



Berwickshire and North Northumberland Coast European Marine Site

Berwickshire and North Northumberland Coast Special Area of Conservation
and the intertidal areas of the Lindisfarne Special Protection Area



Management Scheme 2014



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Berwickshire and North Northumberland Coast European Marine Site : Management Scheme

Who is this management scheme for?

This management scheme is for authorities with statutory powers to manage activities within the marine and coastal environment of Berwickshire and Northumberland. When exercising these powers, authorities must have regard under requirements of the EC Birds and Habitats Directives for the protection of European sites, which include Special Protection Areas and Special Areas of Conservation. This scheme is the tool chosen by authorities with a remit for managing activities within and close to the Berwickshire and North Northumberland Special Area of Conservation and the intertidal areas of the Lindisfarne Special Protection Area, to ensure their compliance with these directives. The area covered by this scheme is known and managed as the Berwickshire and North Northumberland Coast European marine site.

How should this scheme be used?

This scheme identifies activities within and close to the Berwickshire and North Northumberland Coast European marine site, along with the statutory tools available for their management and the authorities responsible for regulation. The scheme turns these management responsibilities into clear actions grouped by activity and, to help authorities with their individual duties, actions are also grouped by authority. The management efforts of non-statutory organisations are also included. This scheme is the primary tool for providing co-ordinated management for the Berwickshire and North Northumberland Coast European marine site.



Berwickshire
and North
Northumberland
Coast



The spectacular coastline of Berwickshire and Northumberland is well known for its dramatic scenery and abundant wildlife. The intertidal shore and shallow sea supports a rich assemblage of marine plants and animals, making the area one of the most important locations for marine life in Europe.

Rocky reef fringes the coast, providing a fascinating platform of nooks and crevices for sea creatures to colonise.

Rocky headlands are separated by sweeping bays and extensive sand and mud flats, providing a home for thousands of burrowing worms, urchins and sediment-dwelling animals. Mysterious sea caves are home to a colourful array of life, while shallow kelp forests provide important shelter for a vast range of animals. These exceptional habitats support an internationally important breeding colony of grey seal, plus thousands of coastal birds.



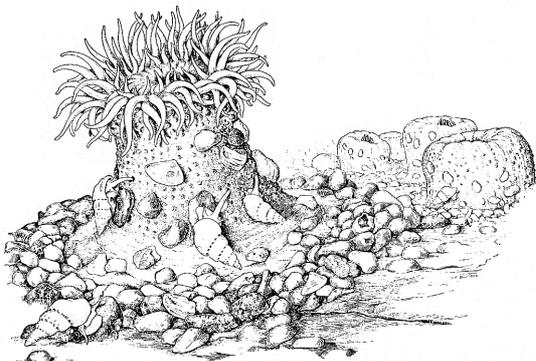
Introduction

What is a European Site?

The term **European site** is used to describe two types of statutory nature conservation designation. The first is a **Special Protection Area (SPA)**. SPAs are designated under the 1979 EC Birds Directive to protect rare, threatened or vulnerable birds listed in Annex I of the directive. SPAs also protect supporting habitats within the boundary of the site; the birds, however, are also protected when beyond the boundary.

The second designation is a **Special Area of Conservation (SAC)**. SACs are designated under the 1992 EC Habitats Directive to protect habitats listed in Annex I and species listed in Annex II of the directive. Mobile species designated as part of a SAC are also protected when beyond the boundary of their site.

SPAs and SACs are known collectively as **European sites** and can be designated on land, at the coast and out to 200 nautical miles within member states. The entire suite of SPAs and SACs across Europe is known as the **Natura 2000 Network**.



What is a European Marine Site?

The term **European marine site (EMS)** is not a statutory designation. It is a UK management term used to describe parts of a SPA or SAC that include marine habitats or species. EMSs can range from entirely subtidal to exclusively intertidal, or a combination of both. An EMS can be made up from a single SPA or SAC, parts of a SAC or SPA (where these sites also include terrestrial areas), or might include multiple SPAs or SACs grouped together under a single EMS banner for the purposes of management.

Protection and Management

Legislation

This scheme only covers the implementation of the EC Birds and Habitats Directives in English and Scottish inshore waters (0-12 nautical miles) as the scheme is limited to sites in these areas. The EC Birds Directive is transposed into English and Scottish law through the Wildlife and Countryside Act 1981, the Conservation of Habitats and Species Regulations 2010 (as amended in England), and the Habitat Regulations 1994 (as amended in Scotland). The EC Habitats Directive is transposed through the Conservation of Habitats and Species Regulations 2010 (as amended in England) and the Habitat Regulations 1994 (as amended in Scotland).



Management

Intertidal SPAs and SACs located entirely above the mean low water mark generally have an underlying **Site of Special Scientific Interest (SSSI)** – a statutory UK nature

conservation designation created under the Wildlife and Countryside Act 1981.

Activities within SSSIs are strictly managed through the Wildlife and Countryside Act, meaning that activities in overlying SPAs and SACs are also managed in accordance with the EC Birds and Habitats Directives.

The Wildlife and Countryside Act, however, is terrestrial legislation and has no remit seaward of the mean low water mark. In the majority of cases SPAs and SACs which stretch seaward of the intertidal area are not underpinned by SSSI designations and do not benefit from protection provided by the Wildlife and Countryside Act. To address this gap, extra provisions are included in both the Conservation of Habitats and Species Regulations 2010 (as amended) (hereafter referred to as the English Habitat Regulations), and the Habitat Regulations 1994 (as amended in Scotland) (hereafter referred to as the Scottish Habitat Regulations).

Competent and Relevant Authorities

Under the English and Scottish Habitat Regulations, **Competent Authorities** include any Minister, government department, public or statutory undertaker, public body of any description or person holding a public office. **Relevant Authorities** are defined as those which exercise statutory powers over the marine and intertidal area and are therefore directly involved in the management of marine SPAs or SACs.

Competent and relevant authorities must have regard to the EC Birds and Habitats Directives when performing their duties and functions.

Non-Governmental Organisations

Various non-governmental organisations operate within Berwickshire and Northumberland. Many play an important management role. Compared to statutory competent and relevant authorities, non-governmental organisations are not governed by the Habitat Regulations in the same way. The management they carry out is on a voluntary basis.

Conservation Advice

Statutory nature conservation bodies – Natural England in England, Scottish Natural Heritage in Scotland – have a duty under the English and Scottish Habitat Regulations to provide advice to relevant authorities on the conservation objectives for marine SPAs and SACs, as well as advice on activities and pressures that might cause deterioration or disturbance to designated features. This advice informs the development of management measures for a site and informs decisions on the impact of proposed activities.

Plans, Projects, Consents and Permissions

Many human activities within or close to the Berwickshire and North Northumberland Coast EMS, either current or planned, are subject to the consent or permission of a competent authority and are classified as 'plans' or 'projects' under the English and Scottish Habitat Regulations. Where proposals might cause a 'likely significant effect' upon a European site, full consideration must be given to the requirements of the Birds and Habitats Directives and proposals must be appropriately



assessed before consent is given. Only proposals which do not adversely impact the integrity of a European site can go ahead, unless in cases of overriding public interest which can only be granted permission by the European Commission. In such cases, compensation must be provided.

Human Activities and Operations Not Regarded as a Plan or Project

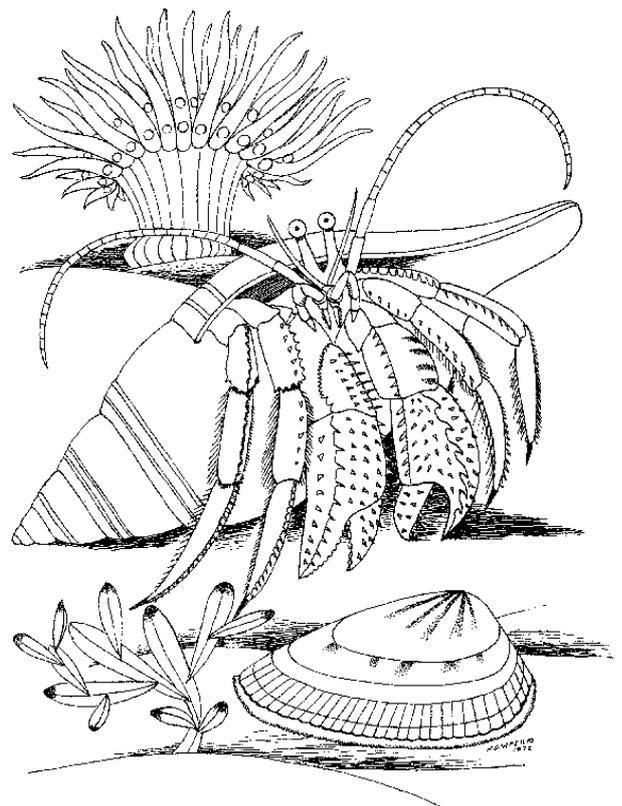
Many activities happen within and close to the Berwickshire and North Northumberland Coast EMS that are not regarded as a 'plan' or 'project' under the Habitat Regulations, and do not, therefore, undergo a full assessment before being granted permission or consent. For these ongoing activities, other types of management measures are used to ensure that they do not hinder the aims of the EC Birds and Habitats Directives. Such measures might include local byelaws, secondary legislation, or voluntary codes and agreements.

Management Scheme

A **management scheme** is the tool used by competent and relevant authorities to ensure compliance with the EC Birds and Habitats Directives. Authorities also use a scheme to co-ordinate their statutory marine functions and management efforts with regard to marine SPAs and SACs. The scheme provides a framework for partnership working and is recognised as the most time- and cost-efficient method for managing large complex sites. Without a scheme, authorities must still develop appropriate management measures in order to comply with the EC Birds and Habitats Directives, but they would do so with reduced support and in isolation of each other.

Site Condition Monitoring

The statutory nature conservation bodies - Natural England and Scottish Natural Heritage - are responsible for monitoring the condition of all European sites within England and Scotland. The UK Government must report to the European Commission every six years on the condition of UK SPAs and SACs. Monitoring results are also used to inform site-level management and the content of the management scheme.





