross Links and are included in coastal access margin only. • The trail crosses Holy Island Dunes on tarmac and Cheswick and Goswick Links on fixed dune grassland. • Coastal access margin is already accessible in all cases, but Ross Links. • The white dunes at Ross Links, will be restricted under S26 of the CRoW Act to prevent effects of increased visitor impacts and the risk of pirri-pirri burr spreading. • Prior to opening the route, where the trail proposal deviates from the monitored Northumberland Coast Path a 4m corridor of the route will be surveyed across the dunes for pirri-pirri burr. Any plants found will be removed to minimise the risk of spread and so reduce the cover and frequency of pirri-pirri. • Access to the landward coastal access margin at Ross Links will be restricted to all public access year round. • Long term detection of pirri-pirri burr on the protected sites will be carried out through the strategic mitigation wardening service.	existing routes, but not those aligned on public rights of way. The proposed trail surface is more resilient to the increase in visitor impacts, including pirri-pirri burr establishing, being fixed dune grassland or tarmac. To prevent the possible predicted effects of increased visitor impacts and the spread of pirri-pirri burr to the white dunes at Ross Links, this area will continue to be restricted. The white dune habitat is less resilient to the effects of increased visitor impacts and the risk of pirri-pirri burr spreading with more open ground for the plant to establish and being previously only accessible by a public right of way. The partnership survey and pirri-pirri removal will limit the spread to other dunes within the SAC and potentially minimise the frequency of the plant below current levels with the on-going efforts of the strategic mitigation service.	pirri-pirri burr

Assessment of adverse effect on site integrity alone			
Risk to conservation objectives	**Relevant design features of the access proposal**	**Can 'no adverse effect' on site integrity be ascertained?** **(Yes/No) Give reasons.**	**Residual effects?**
The installation of access management infrastructure may lead to a loss of extent, distribution, structure and function of habitat, including sub-features and habitat which support the qualifying features.	• The proposals see the installation of new infrastructure items in the designated sites across 61km of trail: o to guide walkers and provide confidence in the trail. o to improve accessibly with the use of kissing. gates, footbridges and back filled steps. o to provide information to walkers in this sensitive wildlife area. o to protect wildlife by providing information on where to walk.	Yes – no adverse effect. The installation of access management infrastructure is placed on ground that can be considered: • non-contributory land with permanently-modified vegetation, with little or no nature conservation value. • an area that has to be legitimately maintained and managed for statutory purposes, such as the necessary maintenance or repair of a public right of way, amenity area, flood or coastal defence structure or a legal wayleave. • or can be regarded as 'inconsequential' in the context of the conservation objectives for the feature, and the nature of the works will not adversely affect the continuity and functioning of the habitat as a whole.	No

Conclusion:

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

Northumbria Coast and Ramsar site, Northumberland Marine SPA, Lindisfarne SPA

- **Breeding little tern** - disturbance to nesting birds by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure at Black Law, Wide Open and three sites (Cheswick Sands, Kiln Point and north Budle Bay) managed for breeding little tern.

Lindisfarne SPA and Ramsar site

- **Overwintering waterbirds** - disturbance to overwintering waterbirds in mudflats outside those restricted as unsuitable for access and inland functionally-linked land at Elwick, Ross and Chesterhill by access on foot, including walking with a dog, and disturbance from the construction phase for installing the access management infrastructure.
- **Permanent habitat loss of supporting habitat** with the installation of new access management infrastructure.

Northumbria Coast SPA and Ramsar site

- **Overwintering purple sandpiper and turnstone** –disturbance to foraging and resting birds by access on foot, including walking with a dog, whilst on the rocky outcrops along the foreshore.

Berwickshire and North Northumberland Coast SAC

- **Grey seals** - disturbance to resting seals on the foreshore and intertidal habitat by access on foot, including walking with a dog.
- **Intertidal mud, sand and saltmarsh -** damage or loss of intertidal habitat, including vegetation, by access on foot, including walking with a dog, outside the mudflats restricted as unsuitable for access.
- **Permanent habitat loss** with the installation of new access management infrastructure.

North Northumberland Dunes SAC

- **Dune habitat** - damage to habitat through increased visitor impacts damage or loss of dune habitat through increased visitor impacts, including walking, from the proposals.
- **Permanent habitat loss** with the installation of new access management infrastructure.

[Go to D5]

The following risks to achieving the conservation objectives identified in D1 are effectively addressed by the proposals and no adverse effect on site integrity (taking into account any

incorporated mitigation measures) can be concluded, although there is some residual risk of insignificant impacts:

North Northumberland Dunes SAC

- **Invasive non-native species** - increased risk of spreading invasive non-native species (pirri-pirri burr) by access on foot, including walking with a dog.

D4 Assessment of potentially adverse effects on site integrity 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:

- **North Northumberland Dunes SAC: Invasive non-native species** - increased risk of spreading invasive non-native species (pirri-pirri burr) from more frequent access in areas of sand dune, following changes in access by foot, as a result of the access proposal reducing the structure and function (including its typical species) of the qualifying features within the site.

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

Table 18: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity

Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity		
Competent Authority	**Plan or project**	**Have any insignificant and combinable effects been identified?**
Natural England	England Coast Path – Amble to Bamburgh	Yes. This project is being considered and the Habitats Regulation assessment (HRA) contemplates the risk of disturbance to overwintering purple sandpiper and turnstone, breeding Arctic and little tern and on sand dunes: the spread of invasive non-native species (pirri-pirri burr), impacts through increased foot fall and potential habitat loss from installing new access management infrastructure. Insignificant and residual effects were identified in the HRA for the risk to disturbance for purple sandpiper and turnstone and the risk of spread of pirri-pirri burr in SAC sand dunes.
Cefas/Natural England	Aquaculture	No. No residual effects identified within this HRA project proposal. The oyster beds are located outside the scope of this project. Access to the area by various bodies has been mitigated.
Northumberland Coast AONB Partnership	Northumberland Coast AONB Management Plan (2014-2019)	No. This management plan is currently being reviewed. The 2014 -2019 Management Plan complements the mitigation measures set out in this appropriate assessment by putting in place policy and actions to: • Seek appropriate management and raise awareness of important breeding, feeding and roosting areas for shorebirds using the results of the wading bird disturbance project, including raising awareness of sites with recreational users through codes of conduct and 'taking your dog' campaign. • Assess and map invasive species and put a plan in place to deal with them. • In general promote responsible dog ownership on beaches and in the countryside by continuing to produce and distribute 'taking your dog to the coast' leaflet.
Environment Agency	Northumberland and North Tyneside Shoreline Management Plan 2 Scottish Border to River Tyne (2009)	No adverse effects on the integrity of the sites from the implementation of the policies in the Shoreline Management Plan.

Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity		
Competent Authority	**Plan or project**	**Have any insignificant and combinable effects been identified?**
Natural England	Lindisfarne NNR Management Plan (2016 -2021)	No. The Management Plan complements the mitigation measures set out in this appropriate assessment by putting in place management to reduce the impacts of pirri-pirri burr on the NRR, as well as engaging with and managing access within the reserve to protect sensitive features.
Northumberland County Council	Northumberland Local Draft Plan for Regulation 18 Consultation (2018)	No, as to address development and increased population the Council has introduced a Strategic Coastal Mitigation Service. Developers will make a financial contribution that will manage disturbances and implement positive measures to control any unwanted effects, where adverse impacts cannot be avoided.
Marine Management Organisation	Construction of new sewage treatment works - Waren Mill (MLA/2019/00297)	No, the construction is located outside the European designated boundary, but may disturb overwintering waterbirds within Lindisfarne SPA. The HRA indicates no adverse effect, as construction is 250m away from Budle Bay and will be completed outside the wintering bird season. The trail at this location detours inland, so no interaction with the proposed trail, coastal access margin or any associated establishment works.

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

- **North Northumberland Dunes SAC: Invasive non-native species** - increased risk of spreading invasive non-native species (pirri-pirri burr) from more frequent access in areas of sand dune, following changes in access by foot, as a result of the access proposal reducing the structure and function (including its typical species) of the qualifying features within the site.

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

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

Table 19: Assessment of in-combination effects likely to have an adverse effect site integrity

Assessment of in-combination effects likely to have an adverse effect site integrity			
Residual risk	**In-combination effect**	**Assessment of risk to site conservation objectives**	**Potential adverse effect?**
Increased risk of spreading invasive non-native species (pirri-pirri burr) from more frequently accessed areas of sand dune, following changes in access on foot, as a result of the proposal, so reducing the structure and function (including its typical species) of the qualifying features within the site.	Increased use of the proposed trail is expected, as a result of its promotion, as part of the England Coast Path, encouraging visitors to walk the dune systems across the designated site from Warkworth to Spittal. This could lead to the spread of pirri-pirri burr between the two coastal access proposals: Amble to Bamburgh and Bamburgh to the Scottish Border, including Holy Island	The mitigation agreed with Northumberland Coast AONB Partnership and their Coast Care team works across both England Coast Path proposals in North Northumberland surveying the 4m corridor of the proposed trail and removing any pirri-pirri burr found before the England Coast Path is opened. This work will continue minimising the frequency of the plant to meet the conservation objectives to reduce the frequency and cover of undesirable species to within acceptable levels. Also the trail mainly follows on the more resilient surface of fixed dune grassland to avert changes in surface condition, soils, nutrient levels or hydrology, which may encourage their spread and the nature of coastal access allows spreading room to lessen the risk of surface changes. Where a risk of spread has been identified on sand dunes not previously accessed by the public, CRoW access rights have been removed, as part of the mitigation.	No

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

- Northumberland Marine SPA
- Northumbria Coast SPA and Ramsar site
- Lindisfarne SPA and Ramsar site
- Berwickshire and North Northumberland Coast SAC
- North Northumberland Dunes SAC
- Tweed Estuary SAC

either alone or in combination with other plans and projects.

PART E: Permission decision with respect to European Sites

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

We, Natural England, are satisfied that our proposals to improve access to the English coast between Bamburgh to the Scottish Border, including Holy Island 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:	England Coast Path Assessment Unit
Date:	25th October 2019
Assessment approved by:	Northumbria Area Team
Date:	25th October 2019

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Appendices

Appendix 1

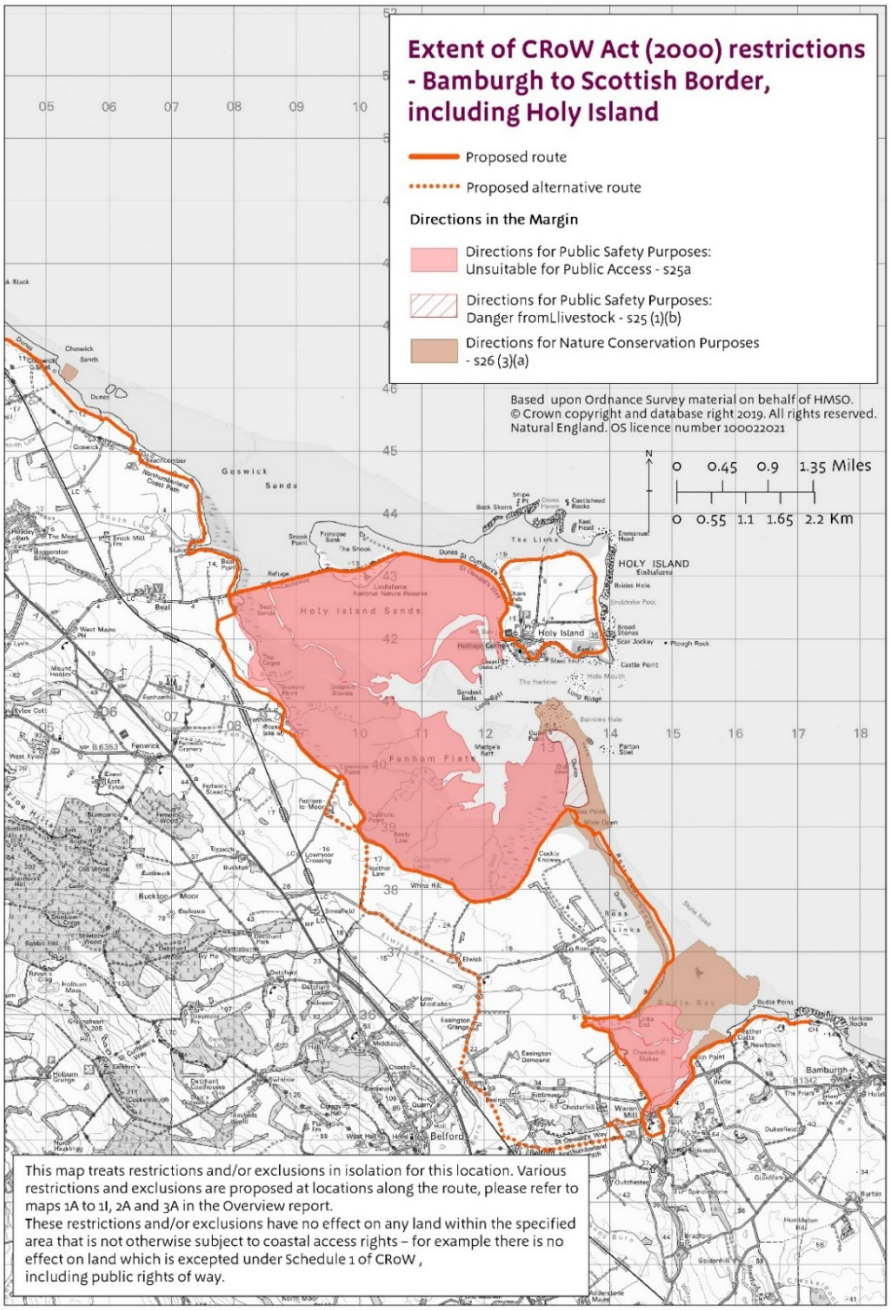
Table 1: Standard measurements for access management infrastructure