Berwickshire and North Northumberland Coast European Marine Site

Site Overview

The Berwickshire and North Northumberland Coast European marine site is made up from components of two separate European sites – the **Berwickshire and North Northumberland Coast Special Area of Conservation**, and the intertidal habitats of the **Lindisfarne Special Protection Area**. It is important to note that the Berwickshire and North Northumberland Coast European marine site is not in itself a statutory designation. This is simply a term given to the grouping of SAC and SPA components which fall under this management scheme. It is important to note that only the intertidal habitats of the Lindisfarne SPA are covered by this scheme. All other features of the SPA are managed under the terrestrial protective framework and by the presence of an underlying Site of Special Scientific Interest (SSSI) and National Nature Reserve.

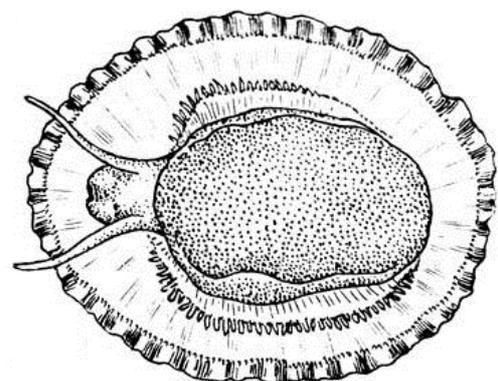
Berwickshire and North Northumberland Coast Special Area of Conservation

The Berwickshire and North Northumberland Coast SAC received full designation in 2000. The site stretches from Alnmouth in Northumberland, England, along 115km of coastline to Fast Castle Head in Berwickshire, Scotland (Fig. 1). It stretches out to almost four nautical miles at its widest point and encompasses 645 km² of shore and sea, including the Farne Islands and Holy Island. It protects intertidal and subtidal reefs, intertidal sand and mud, submerged and partially submerged sea caves, large

inlets and bays, and a breeding population of grey seal. The SAC has no underlying SSSI designed to protect the same features, as it extends seaward of the mean low water mark and beyond the remit of SSSI legislation - the Wildlife and Countryside Act 1981. The intertidal areas, however, are underpinned by the Northumberland Shore SSSI, but only for bird interest features and their supporting habitats, not for intertidal SAC habitats in their own right.

Lindisfarne Special Protection Area

Lindisfarne SPA was designated in 1992 to protect rare, threatened and vulnerable birds listed in Annex I of the Birds Directive, plus internationally-important populations of migratory species and waterfowl. The boundary of the SPA protects intertidal sand and mudflats, rocky shore, saltmarsh and eelgrass beds as supporting habitats for the bird interest features. These supporting habitats make up 75% of the Lindisfarne SPA and lie entirely within the boundary of the Berwickshire and North Northumberland Coast SAC.



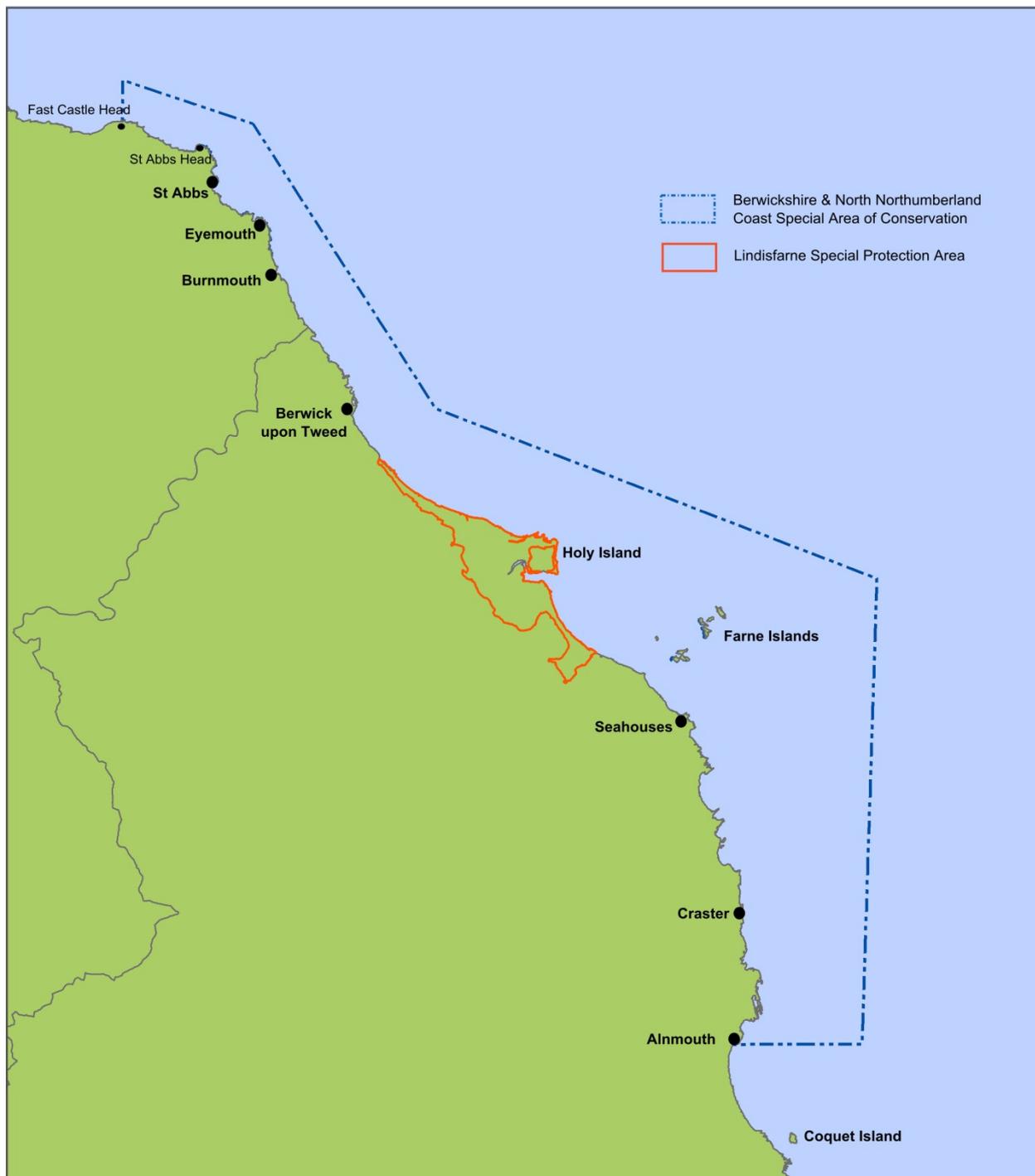


Figure 1. Location of the Berwickshire and North Northumberland Coast SAC and the Lindisfarne SPA



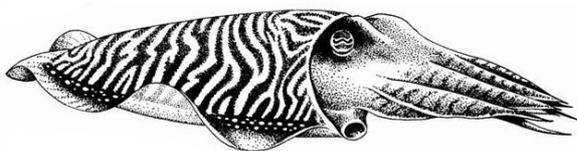
How is the Berwickshire and North Northumberland Coast EMS Managed?

Management Group

Twenty-eight groups of activities are identified within the Berwickshire and North Northumberland Coast EMS which require various degrees of management. Twenty-one relevant authorities are identified as having the statutory powers to contribute towards their management. These authorities form the Berwickshire and North Northumberland Coast EMS Management Group and each authority co-ordinates its individual management efforts through this scheme. Group members are displayed opposite. Northumberland Wildlife Trust is also a member of the Management Group as a non-statutory organisation. The group meets annually to discuss management progress and issues. In between meetings, it delegates powers to the Steering Group.

Steering Group

The Steering Group is made up of 12 relevant authorities plus other interested organisations. Membership is displayed opposite. The group has executive powers delegated by the Management Group and meets quarterly to discuss ongoing site management and to steer the work of the Implementation Officer.



Management Group Members

- Berwick Harbour Commission
- Environment Agency
- Eyemouth Harbour Trust
- English Heritage
- Marine Management Organisation
- Marine Scotland
- Maritime and Coastguard Agency
- Ministry of Defence
- National Trust
- National Trust for Scotland
- Natural England
- North Sunderland Harbour Commission
- Northern Lighthouse Board
- Northumberland County Council
- Northumberland IFCA
- Northumberland Wildlife Trust
- River Tweed Commission
- Scottish Borders Council
- Scottish Environment Protection Agency
- Scottish Natural Heritage
- St. Abbs Harbour Trust
- Trinity House

Steering Group Members

- Environment Agency
- Eyemouth Harbour Trust
- Marine Scotland
- National Trust
- Natural England
- Northumberland Coast AONB
- Northumberland County Council
- Northumberland IFCA
- Northumberland Wildlife Trust
- Scottish Borders Council
- Scottish Environment Protection Agency
- Scottish Natural Heritage
- St. Abbs and Eyemouth Voluntary Marine Reserve



Implementation Officer

The Implementation Officer is employed by the Management Group to develop the management scheme and to support authorities with its implementation. The officer provides the secretariat and maintains the governance framework within which the scheme operates, and facilitates partnership working across the site. The officer is also assigned specific management actions through this scheme.

Monitoring Progress

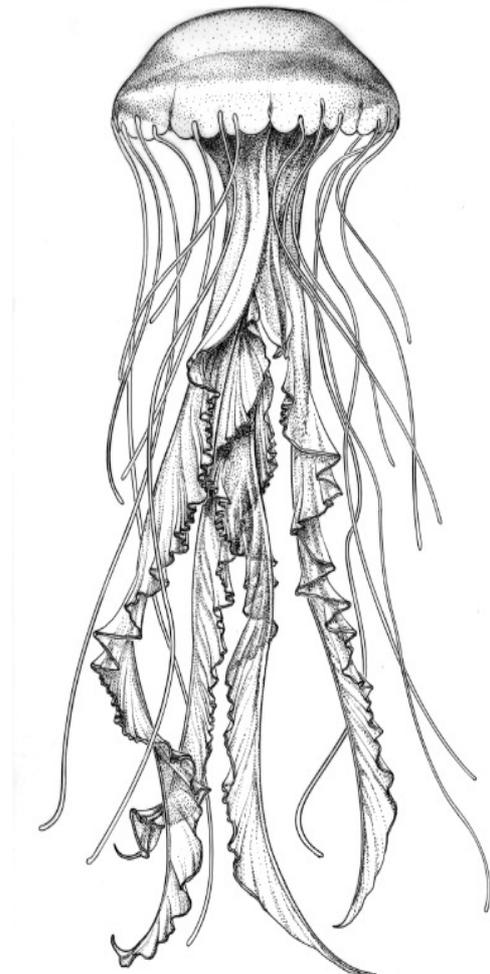
Management Group authorities report annually to the Implementation Officer on the progress of management measures contained within this scheme. The officer provides a summary of progress in an annual report.

Updating the Scheme

Management Group members will be asked to complete a short annual questionnaire annually to gather data on changes related to activities taking place within the EMS, changes to statutory duties, changes to management efforts and data gathering. The officer will use the results to maintain the scheme up to date. Figure 2 illustrates the process.

Updating the Action Plan

Reporting indicators have been produced to act as triggers for further management requirements. The indicators are discussed on page 21 and are listed in the Action Plan from pages 24 - 37. The officer will use feedback from authorities on the indicators to update the action plan annually. Statutory condition monitoring and other evidence relating to activities and condition will also be used to inform management actions (Fig. 2).



Berwickshire and North Northumberland Coast European Marine Site: Management Scheme 2014

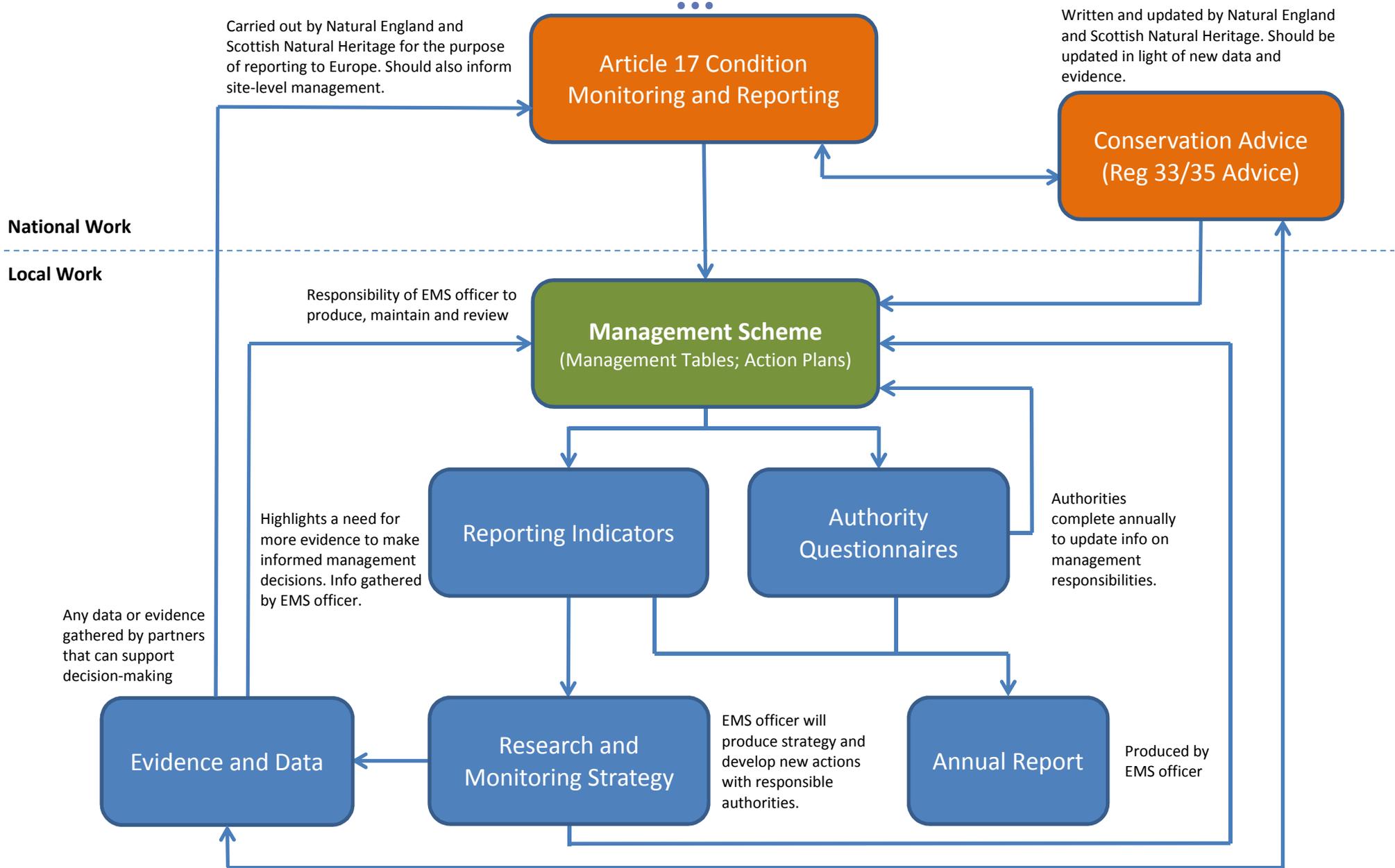


Figure 2. Management Scheme monitoring and reporting process



Relationship to Adjacent and Overlapping Designations

Ramsar Sites

Ramsar sites are designated under the 1971 Ramsar Convention to protect wetlands of international importance. The area covered by Lindisfarne SPA was one of the first sites to be designated in 1976. Most of the shore between the Tweed Estuary and Tees Estuary is also a Ramsar site and follows the boundary of the Northumbria Coast SPA, which overlaps the Berwickshire and North Northumberland Coast SAC and the Lindisfarne SPA and Ramsar. Ramsar sites are afforded the same level of protection in the UK as SPAs; most have an underlying SPA that follows the Ramsar boundary.

Special Protection Areas (SPAs)

In addition to the Lindisfarne SPA there are a further four SPAs adjacent to and overlapping the Berwickshire and North Northumberland Coast SAC, including the St. Abb's Head to Fast Castle SPA, the Northumbria Coast SPA, the Farne Islands SPA and the Coquet Island SPA. All have underlying SSSI designations and are managed through provisions in the Wildlife and Countryside Act 1981 and so have not been brought under this management scheme. In 2009, the St. Abb's Head to Fast Castle SPA was extended one kilometre offshore and its southern half overlaps with the Berwickshire and North Northumberland Coast SAC. There is a possibility that the remaining SPAs might be extended offshore in the future. If extended, the Management Group and national competent authorities will discuss the option to bring these sites under a single scheme. Opportunities to

group sites under a single scheme will also be discussed as part of an English Marine Protected Area management review.

Special Areas of Conservation (SACs)

A number of SACs lie adjacent to, but do not overlap with the Berwickshire and North Northumberland Coast SAC. Sites include St. Abb's Head to Fast Castle SAC within Scotland, the Tweed Estuary SAC and the North Northumberland Dunes SAC. Each SAC has an underlying SSSI and is managed through the terrestrial protective framework.

Sites of Special Scientific Interest (SSSIs)

Much of the intertidal shore within the boundary of the Berwickshire and North Northumberland Coast SAC is encompassed by the Northumberland Shore SSSI, designated as an important wintering ground for shorebirds and for supporting both nationally and internationally important numbers of six species of wading bird. The SAC encompasses a further 10 SSSIs, from the Berwickshire Coast SSSI in the north to the Howick to Seaton Point SSSI in the south. The Lindisfarne SPA is entirely within the boundary of the Lindisfarne SSSI. In the south, the Alnmouth Saltmarsh and Dunes SSSI lies adjacent to the southern end of SAC. The SSSIs complement the European sites by conserving specific interest features within an area of high conservation value.

National Nature Reserves (NNRs)

The area covered by the Lindisfarne Ramsar, SPA and SSSI is also a designated National Nature Reserve (NNR). The Farne Islands are also afforded NNR status. NNRs are the best examples of SSSIs and aim to provide access and opportunities for people to experience



the natural environment. Lindisfarne NNR is under the management of Natural England, and the Farne Islands NNR is managed by the National Trust. Both sites lie entirely within the Berwickshire and North Northumberland Coast SAC. Both NNRs have byelaws in place specific to the NNR status which make a direct contribution towards the management of the wider Berwickshire and North Northumberland Coast EMS.

Marine Conservation Zones (MCZs)

Marine Conservation Zones (MCZs) are a new type of English marine nature conservation designation which aim to protect marine habitats and species typical of English waters. MCZs are designated under the Marine and Coastal Access Act 2009. The AIn estuary was designated in 2013 and lies adjacent to the southern boundary of the Berwickshire and North Northumberland Coast SAC. The estuary is designated for a range of habitats including coastal saltmarsh and saline reed beds, intertidal mud, estuarine rocky shore and sheltered muddy gravels.

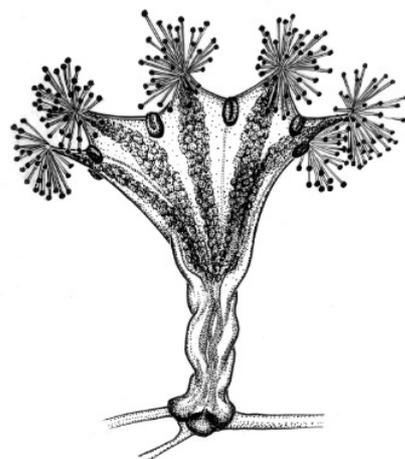
St. Abbs and Eyemouth Voluntary Marine Reserve (VMR)

The St. Abbs and Eyemouth Voluntary Marine Reserve (VMR) was established in 1984 and was the first Scottish VMR. The reserve stretches along eight kilometres of the Berwickshire coast from north of St. Abb's Head to Eyemouth, and extends one and a half kilometres offshore. The VMR lies entirely within the boundary of the Berwickshire and North Northumberland Coast SAC and has a special assemblage of marine life that attracts divers and wildlife enthusiasts from around the world.

It is fished by a traditional pot fishery for crab and lobster. Management of the VMR is overseen by a committee comprising representatives of the fishing and diving communities, harbour trusts, conservation organisations and local authorities. Management measures in place within the VMR play an important role in supporting the overall management of the Berwickshire and North Northumberland Coast EMS.

Northumberland Coast Area of Outstanding Natural Beauty (AONB)

The Northumberland Coast Area of Outstanding Natural Beauty (AONB) is an English designation covering 138 square km and stretching along 64 km of coastline from Berwick upon Tweed to the Coquet Estuary. The AONB extends down to mean low water and overlaps with intertidal areas of the Berwickshire and North Northumberland Coast EMS. The purpose of the AONB is to protect and enhance the natural beauty of the area. The spatial overlap with the EMS means that the two designations share common conservation aims and issues. The management of each designation brings mutual benefits for the other.