Item	Constituents	Size of constituents (mm)	Area (m^2)	Amount required for each item	Total area per constituent item (m^2)	Total area per item (m^2)
Waymarker post	post	100 x 100	0.01	1		0.01
Multi-finger post	post	100 x 100	0.01	1		0.01
Kissing gate	hanging post	150 x 150	0.023	1	0.023	
	closing/back post	125 x 125	0.016	4	0.064	0.087
Stock fencing	straining post / 150m interval	125 (diameter)	0.012	1		0.012
	struts	80 (diameter)	0.005	1		0.005
	intermediate posts / 3m intervals	65 (diameter)	0.003	1		0.003
Footbridge (in-ground items only)	bearing pads	200 x 75	0.015	2	0.03	
	posts	100 x 75	0.008	4	0.032	0.062
Interpretation panels (in-ground items only)	posts	100 x 100	0.01	4		0.04

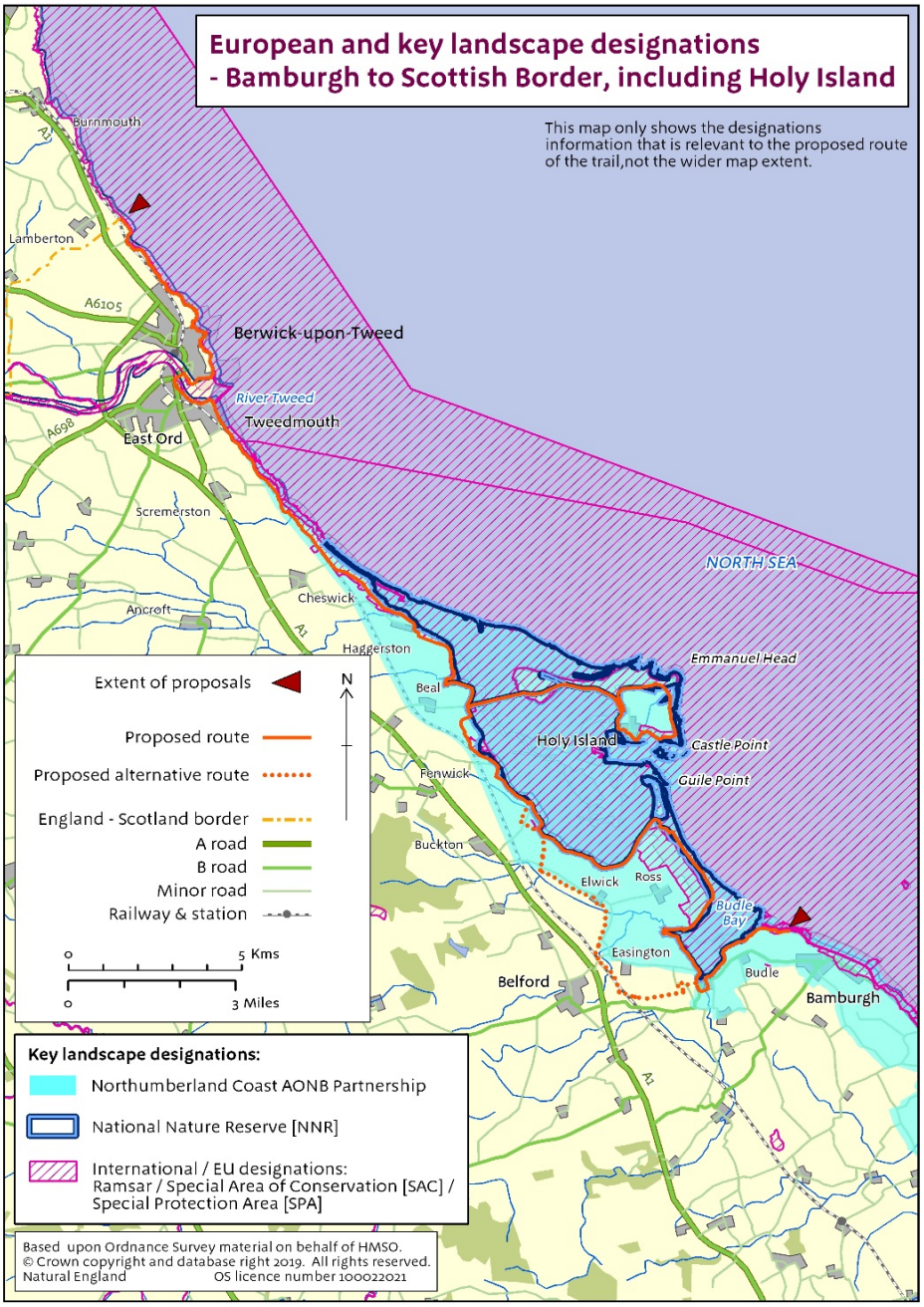
- Specifications for stock fencing and footbridge taken from Higher Level Stewardship capital items schedule
- Specifications for waymarker post, multi-finger post, interpretation panel taken from madebylandmark.com
- Specifications for kissing gate taken from Kent County Council