Feature Descriptions and Conservation Objectives

Berwickshire and North Northumberland Coast SAC

The Berwickshire and North Northumberland Coast SAC is designated for five qualifying features. Each feature has associated sub-features. Their distribution varies along the coast, as illustrated in Figure 3. The conservation objectives for each feature are listed below. They have been taken from the Regulation 33 Advice Package that was published by English Nature and Scottish Natural Heritage in 2000 under requirements of the 1994 Habitat Regulations. New conservation advice will be produced before April 2016 when advice on conservation objectives and activities likely to cause damage will be reviewed. Until that time, the 2000 advice will be used to inform this management scheme.

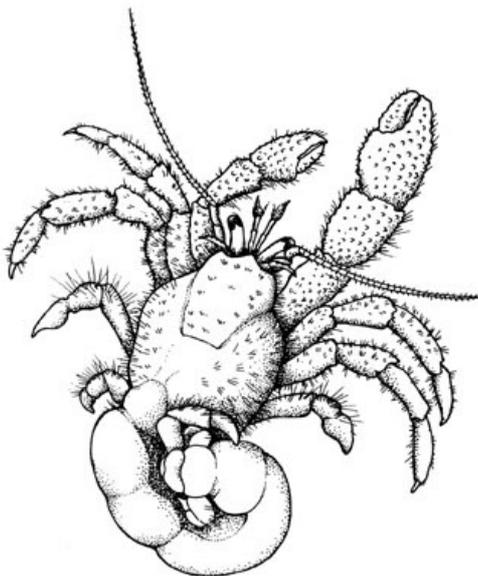
Feature: Intertidal and Subtidal Rocky Reef

Reefs are found throughout the Berwickshire and North Northumberland Coast SAC. The reefs come in a wide variety of shapes and forms, including areas of cobbles, vertical rock walls, horizontal ledges, areas of broken bedrock and boulder fields. The majority of reefs are found in the subtidal zone below the low water mark; however, reefs also lie within the intertidal zone - an area often referred to as the rocky shore. The reefs within the SAC are some of the most diverse in the North Sea.

Sub-features: Rocky shore communities, kelp forest communities, subtidal faunal turf communities

Conservation objective: Subject to natural change, maintain in favourable condition the reefs, in particular:

- The extent, distribution, diversity and species richness of reef communities



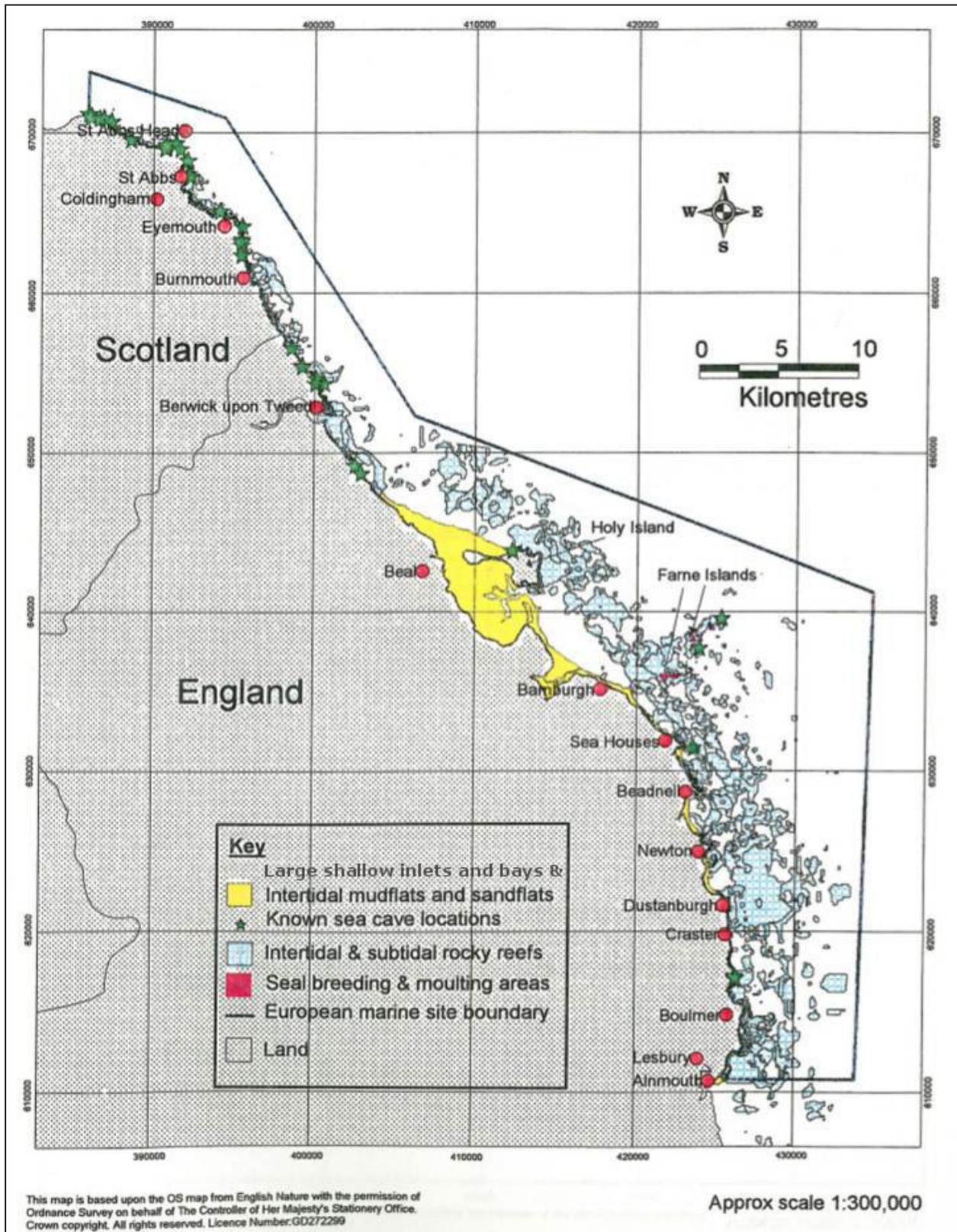


Figure 3. Location of features within the Berwickshire and North Northumberland Coast SAC and the Lindisfarne SPA. Image replicated from the Regulation 33 Advice Package 2000.



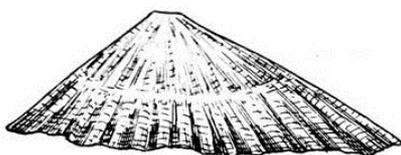
Feature: Submerged and Partially Submerged Sea Caves

Sea caves are found throughout the Berwickshire and North Northumberland Coast SAC but are more dominant in the northern section. They are associated with areas of reef and include tunnels or caverns in the intertidal and subtidal zones. The type of bedrock from which a cave is made and the location of the cave can influence its shape, morphology and the animals and plants that it supports. Caves vary in size from only a few metres to more extensive systems which may extend hundreds of metres into the rock. They are typically colonised by encrusting animals but can also support shade-tolerant algae near the entrance. Examples of partly submerged caves can be found in the sandstone cliffs to the north of Berwick, in the limestone at Howick, and on the north side of Holy Island. Submerged sea caves, tunnels and arches occur in the volcanic rock around St. Abbs and the Farne Islands.

Sub-features: Intertidal cave communities, subtidal cave communities

Conservation objective: Subject to natural change, maintain in favourable condition the submerged or partially submerged sea caves, in particular:

- The diversity of sea cave communities and their characteristic zonation



Feature: Intertidal Sand and Mud Flats

Intertidal sand and mud flats are submerged at high tide and exposed at low tide. The English section of the site contains extensive and biologically diverse sand and mud flats. They range from wave exposed areas with mobile coarse sand, to more sheltered areas of fine sediment. The assemblage of animals and plants they support depends on the type of sediment present, its stability and the salinity of the surrounding water. Fenham Flats, Ross Sands, Budle Bay and the coast adjacent to the north of Holy Island form the most extensive area of intertidal sand and mud in North East England. They support one of the largest intertidal beds of narrow-leaved seagrass (*Zostera angustifolia*) and dwarf seagrass (*Zostera noltii*) on the east coast of the UK. There is also a diverse collection of animals living within the sediment, with large beds of the blue mussel (*Mytilus edulis*) on the surface. Many of the bays along the open coast consist of fairly mobile sand that supports communities of small crustaceans and marine worms. Areas of more sheltered sediment, such as Newton Haven, support stable lower shore communities of burrowing heart urchins (*Echinocardium cordatum*) and bivalve molluscs.

Sub-features: Sand communities, mud and muddy sand communities, mussel bed, eelgrass

Conservation objectives: Subject to natural change, maintain in favourable condition the sand flats and mud flats not covered by sea water at low tide, in particular:



- The extent of eelgrass bed communities and mussel (*Mytilus edulis*) bed communities
- The diversity of infaunal communities

It should be noted, since the original conservation objectives were published in June 2000, high levels of nutrient enrichment have resulted in a deterioration of the sand and mud flats. Through this management scheme, it is hoped that the condition of the sand and mudflats will be restored rather than maintained.

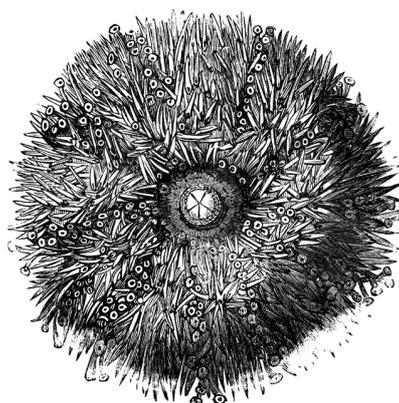
Feature: Large Shallow Inlets and Bays

Whilst predominantly rocky, the English section of the SAC has several characteristic, sediment-dominated bays including Budle Bay, Beadnell Bay and Embleton Bay. These beautiful beaches are relatively exposed, fairly uniform in nature and support many marine invertebrates. Budle Bay lies on the mainland just south of Holy Island. This area forms one of the most extensive areas of sand flat between the Firth of Forth and the Wash, with one of the richest assemblages of sediment species in North East England. Beyond the intertidal area, Beadnell Bay and Embleton Bay form a sandy break in the otherwise continuous rocky reef, with extensive areas of clean sand which support dense populations of the heart urchin (*Echinocardium cordatum*), and razor clams (*Ensis iliqua* and *E. arcuatus*).

Sub-features: Fine and coarse sediment communities

Conservation objectives: Subject to natural change, maintain in favourable condition the large shallow inlets and bays, in particular:

- The extent and diversity of component habitats
- The water quality of component habitats



Feature: Grey Seal (*Halichoerus grypus*)

The information below on grey seal populations within the Berwickshire and North Northumberland Coast SAC is taken from the following report:

Thompson, D. & Duck, C. (2010) *Berwickshire and North Northumberland Coast European Marine Site: grey seal population status. Report to Natural England: 20100902-RFQ*

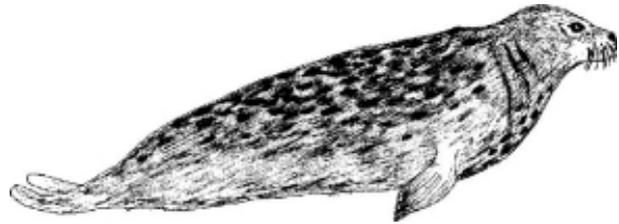
The UK supports around 45% of the world population of grey seal (*Halichoerus grypus*) based on pup production. This represents 95% of the total European population. Within the Berwickshire and North Northumberland Coast SAC there are two major grey seal breeding groups.



There is a long established breeding population on the Farne Islands and a relatively recently established breeding group on the mainland coast at Fast Castle. In addition, to the north of the SAC, there is a major breeding colony on the Isle of May which is traditionally thought to have been established by recruitment from the Farnes population. There are smaller breeding groups to the west of the SAC on the small isles of the Firth of Forth, particularly Inchkeith. To the south of the SAC, the nearest significant breeding colony is at Donna Nook in Lincolnshire. Pups are occasionally born on other sections of the coast, and parts of the coast between Budle Bay and the north end of Holy Island would appear to be potentially suitable breeding sites; however, no other regular breeding groups are known within the SAC other than at the Farne Islands and Fast Castle.

Farne Islands Breeding Colony

Grey seals have bred on the Farne Islands since historical records began in the 7th Century. Today (2013), an estimated 4,000 individuals live and breed on the Farne Islands, with approximately 1,000 pups being produced each year, although mortality can be high due to frequent bad weather and rough sea conditions. Females give birth on the Farnes from September through to December, often selecting sites close to where they gave birth in the previous season. On the Farne Islands, rocky and coarse sediment shores provide the main breeding habitats. Access to undisturbed pupping areas is a key requirement and the success of the Farne Islands colony is thought to be largely due to the undisturbed nature of the islands.



Fast Castle Head Breeding Colony

Small numbers of grey seal have been known to breed on beaches at the base of cliffs at Fast Castle since the late 1980s. The first comprehensive pup production surveys were carried out in 1997 when pup production was around 230. Pup production at Fast Castle continues to grow exponentially at an average rate of approximately 16.6% per annum (p.a.). It is generally assumed that a closed population of grey seals can grow at around 12% p.a. in the absence of density dependent effects, with the highest plausible fecundity and adult and pup survival levels. Sustained growth of 16.6% p.a. can only be achieved with additional recruitment from other breeding colonies. In the case of Fast Castle, it seems likely that the nearby Isle of May population is the main source of recruits. The most notable feature of the Fast Castle colony is that it has exhibited very rapid growth throughout a period when the adjacent colonies at the Farne Islands and the Isle of May have shown little growth. In 2008, Fast Castle pup production was equal to that of the Farne Islands. With no indication of a slow-down in the 16% p.a. growth rate, the obvious implication is that within a few years this remote colony on the Berwickshire coast will be significantly larger than the Farne Islands colony.



Non-Breeding Distribution

Grey seals come ashore to rest outside of the breeding season and they moult during late winter. A study carried out during the Spring and Summer months of 2008 (Thompson and Duck, 2010) revealed that the area around the Farne Islands and Holy Island holds the largest concentration of hauled out seals along the East coast, with a small haulout area at Newton Bay. The nearest large haulout site to the north was 80 km away at the Firth of Forth. To the south there was a major haulout site at Coquet Island - just south of the Berwickshire and North Northumberland Coast SAC – but then no major haulout sites between Coquet Island and the Humber estuary. The SAC, therefore, provides valuable haulout locations. The complete absence of seal haulout sites along the coast at the Fast Castle breeding site was unexpected, as there are haulout sites close to most grey seal breeding sites in the UK. The most likely explanation is that the local topography at Fast Castle does not provide suitable haulout habitat (*ibid.*). Whereas access to sheltered and undisturbed beaches is the primary consideration for breeding grey seals, haulout sites are usually areas with easy access to open water. The stratigraphy at Fast Castle, with erosion of cliffs with steep incline planes means that there are few suitable haulout rocks. The sheltered beaches have restricted access routes which may reduce their attractiveness to seals. The proximity (50km represents less than a half day swim for a grey seal) of the large and presumably attractive haulout sites at the Farnes, Isle of May and Firth of Tay, and the wide ranging foraging movements of grey

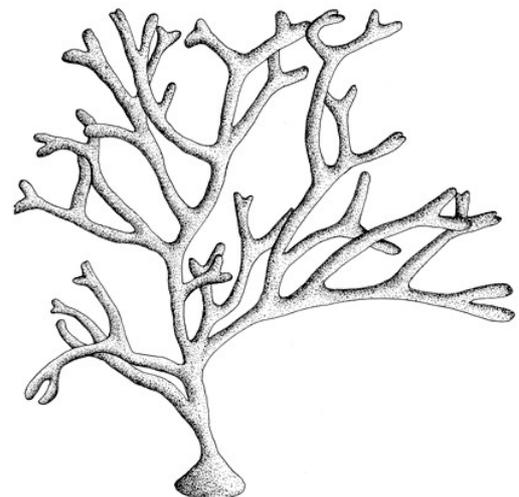
seals means that this absence of haulout sites does not indicate a problem. It should be noted that this distribution was a snap shot in 2008 and patterns may have changed since then.

Sub-features: Rocky and coarse sediment shores

Conservation objectives: Subject to natural change, maintain in favourable condition the habitats for the grey seal (*Halichoerus grypus*), in particular:

- The extent and suitability of grey seal (*Halichoerus grypus*) breeding habitat on the Farne Islands

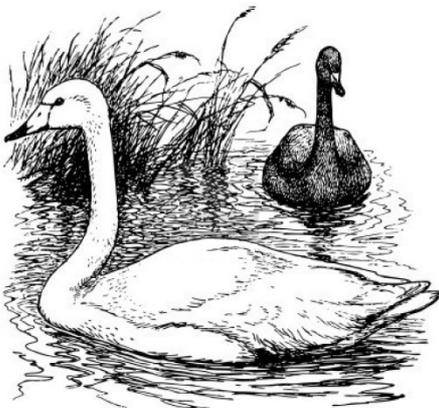
It should be noted that since the 2000 publication of this conservation objective, other areas within the Berwickshire and North Northumberland Coast SAC are becoming increasingly important for grey seals, including the Fast Castle Head breeding area and haulout areas around Holy Island. The extent and suitability of these areas should also be maintained.





Lindisfarne Special Protection Area

Lindisfarne Special Protection Area (SPA) supports a vast number of birds and their supporting habitats. The conservation objectives listed below are taken from the Regulation 33 Advice Package that was published by English Nature and Scottish Natural Heritage in 2000 under requirements of the 1994 Habitat Regulations. The conservation objectives focus on habitat condition rather than bird populations, as populations can change as a result of national or international trends or events. Annual counts for qualifying species are used by Natural England in the context of five-year peak means, together with UK population and distribution trends to assess whether this SPA is contributing to the favourable condition status of the species across Europe. Only the intertidal habitats are included within this management scheme.



EC Birds Directive Annex I Species

Golden plover (*Pluvialis apricaria*), Whooper swan (*Cygnus Cygnus*) and Little tern (*Sterna albifrons*).

Sub-features: Intertidal sand and mud flats, saltmarsh, eelgrass beds

Conservation objective: Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of regularly occurring Annex I bird species, in particular:

- Intertidal mudflat and sand flats
- Saltmarsh
- Eelgrass beds

Internationally Important Populations of Migratory Species

Greylag goose (*Anser anser*) and Light-bellied brent goose (*Branta bernicla hrota*), Wigeon (*Anas penelope*), Ringed plover (*Charadrius hiaticula*), Bar-tailed godwit (*Limosa lapponica*) and Redshank (*Tringa trotinus*).

Sub-features: Intertidal sand and mud flats, saltmarsh, eelgrass beds

Conservation objective: Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of regularly occurring migratory bird species, in particular:

- Intertidal mudflat and sand flats
- Saltmarsh
- Eelgrass beds



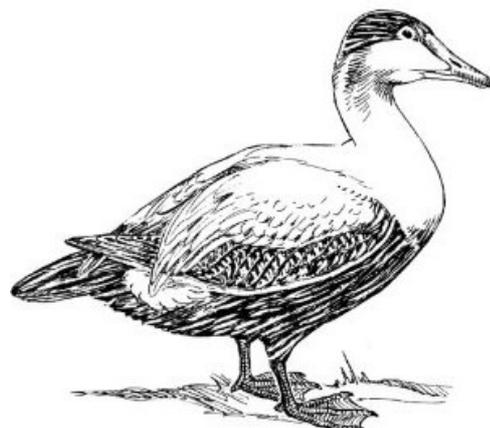
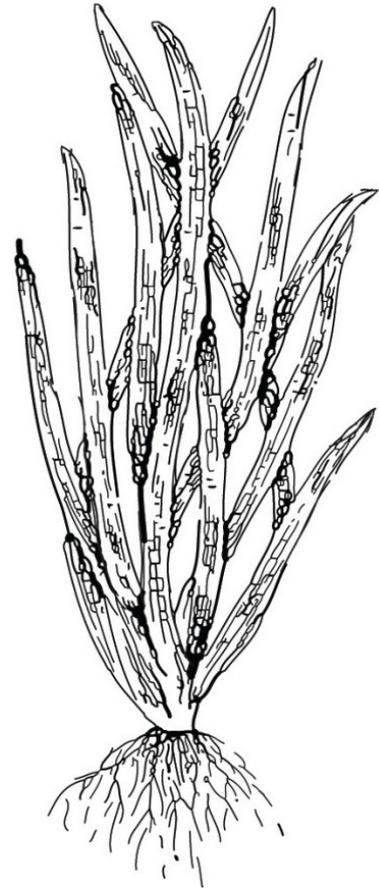
Internationally Important Assemblage of Waterfowl

Over winter, the area regularly supports internationally important numbers of waterfowl including Pink-footed goose (*Anser brachyrhynchus*), Golden plover (*Pluvialis apricaria*), Bar-tailed godwit (*Limosa lapponica*), Greylag goose (*Anser anser*), Light-bellied brent goose (*Branta bernicla hrota*), Wigeon (*Anas penelope*), Whooper swan (*Cygnus cygnus*), Knot (*Calidris canutus*), Redshank (*Tringa totanus*), Shelduck (*Tadorna tadorna*), Eider (*Somateria mollissima*), Common scoter (*Melanitta nigra*), Ringed plover (*Charadrius hiaticula*), Lapwing (*Vanellus vanellus*), Dunlin (*Calidris alpina alpina*), Grey plover (*Pluvialis squatarola*).