Appendix 2

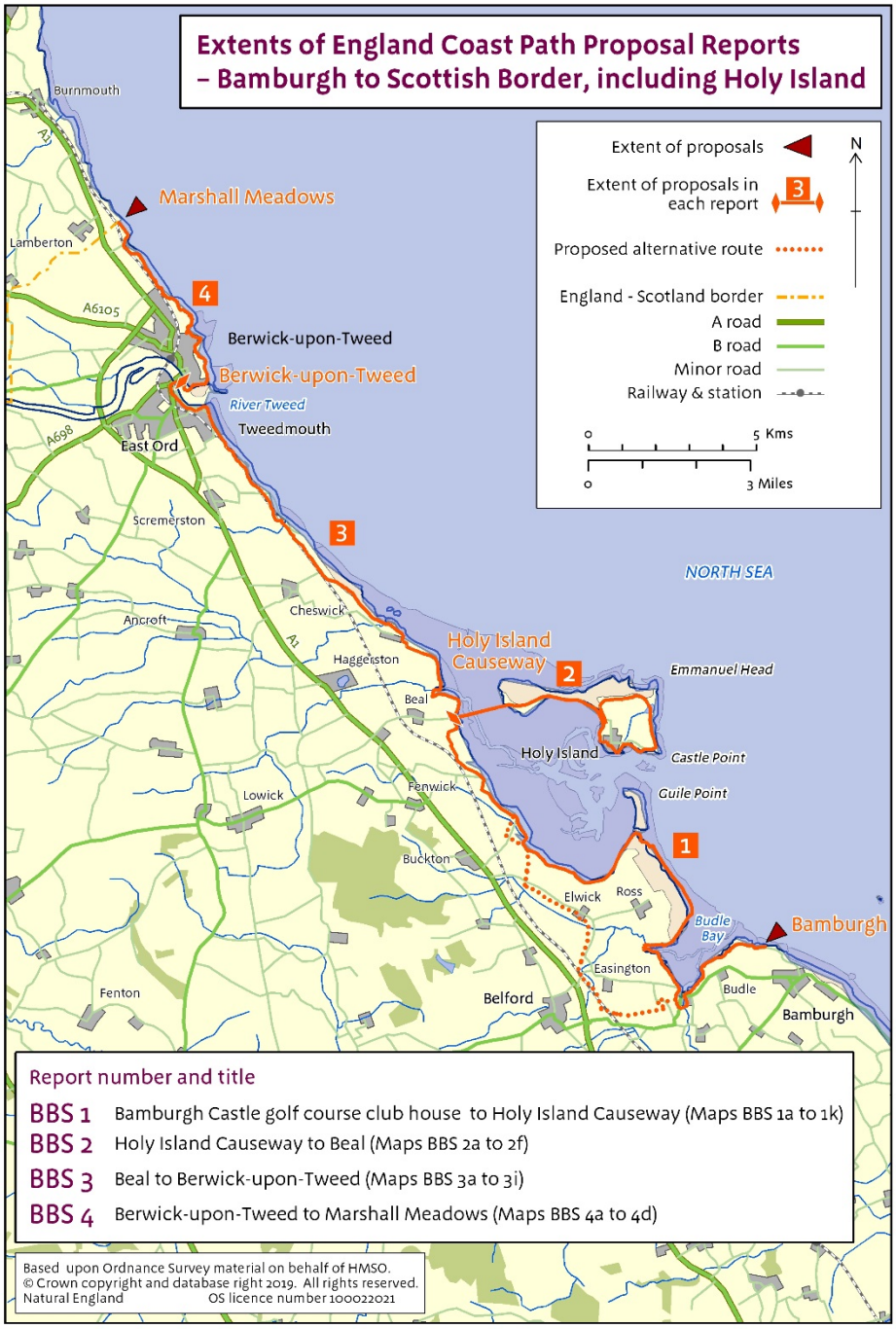
Map 1: Geographic extent of coastal access restrictions (CRoW Act 2000) from Bamburgh to the Scottish Border, including Holy Island



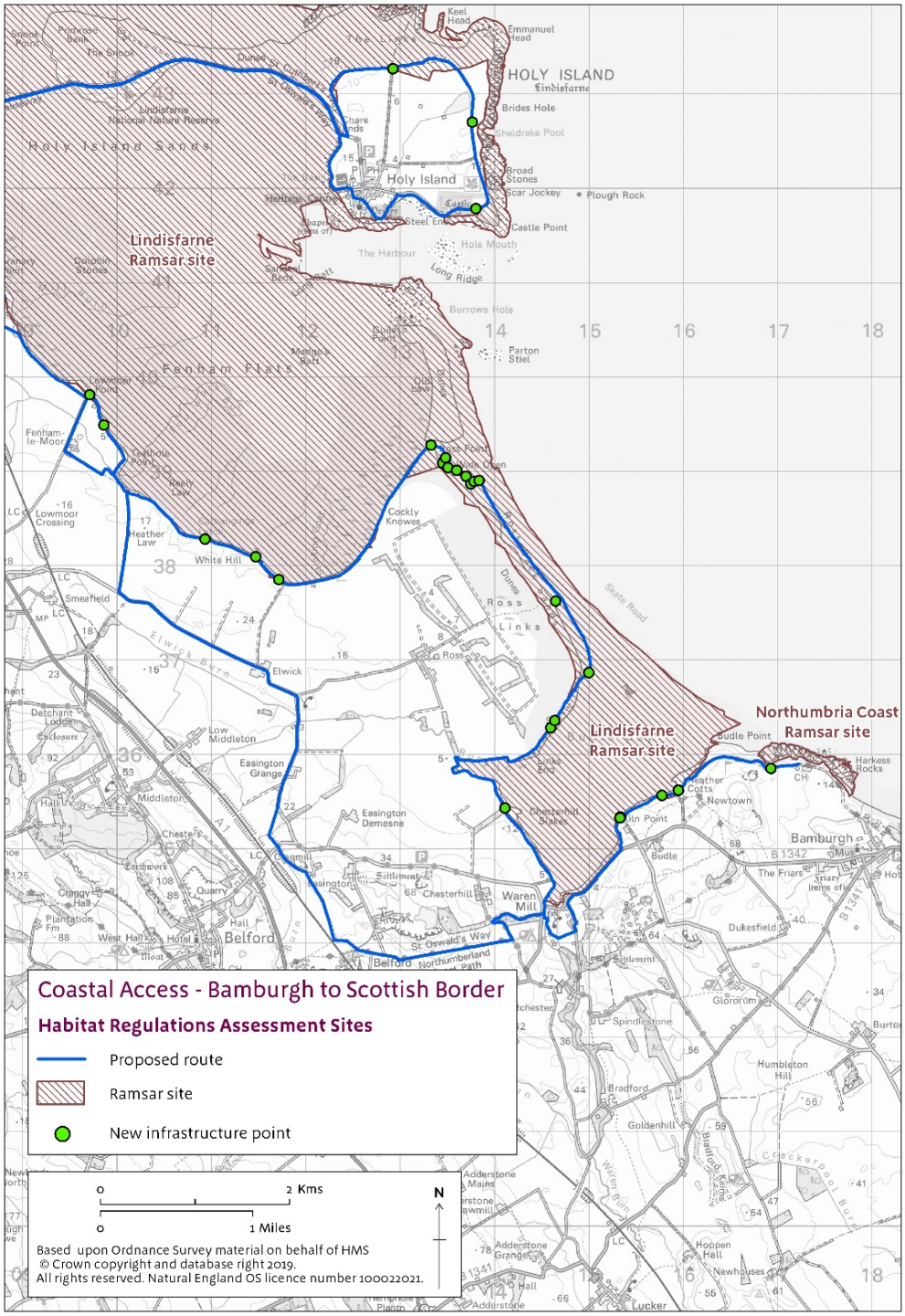
Map 2: Geographic extent of European designated sites and proposal reports from Bamburgh to the Scottish Border, including Holy Island