Sub-features: Intertidal sand and mud flats, saltmarsh, eelgrass beds, rocky shores

Conservation objective: Subject to natural change, maintain in favourable condition the habitats for the internationally important assemblage of waterfowl, in particular:

- Intertidal mudflat and sand flats
- Saltmarsh
- Eelgrass beds
- Rocky shores





Pressures in and around the Berwickshire and North Northumberland Coast EMS

Human Activities

Twenty eight groups of potentially damaging human activities have been identified as occurring within or close to the Berwickshire and North Northumberland Coast EMS. These groups are listed below. Details of each group, along with the regulatory and voluntary management tools available for management, and the lead managing organisations, are presented in the Management Tables in Appendix I (pg. 59). The management requirements identified for each activity grouping have been transferred to an Action Plan found on pages 24 - 37 of this scheme. To view which actions are relevant to each individual organisation, see the Action Plan on pages 38 - 53.



1. Anchoring
2. Angling
3. Aquaculture
4. Beach Cleaning
5. Boating
6. Commercial Fishing
7. Creel/Pot Fisheries
8. Diffuse Pollution
9. Discharges from land
10. Discharges at sea
11. Diving
12. Drift, T and J Netting
13. Flood and Coastal Defence
14. Harbour Development
15. Harbour Waste Management
16. Intertidal Hand Gathering
17. Litter
18. Low Flying Military Aircraft
19. Maintenance/Capital Dredging/Disposal
20. Microlights
21. Navigation (aid maintenance)
22. Non-Native Species
23. Oil/Pollution Spill Prevention
24. Ordnance Disposal
25. Recreation
26. Seal Control
27. Seal Stranding Response
28. Wildfowling and Punt Gunning

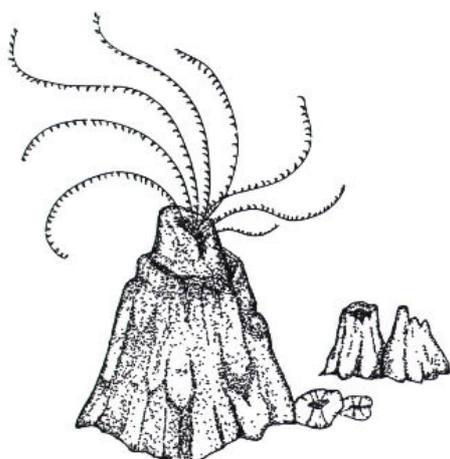


Additional Themes

In addition to the human activities discussed above, other management themes need to be considered for the effective co-ordination of management for the Berwickshire and North Northumberland Coast EMS. These themes are listed below.

- Managing the EMS in its wider context
- Data, evidence and information sharing
- Awareness-raising
- Site condition priorities

Specific actions have been developed to ensure that those involved in site management work towards these themes. The actions and associated delivery organisations can be found in the Action Plan from pages 24 - 37 of this scheme.



How will Achievement of the Scheme be Measured?

Reporting Indicators

Each activity grouping and theme has a set of reporting indicators which are displayed in the Action Plan on pages 24 - 37. Indicators relate to the following principles:

1. Do we know the intensity levels of a given activity or pressure?
2. Do we know what impact the activity/pressure is having on the site?
3. Are appropriate management measures in place?

The indicators measure whether additional data gathering or management action is required. If further work is needed, the Implementation Officer will work in partnership with organisations to develop new actions. New actions will only be included following consultation and agreement from the associated delivery organisation.

Site Condition

The most up to date statutory condition monitoring required under Article 17 of the Habitats Directive will be used, along with other data and evidence, to report against the achievement of conservation objectives (found on pages 12 - 19 of this scheme).

The Implementation Officer will produce an annual progress report based on the achievement of reporting indicators and conservation objectives, and will monitor the ongoing implementation of this scheme.



Management Action Plans

How to Read the Action Plans

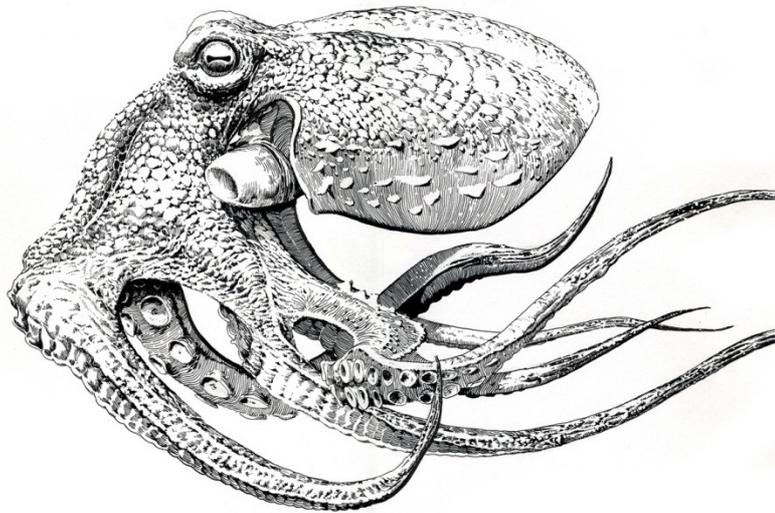
Action Plan by Activity

Human Activity:	Identifies the human activity within or close to the Berwickshire and North Northumberland Coast European Marine Site that requires a degree of management in order to protect the qualifying features.
Management Measure:	States the management action that is required to ensure that the qualifying features of the site are protected from activities.
Statutory/Voluntary Measures:	Statutory duties are identified in bold blue text. Voluntary measures are identified by regular black text. An authority is not legally obliged to carry out voluntary measures but they play an important role in site management and are to be encouraged.
Lead Organisation(s):	Identifies the organisations that will take the lead role in delivering a particular action. Statutory authorities are shown in bold green text. Where a statutory authority is identified against a statutory action (in blue), this management measure must be carried out. Where a statutory authority is identified against a voluntary measure (in black), then authorities are encouraged to carry out these measures. In some cases non-governmental organisations are identified to lead or contribute towards the delivery of a particular action. This is a voluntary contribution even when the management action is a statutory measure. Non-governmental organisations are shown in regular black text. A list of abbreviations can be found on page 57.
Timeframes:	Identifies the financial year in which the management measure should be undertaken.
Reporting Indicators:	Provide prompts to aid the understanding of a management pressure. The indicators will provide focus for the annual progress report and will trigger additional management action in the future.
Additional Themes:	Areas of work which are essential for the effective running of the management scheme and the achievement of conservation objectives, but which are not related to a particular human pressure.



Action Plan by Organisation

This action plan (page 38) contains the actions found in the 'action plan by activity', but they are now categorised by organisation. This enables each organisation to identify their role in the management scheme and to understand their statutory and voluntary contributions towards site management. The numbers in the end column refer back to the tables in the previous action plan (by activity, page 24) where delivery partners and timescales can be found.





Management Action Plan by Activity

A list of organisation abbreviations can be found on page 57

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
1. Anchoring	1.1. Identify key anchoring hotspots within the BNNC EMS and compare locations with sensitive areas of the site	EMS officer		●	●		
	1.2. Monitor the impact of anchoring within the BNNC EMS and implement management measures where necessary	NT, NE		●	●	●	●
	1.3. Maintain anchoring at a level that does not adversely affect the rocky reefs around the Farnes through the Farne Islands National Nature Reserve Management Plan	NT	●	●	●	●	●
Reporting Indicators: 1.a. Are levels of anchoring within the BNNC EMS known/have they changed from previous years? 1.b. Have anchoring hotspots been assessed against sensitive locations within the BNNC EMS? 1.c. Have management requirements been assessed and recommendations implemented?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
2. Angling (Shore and Sea)	2.1. Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible	NIFCA, RTC, EA, MS, MMO	●	●	●	●	●
	2.2. Using the Angling 2012 findings, and by continuing to collect data on recreational fishing activity through the NIFCA Angling Strategy, identify the angling hotspots within the BNNC EMS and assess against sensitive site locations	NIFCA	●	●	●		
	2.3. Work with angling groups to raise awareness of sensitive locations and promote good practice, particularly regarding litter	NIFCA, AONB, NWT, VMR	●	●	●	●	●
	2.4. Carry out beach cleans at angling hotspots	AAC, AONB, NWT	●	●	●	●	●
	2.5. Promote the importance of the BNNC EMS and its management needs to angling clubs by inviting club representatives to stakeholder events	EMS officer	●	●	●	●	●
	2.6. Ensure management regimes in the Tweed and Eye Fisheries District have regard to the qualifying features of the BNNC EMS to minimise fishing-related damage and disturbance	RTC	●	●	●	●	●
Reporting Indicators: 2.a. Are levels of angling within the BNNC EMS known/have they changed from previous years? 2.b. Have angling hotspots been assessed against sensitive locations within the BNNC EMS? 2.c. Have management requirements been assessed and recommendations implemented?							

Berwickshire and North Northumberland Coast European Marine Site: Management Scheme 2014



Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
3. Aquaculture (Pacific oyster <i>Crassostrea gigas</i>)	3.1. Review consents for the current scale of the <i>C. gigas</i> operation at Ross Sands, taking account of new evidence of natural settlement on the Firth of Forth and Solway coast. Mitigate impacts and monitor the operation.	NE, CEFAS	●	●			
	3.2. Monitor local climatic conditions and sea surface temperature to project when local conditions might support the natural establishment of <i>C. gigas</i> within the BNNC EMS. Review consents in light of changes	NE, CEFAS	●	●	●		
	3.3. Consider the opportunity to monitor the <i>C. gigas</i> operation at the same time as the annual mussel survey	NIFCA		●	●	●	●
	3.4. Ensure the management regime for the <i>C. gigas</i> operation at Ross is included in the NIFCA Strategic Environmental Assessment and implement recommended management measures	NIFCA	●	●			
	3.5. Understand the effects of the <i>C. gigas</i> operation on the native mussel beds and related features	NE, CEFAS, NIFCA	●	●	●		
Reporting Indicators: 3.a. Are the correct consents in place and have they been reviewed in light of new evidence relating to the natural settlement of <i>C. gigas</i> ? 3.b. Is a monitoring/review regime in place to look for early indications of natural settlement of <i>C. gigas</i> within the BNNC EMS? 3.c. Has the relationship between the decline in condition of the mussel beds and the proximity of the oyster trestles been explored?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
4. Beach Cleaning	4.1. Avoid mechanical cleaning on all beaches in the BNNC EMS	NCC, SBC	●	●	●	●	●
Reporting Indicators: 4.a. Are all beaches within the EMS cleaned by non-mechanical means?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
5. Boating (chartered)	5.1. Monitor boat landings within the Farne Islands NNR, maintain and enforce restrictions in order to meet the conservation objectives for features covered by this scheme	NT	●	●	●	●	●
	5.2. Work with charter boat operators to promote the significance and sensitivities of the BNNC EMS and develop codes of conduct if necessary	NT, NE(NNR), MMO, NWT	●	●	●		
	5.3. Promote the Scottish Wildlife Watching Codes with Scottish charter boat operators	SAHT, EHT, NTS VMR	●	●	●	●	●
	5.4. Evaluate existing data gathering for boat launching within the BNNC EMS, and work with slip providers to improve data gathering where opportunities exist	EMS officer		●	●		
	5.5. Boat launch facilities to share non-sensitive data on charter boat numbers with the EMS officer	SAHT, EHT, NSHC, NCC		●	●		
Reporting Indicators: 5.a. Is the level of charter boat activity within the BNNC EMS known/has it changed from previous years? 5.b. Has the level of charter boat activity been assessed for its impact on the BNNC EMS? 5.c. Have management requirements been assessed and recommendations implemented?							

Berwickshire and North Northumberland Coast European Marine Site: Management Scheme 2014



Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
6. Commercial Fishing (mobile gear)	6.1. Maintain and enforce fixed gear reserve in Scottish section of the BNNC EMS and ensure that any derogations to the order consider the impact on the BNNC EMS	MS	●	●	●	●	●
	6.2. Prohibit mobile gear designed to contact the seabed in areas of rocky reef and seagrass within the English section of the BNNC EMS	NIFCA	●	●	●	●	●
	6.3. Assess the impact of mobile gear on the integrity of the BNNC EMS and implement additional management measures, if necessary (Habitats Directive – Article 6)	NIFCA	●	●			
	6.4. Respond to SNH risk review of fishing in Scottish section of the BNNC EMS and implement fisheries management measures if necessary	MS	●	●			
	6.5. Ensure fishing vessels are disposing of fishing-related waste in a manner that complies with relevant MARPOL legislation	MCA	●	●	●	●	●
	6.6. Marine Scotland and Northumberland IFCA to work in partnership to enforce fisheries regulation in cross-border fisheries	NIFCA, MS	●	●	●	●	●
Reporting Indicators: 6.a. Have mobile fishing gear methods been assessed for their impact to the Scottish section of the BNNC EMS and management measures considered/implemented? 6.b. Have all mobile fishing gear methods that take place within the English section of the BNNC EMS been subject to a Habitat Regulations Assessment under the Habitat Regulations? 6.c. Have management measures been assessed and implemented as a result of the above assessments? 6.d. Are regulations complied with and enforced?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
7. Creel/Pot Fisheries	7.1. Maintain the pot limitation scheme in Northumberland and manage the activity at a sustainable level	NIFCA	●	●	●	●	●
	7.2. Maintain and promote the importance of the v-notching scheme in Northumberland	NIFCA	●	●	●	●	●
	7.3. Maintain and enforce byelaws for minimum landing sizes, plus any maximum landing sizes that are established in the future	NIFCA	●	●	●	●	●
	7.4. Carry out a Habitat Regulations Assessment to establish impact of the creel/pot in the English section of the BNNC EMS, and implement management measures if necessary	NIFCA	●	●			
	7.5. Respond to SNH risk review in Scottish section of the BNNC EMS and implement management measures if necessary	MS	●	●			
	7.6. Continue to explore opportunities to establish a pot limitation scheme in Scotland	MS	●	●	●		
	7.7. Support ongoing data gathering and research to inform the sustainable management of creel/pot fisheries within the BNNC EMS	NIFCA, NE, CEFAS, MS	●	●	●	●	●
	7.8. Ensure fishing vessels are disposing of fishing-related waste in a manner that complies with relevant MARPOL legislation	MCA	●	●	●	●	●

Berwickshire and North Northumberland Coast European Marine Site: Management Scheme 2014



Reporting Indicators: 7.a. Has potting been assessed for its impact to the Scottish section of the BNNC EMS and management measures considered/implemented?
 7.b. Has potting within the English section of the BNNC EMS been subject to a Habitat Regulations Assessment under the Habitat Regulations?
 7.c. Have management measures been assessed and implemented as a result of the above assessments?
 7.d. Are regulations/management measures complied with and enforced?

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
8. Diffuse Pollution (land run-off)	8.1. Ensure Catchment Sensitive Farming and other land management schemes seek to address the impact of agricultural effluent on the marine environment	NE, EA, SEPA	●	●	●	●	●
	8.2. Use sediment modelling from SMP Coastal Squeeze Study to inform nutrient transport from the rivers Eye and Tweed and its contribution to elevated nutrients around Holy Island	EA	●	●			
	8.3. Identify the sources of nutrient enrichment around Holy Island and implement management measures to reduce levels	EA	●	●	●		
	8.4. Continue to monitor the Budle Bay Nitrate Vulnerable Zone and other areas within the BNNC EMS that are vulnerable to elevated nutrient levels	EA	●	●	●	●	●
	8.5. Consider effects on the whole BNNC EMS (including effects that materialise cross-border) when prioritising water quality issues	EA, SEPA	●	●	●	●	●
	8.6. English and Scottish regulators to collaborate on coastal water quality issues where the Rivers Eye and Tweed might influence quality	EA, SEPA, NE, SNH	●	●	●	●	●
	8.7. Ensure water quality impacts on the BNNC EMS are considered in Catchment Management Plans	EA, SEPA	●	●	●	●	●

Reporting Indicators: 8.a. Are cross-border regulators working together to address diffuse pollution issues?
 8.b. In relation to elevated nutrient levels around Holy Island, have point sources been identified and are action plans being developed?
 8.c. Are nutrient levels and *Ulva intestinalis* levels reducing around Holy Island?

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
9. Discharges (from land)	9.1. Understand the cumulative impact of coastal septic tanks and misconnections on the condition of the BNNC EMS and implement management where necessary	EA, SEPA	●	●	●		
	9.2. Seek opportunities through the Living Waterways project to assess the impact of coastal developments not connected to the main sewerage system, including septic tanks and mis-connections	NWT, NWL	●	●	●		

Reporting Indicators: 9.a. Do we have an understanding of the number of coastal septic tanks flowing into the BNNC EMS and have they been assessed for their cumulative impact on the BNNC EMS?
 9.b. Have management requirements been assessed and recommendations implemented?
 9.c. Is water quality monitoring data being used to inform site condition?

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
10. Discharges (at Sea)	10.1. Provide guidelines for ballast water management, and information about the potential consequences of unwanted organisms transferred through ballast water	MCA	●	●	●	●	●

Berwickshire and North Northumberland Coast European Marine Site: Management Scheme 2014



	10.2. Provide guidelines for the discharge of substances into the sea and enforce requirements under the MARPOL Convention	MCA	●	●	●	●	●
Reporting Indicators: 10.a. Are ballast water transfer operations at Berwick harbour carried out in line with current guidelines? 10.b. Are all vessels operating within the BNNC EMS complying with requirements under the MARPOL Convention?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
11. Diving	11.1. Evaluate existing data gathering for diving intensity within the BNNC EMS, and work with slip providers to improve data gathering where opportunities exist	EMS officer, VMR		●	●		
	11.2. Dive launching facilities to share non-sensitive data on dive boat numbers with the EMS officer	SAHT, EHT, NSHC, VMR		●	●	●	●
	11.3. Maintain NIFCA byelaws for the removal of species; monitor and enforce amongst divers	NIFCA	●	●	●	●	●
	11.4. Promote good practice codes of conduct amongst divers	NIFCA, NT, NWT, VMR	●	●	●	●	●
Reporting Indicators: 11.a. Are levels of diving within the BNNC EMS known/have they changed from previous years? 11.b. Have diving hotspots been assessed against sensitive locations within the BNNC EMS? 11.c. Have management requirements been assessed and recommendations implemented?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
12. Drift, T and J Netting	12.1. Ensure management regimes in the Tweed and Eye Fisheries District have regard to the qualifying features of the BNNC EMS to minimise fishing-related damage and disturbance	RTC	●	●	●	●	●
	12.2. Ensure that net fishing south of the Tweed and Eye Fisheries District is carried out in line with Environment Agency licence requirements	EA, NIFCA	●	●	●	●	●
	12.3. Ensure the level of fishing pressure of permissible net fisheries remains at a sustainable level, in accordance with international guidelines and which does not impact the BNNC EMS	RTC, EA	●	●	●	●	●
	12.4. Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible	NIFCA, RTC, EA, MS, MMO	●	●	●	●	●
Reporting Indicators: 12.a. Are all licence holders operating within the BNNC EMS complying with conditions? 12.b. Is there any unlicensed activity within the BNNC EMS?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
13. Flood and Coastal	13.1. Seek early advice from statutory nature conservation body on all local authority flood and coastal defence schemes within and adjacent to the BNNC EMS; obtain relevant consents	NCC, SBC	●	●	●	●	●

Berwickshire and North Northumberland Coast European Marine Site: Management Scheme 2014