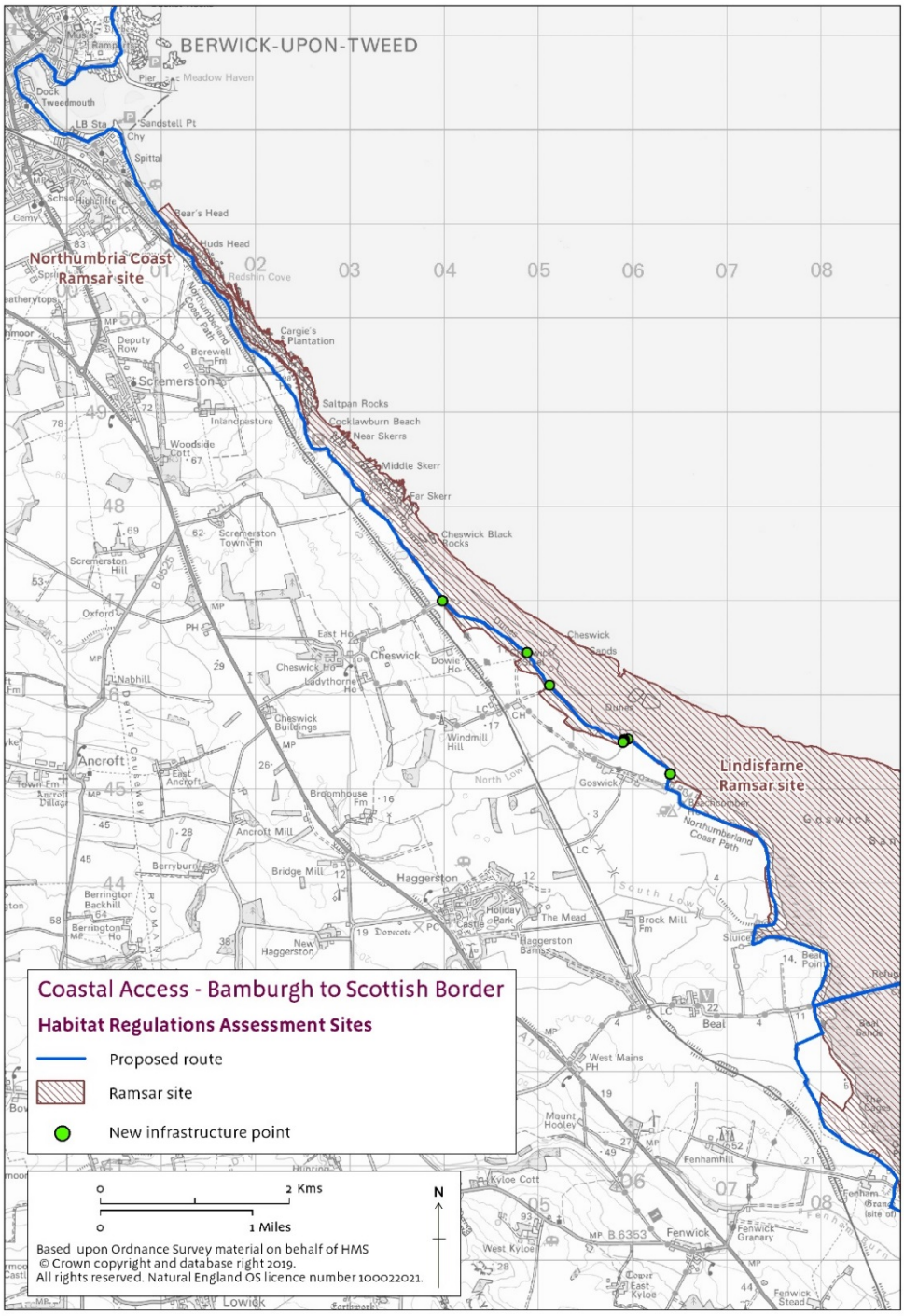
Map 3: Geographic extent of proposal reports from Bamburgh to the Scottish Border, including Holy Island



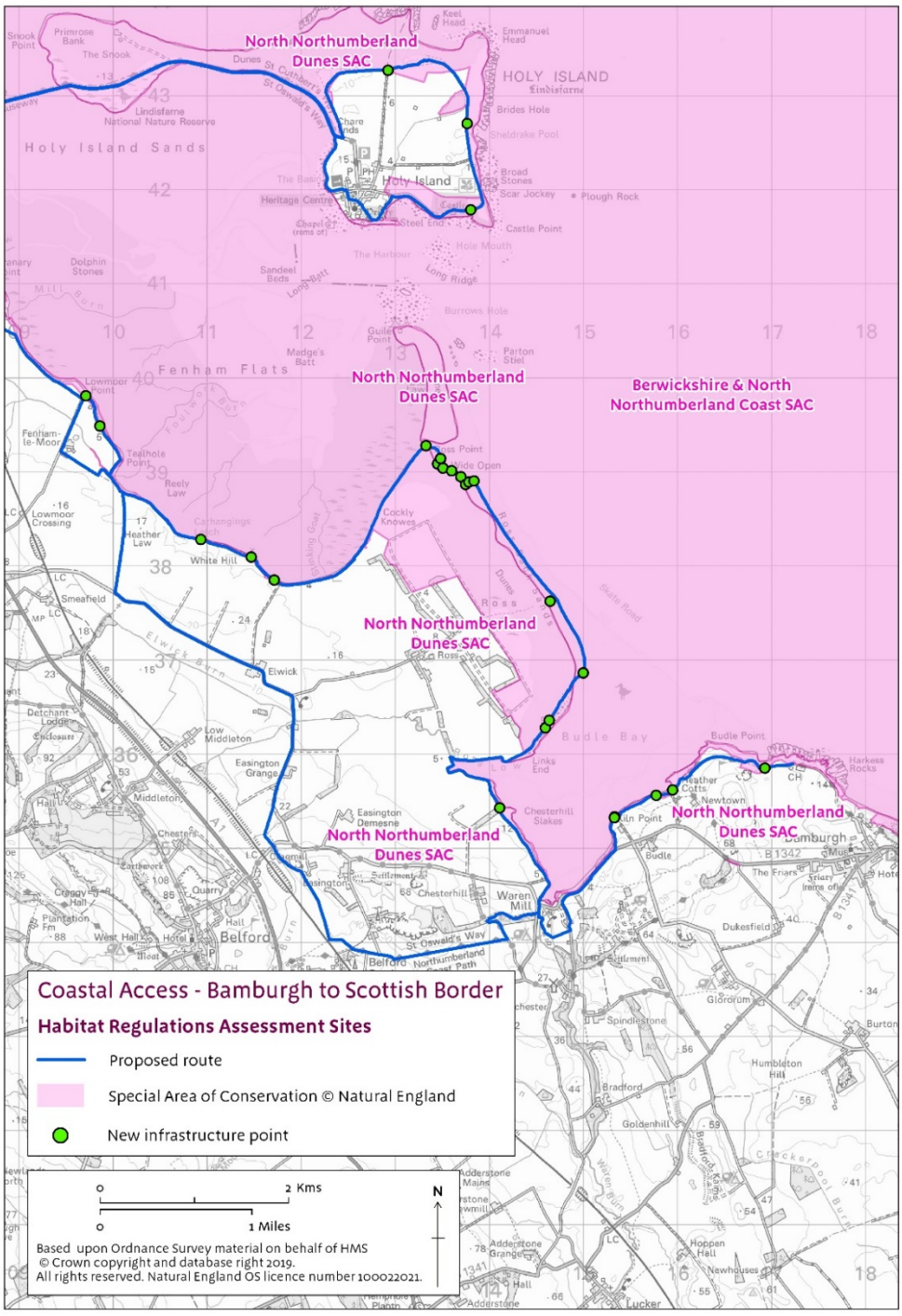
Map 4a: Location of new access management infrastructure to be installed within Lindisfarne Ramsar site (south)



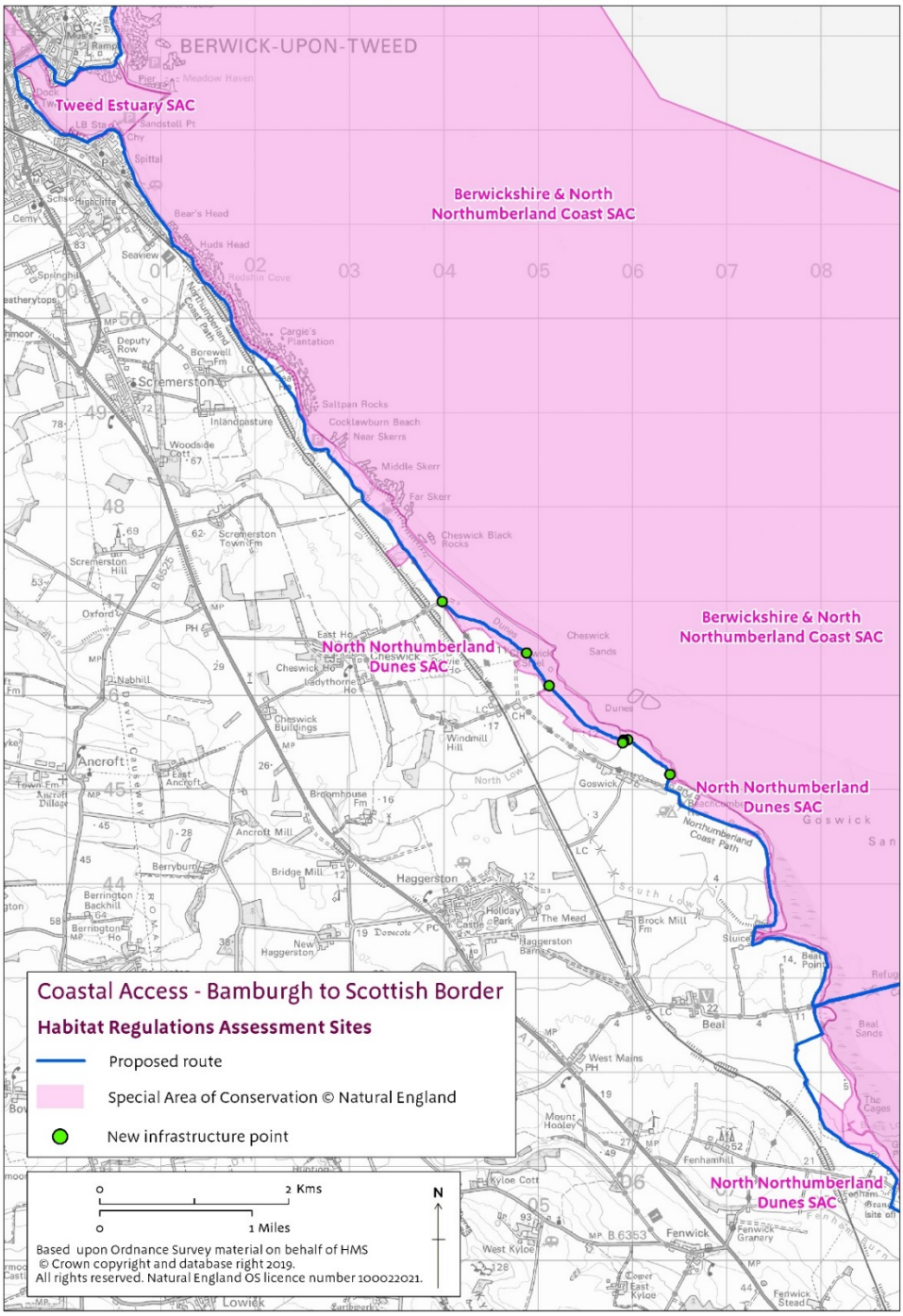
Map 4b: Location of new access management infrastructure to be installed within Lindisfarne Ramsar site (north)



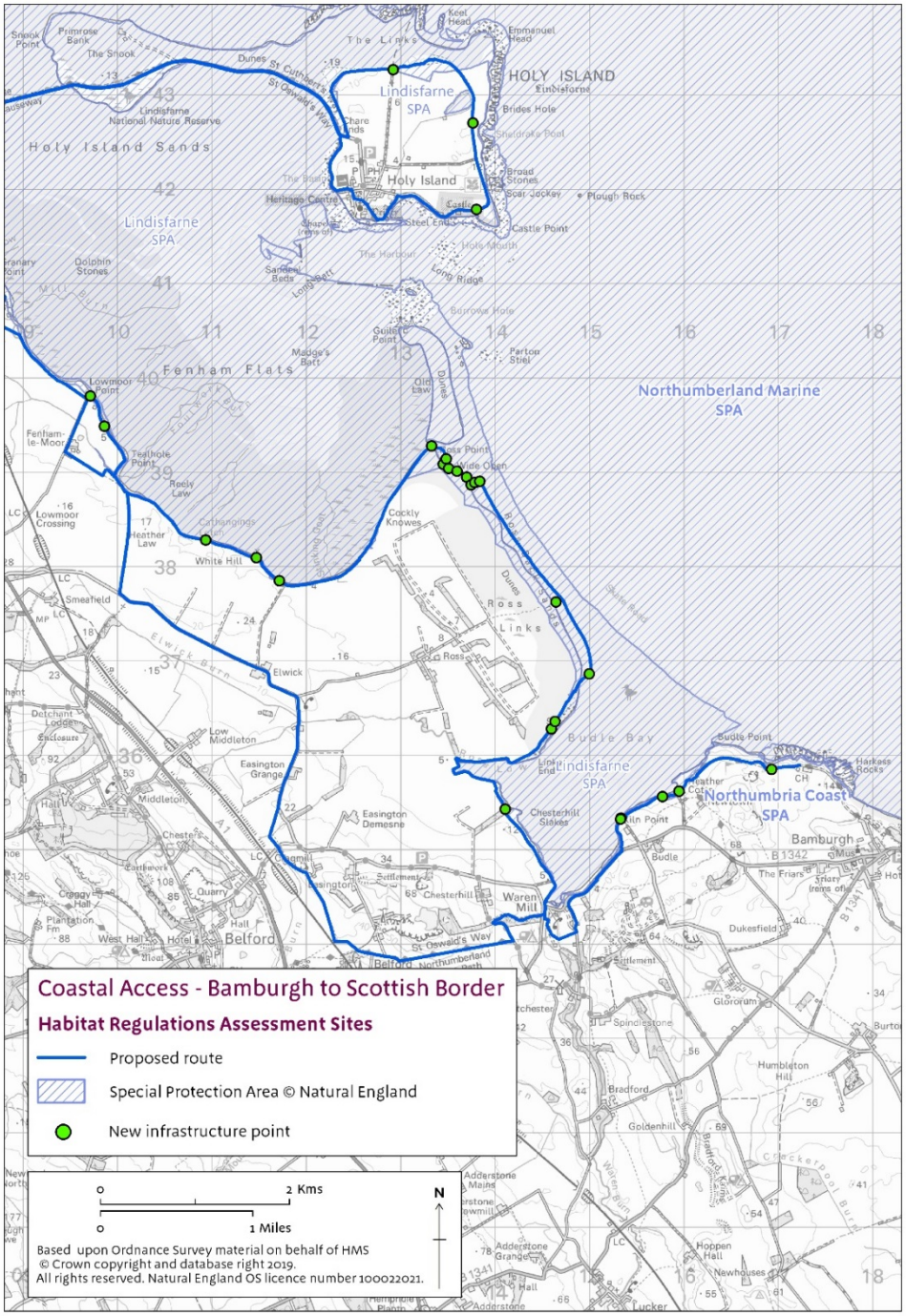
Map 4c: Location of new access management infrastructure to be installed within Berwickshire and North Northumberland Coast SAC and North Northumberland Dunes SAC (south)



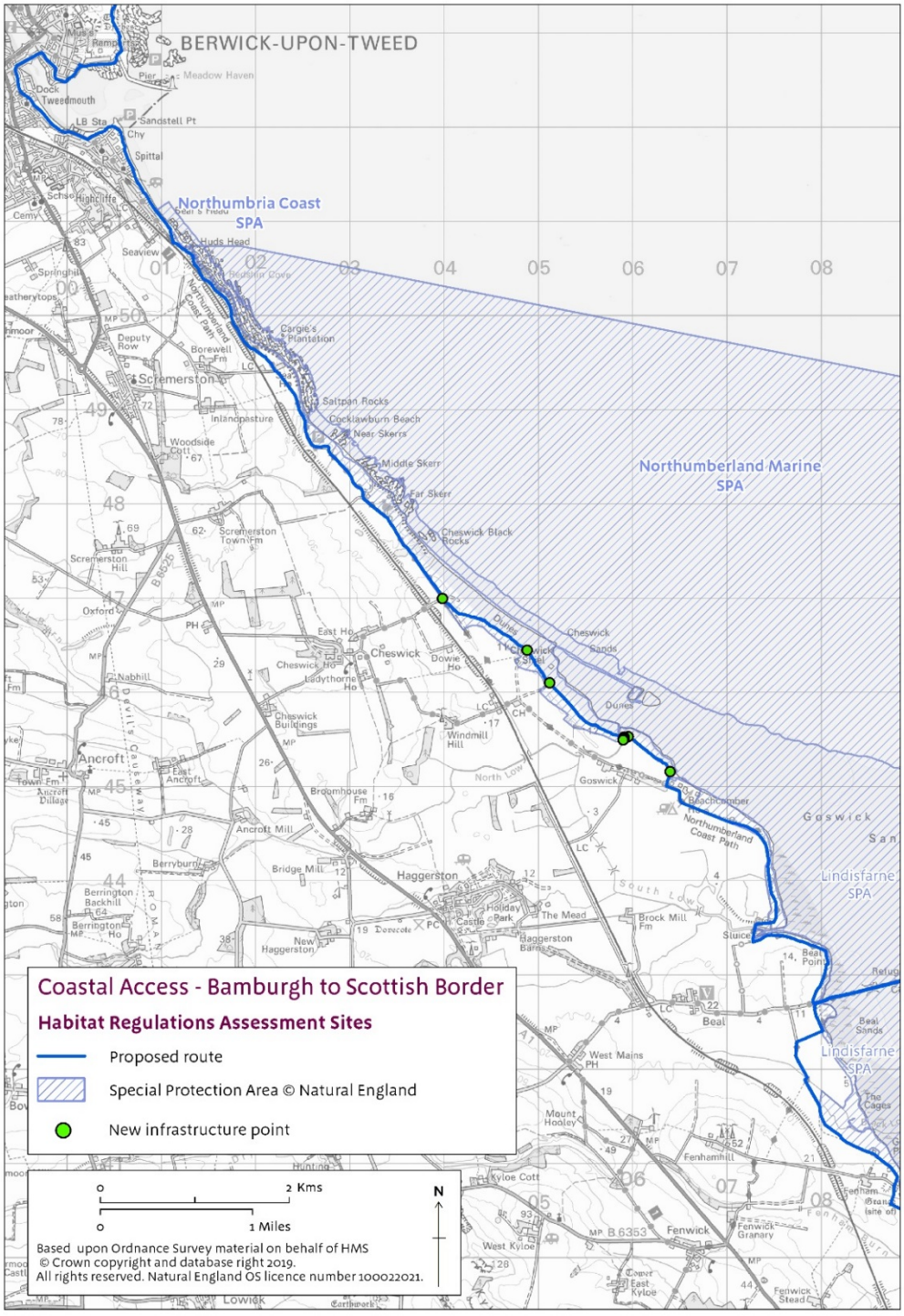
Map 4d: Location of new access management infrastructure to be installed within Berwickshire and North Northumberland Coast SAC and North Northumberland Dunes SAC (north)



Map 4e: Location of new access management infrastructure to be installed within Lindisfarne SPA and Northumberland Marine SPA (south)



Map 4f: Location of new access management infrastructure to be installed within Lindisfarne SPA and Northumberland Marine SPA (north)



Appendix 3

Early Warning Monitoring Programme Plan – Links End and Lowmoor Point Saltmarsh (Lindisfarne SSSI units 2 and 5)

Aim: To implement a monitoring scheme in order to put in place an 'early warning' of the potential risks identified in the HRA, and documented below as a result of there being more footfall, than predicted through the introduction of the England Coast Path on saltmarsh between Links End and Lowmoor Point (Lindisfarne SSSI units 2 and 5).

Objective: To ensure that there is a high level of confidence that the agreed monitoring will provide the answers needed to address uncertainties and can inform any further or adapted mitigation measures.

Should the agreed monitoring detect risks that *may* cast reasonable doubt on the conclusions of the appropriate assessment, the enclosed adaptive measures will be triggered and implemented in response to the risks. Appropriate triggers or alerts are included within the plan.

Background: the trail between Links End and Lowmoor Point forms a small part of the England Coast Path. Between these locations there are four distinct entry/exit points with no wider access within the coastal access margin due to the nature of the landscape. To avoid disturbing overwintering waterbirds in this location, the route is managed by Lindisfarne National Nature Reserve (NNR) wardens and open from 1st June to 31st July each year. The trail here will create new access or follow existing walked routes with very low levels of access across areas of saltmarsh.

Saltmarsh has been developing in Lindisfarne NNR for approximately 50 years and is a rare habitat in the North East. It has recently been recognised as a qualifying sub-feature of large shallow inlets and bays within the Berwickshire and North Northumberland Coast SAC.

The early warning monitoring programme addresses some residual uncertainty about the risk arising from the anticipated effects of the England Coast Path once opened and any unforeseen adverse effects that may invalidate the assessment's conclusion.

Resource: Initial capital funding from the England Coast Path programme, with on-going resource for habitat surveying and footfall monitoring supplied by Natural England (Lindisfarne NNR and Northumbria Area Team).

Reporting: Complied by Natural England (Lindisfarne NNR), and supplied annually to the trail partnership and Natural England.

Timescale: 1 year baseline survey prior to the England Coast Path opening to confirm current levels of access and habitat condition, followed by a 5 year monitoring programme after opening.

Method: Baseline evidence of access levels and habitat condition will be established before commencement of the trail. An initial survey to establish the condition of the saltmarsh and

transitional habitat to sand dune in Lindisfarne SSSI units 2 and 5 will be carried out following the Common Standards Monitoring (CSM) methods and by applying the appropriate attributes and targets set out in the Favourable Condition Table (FCT)[1] for the site (table 1). The early warning monitoring will also follow this protocol surveying the habitat at the start and end of the growing period: spring and early autumn, corresponding with the open period of the path.

Table 1: List of saltmarsh attributes to assess on units 2 and 5 (Lindisfarne SSSI FCT, 2009)

Site-Specific definitions of Favourable Condition – Lindisfarne SSSI			
Littoral sediment Units 1, 2, 5 and 9			
Pioneer saltmarsh: SM6 and SM8;			
Low-mid marsh communities: SM13a, SM14.			
Mid-upper marsh communities: SM13d+f, SM16, SM19.			
Driftline: SM24			
Transitions: including swamp communities: S21			
Attribute term in guidance	**Measure**	**Site-specific Targets**	**Comments**
Vegetation structure: sward height	This can be assessed by taking average sward height from the quadrats forming part of the structured walk	Maintain site-specific structural variation in the sward.	Over-grazing can lead to loss of rare plant species and affect bird breeding and feeding habitats and under-grazing can lead to a loss of plant diversity by competitive exclusion. A varied vegetation structure is important for maintaining invertebrate diversity.
Vegetation composition: characteristic species	Visual assessment of cover, using structured walk	Maintain frequency of characteristic species of saltmarsh zones as follows: **[refer to table 3d in FCT for list]**	Communities may be dynamic in their distribution and are linked to the physical processes operating at the site, including topography, creek patterns etc. The species composition and type of saltmarsh will vary regionally and also from site to site.
Other negative indicators	Visual assessment during site visit	No increase in bare substrate as a result of anthropogenic activities such as vehicle use or trampling at vulnerable locations (tracks, access points)	

Each entry/exit point will be monitored throughout the year with digital people counters to provide access data: levels of footfall and timing of visit. The data will be collected regularly to assess the levels and whether the trigger is met. Data will be collected prior to commencement to establish current access patterns and usage and throughout the monitoring period to quantify any change in access and determine any impact on the saltmarsh.
The access and habitat data will be evaluated annually to determine any effects to the habitat from the levels of access, using trampling thresholds calculated from Anderson (1995)[2] and the FCT survey.

Results and actions: Based on expert opinion the trampling threshold limit of 1,851 passes over the 2 month period (June and July) has been set, by which trampling is assessed to be of medium impact and should trigger action to review the habitat regulations assessment before any adverse effects can occur.

Table 2: Thresholds and actions

Footfall threshold	Habitat survey	Action
< 1851 passes	Below Threshold Trigger	No review of habitat regulations assessment required. Monitoring of condition will continue to be applied.
	Above Threshold Trigger	Review of habitat regulations assessment. Monitoring of condition will continue to be applied.
> 1851 passes	Below Threshold Trigger	Review of habitat regulations assessment. Monitoring of condition will continue to be applied
	Above Threshold Trigger	Review of habitat regulations assessment. Monitoring of condition will continue to be applied.

If after a review additional mitigation is required the following options have been identified.

- A review of the directions to exclude coastal access rights between Links End and Lowmoor Point
- A variation to the route of the England Coast Path between Links End and Lowmoor Point.

[1] Designated Sites View – Lindisfarne SSSI, Natural England

[2] Andersen, U.V., 1995. Resistance of Danish coastal vegetation types to human trampling. Biological Conservation, 71, 223-230.