Defence	13.2. Ensure the BNNC EMS is considered in strategic flood and coastal defence planning - including local authority Local Plans and Neighbourhood Plans – and ensure long-term shoreline management takes habitat squeeze into account	NCC, SBC	●	●	●	●	●
	13.3. Complete a study on coastal squeeze for protected habitats along the Cell 1 frontage as a result of shoreline management planning policies	NCC	●	●			
	13.4. When providing advice on flood and coastal protection, ensure that advised actions will not negatively impact the BNNC EMS	NCC, SBC	●	●	●	●	●
	13.5. Promote and encourage flood and coastal defence schemes that work with natural processes at the coast rather than implementing hard defence measures for protection	NCC, SBC, EA, NE, SNH	●	●	●	●	●
	13.6. When defence structures come to the end of their life, seek innovative ways to work with natural processes, rather than replacing hard defence structures	NCC, SBC, EA	●	●	●	●	●
	13.7. Raise awareness among property owners of the damage caused by inappropriate fly tipping and unconsented/inappropriate private coastal defence interventions within the BNNC EMS through promotional material	NCC, EA, MMO	●	●	●	●	●
Reporting Indicators: 13.a. How many new flood and coastal defence schemes have been established within the BNNC EMS? 13.b. What is the level of unconsented flood and coastal defence schemes within the BNNC EMS? 13.c. Does the coastal squeeze study indicate expected impact on BNNC EMS features as a result of shoreline management plan policies?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
14. Harbour Development	14.1. Obtain all relevant permissions and consents for harbour works, and ensure small scale maintenance does not impact on the condition of the site	SAHT, EHT, NSHC, BHC	●	●	●	●	●
	14.2. Ensure compliance with the Port Marine Safety Code	SAHT, EHT, NSHC, BHC	●	●	●	●	●
Reporting Indicators: 14.a. How many new harbour development schemes have been implemented within the BNNC EMS?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
15. Harbour Waste Management	15.1. Harbours to provide and promote waste and recycling services	SAHT, EHT, BHC, NSHC	●	●	●	●	●
	15.2. Waste management plans to be maintained (Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission) and reviewed in line with UK regulations	EHT, BHC, NSHC, MCA	●	●	●	●	●
	15.3. Oil waste services to be provided at harbours	EHT, BHC, NSHC	●	●	●	●	●
	15.4. Implement harbour related elements of the Scottish Marine Litter Strategy	SAHT, EHT	●	●	●	●	●
Reporting Indicators: 15.a. Do harbours within the BNNC EMS that require harbour waste management plans have these in place? 15.b. How many harbours offer oil waste services?							



15.c. How many harbours offer recycling services?

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
16. Intertidal Hand Gathering	16.1. Prohibit bait digging in areas of seagrass within the BNNC EMS	NIFCA	●	●	●		
	16.2. Undertake a Habitat Regulations Assessment for all commercial intertidal hand gathering in the BNNC EMS – shellfish, bait species, <i>Littorina littorea</i> – and establish additional management measures where necessary	NIFCA	●	●			
	16.3. Consider recommendations that may develop through the IPENS project and other projects regarding the management of bait digging	NIFCA, NE	●	●			
	16.4. Maintain existing bylaws to manage intertidal hand gathering within the Lindisfarne National Nature Reserve	NE(NNR)	●	●	●	●	●
	16.5. Maintain agreement with bait diggers to avoid the north area of Boulmer Haven, while recognising this restriction is in place for boat access	NCC	●	●	●	●	●
	16.6. Work with angling groups to raise awareness of good environmental practice when bait-digging within the BNNC EMS. Develop codes of conduct if necessary	NIFCA, NE(NNR)	●	●	●	●	●
	16.7. Recognising the different rights that apply to recreational and commercial bait digging, explore the possibility of a management regime that separates the two	NIFCA	●	●	●	●	●
	16.8. Work with local sea bait trade outlets to educate them on the law regarding commercial digging, particularly within the BNNC EMS	NIFCA	●	●	●	●	●
	16.9. Continue to survey the mussel stocks to the south of Holy Island annually	NIFCA	●	●	●	●	●

Reporting Indicators: 16.a. Has a Habitat Regulations Assessment been carried out to assess the impact of bait digging within the English section of the EMS, and what are the results?
16.b. Do management regimes reflect the different rights between commercial and recreational activity?

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
17. Litter	17.1. Maintain the Fishing for Litter initiative in Scotland and promote to local fishermen	EHT, SBC	●	●	●	●	●
	17.2. Continue to explore the possibility of establishing a Fishing for Litter initiative in Northumberland	NIFCA	●	●	●		
	17.3. Continue to facilitate community beach cleans within the BNNC EMS and Northumberland Coast AONB as part of the Marine Conservation Society Beach Watch initiative	AONB	●	●	●	●	●
	17.4. Continue to collect rubbish generated from community beach cleans within the BNNC EMS and Northumberland Coast AONB	NCC	●	●	●	●	●
	17.5. Raise awareness of the impacts of marine litter among site users	NT, NE(NNR), SNH, NTS, NIFCA, VMR, AONB, NWT	●	●	●	●	●
	17.6. Implement actions from the Scottish Marine Litter Strategy and Scotland's Zero Waste Plan within the BNNC EMS	NTS, SEPA, MS, SAHT, EHT, VMR	●	●	●	●	●

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	17.7. Promote and support beach cleans throughout the BNNC EMS	NT, NE(NNR), AONB, VMR, NWT	●	●	●	●	●
	17.8. Promote and facilitate underwater litter picks	VMR		●	●	●	●
	17.9. Promote the reduction of Sewage Related Debris (SRD) being discharged to the freshwater and marine environment	SW, NWL	●	●	●	●	●
	17.10. Raise awareness of the impacts of placing inappropriate items into the sewerage system	SW, NWL	●	●	●	●	●
Reporting Indicators: 17.a. How many beaches within the BNNC EMS are regularly litter picked? 17.b. How many underwater cleans have taken place within the BNNC EMS? 17.c. Has the Fishing for Litter initiative been established in Northumberland?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
18. Low Flying Military Aircraft	18.1. Maintain low flying exclusion zones around the Farne Islands and Holy Island	MoD	●	●	●	●	●
Reporting Indicators: 18.a. Are low flying exclusion zones still in place around the Farne Islands and Lindisfarne National Nature Reserves, and are they complied with?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
19. Maintenance / Capital Dredging and Disposal	19.1. Ensure new dredge and disposal proposals undergo a Habitat Regulations Assessment	MMO, MS	●	●	●	●	●
	19.2. Ensure CEFAS and EA guidelines for levels of contaminants in dredge spoil are applied when assessing proposals	MMO, MS	●	●	●	●	●
	19.3. Ensure compliance with the Port Marine Safety Code	SAHT, EHT, NSHC, BHC	●	●	●	●	●
Reporting Indicators: 19.a. How many unauthorised dredge/dredge disposal incidents have taken place within the BNNC EMS over the reporting period?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
20. Microlights	20.1. Identify microlight hotspots within the BNNC EMS and compare against sensitive locations within the site	NE(NNR), NT, AONB, EMS officer		●	●		
	20.2. Work with light aircraft industry bodies, local airfields and user groups to develop environmental guidance for existing codes of conduct	NE(NNR), NT, AONB, EMS officer			●		
	20.3. Encourage the creation of microlight avoidance zones around sensitive areas	NE(NNR), NT	●	●	●		
	20.4. Collect intelligence about microlights within sensitive areas of the BNNC EMS and share amongst partners	NE(NNR), NT	●	●	●	●	●

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Reporting Indicators: 20.a. Which areas of the BNNC EMS are impacted by microlights?
 20.b. Has the establishment of microlight avoidance zones been considered and explored?
 20.c. Have discussions opened up with microlight user groups and are codes of conduct agreed?

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
21. Navigation	21.1. When establishing, maintaining and decommissioning aids to navigation within the BNNC EMS, ensure adverse impacts to the site are kept to a minimum	TH, NLB	●	●	●	●	●
	21.2. Ensure contractors are aware of the sensitivities of the BNNC EMS and that required consents are obtained before the commencement of works	TH, NLB	●	●	●	●	●

Reporting Indicators: 21.a. Have there been any major planned works to aids to navigation within the BNNC EMS? (Information received through Notices to Mariners)

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
22. Non-Native Species	22.1. Work with the Big Sea Survey data and other datasets to identify presence/absence, abundance and distribution of marine non-native species within and close to the EMS, identify monitoring indicator species, and assess the impact to the EMS	EMS officer	●	●			
	22.2. Identify key vectors for the introduction of marine non-native species to the BNNC EMS	EMS officer	●	●			
	22.3. Develop a monitoring strategy to look at presence/absence, abundance and distribution of target species over time	EMS officer	●	●			
	22.4. Following research and monitoring, consider the need for a biosecurity plan for the BNNC EMS	EMS officer, NE, SNH		●	●	●	
	22.5. Identify and monitor a set of climate change indicator species to inform natural change within the BNNC EMS	EMS officer	●	●	●	●	●
	22.6. Promote student projects that involve the gathering and analysis of data related to marine non-native species within and adjacent to the BNNC EMS	NE, NE(NNR), NIFCA, EMS officer	●	●	●	●	●
	22.7. Make use of existing data collection opportunities to gather data on marine non-native species	EA, SEPA, NT, NTS, NIFCA, MMO, MS, NE, NE(NNR), SNH, NWT, VMR	●	●	●	●	●
	22.8. Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	EA, SEPA, NT, NTS, NIFCA, MMO, MS, NE, NE(NNR), SNH, NWT, VMR	●	●	●	●	●
	22.9. Promote the Check, Clean, Dry campaign amongst boat owners/users	SAHT, EHT, BHC, NSHC, NT, NTS, RYA, NWT, VMR	●	●	●	●	●

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	22.10. Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	NE, NE(NNR), SNH, NT, EA, NTS, SEPA, NWT	●	●	●	●	●
	22.11. Place settlement panels within and close to the BNNC EMS to gather early warning signs of the presence of marine non-natives	NE, NE(NNR)	●	●	●	●	●
	22.12. Continue to support the UK MarClim project within the BNNC EMS to maintain dataset on climate change indicator species	NE	●	●	●	●	●
Reporting Indicators: 22.a. Have invasive non-native marine species been identified within and close to the BNNC EMS, and is their location and distribution mapped? 22.b. Is a monitoring strategy in place for marine non-native species within and close to the BNNC EMS? 22.c. Which established non-native species are being controlled within and close to the BNNC EMS and are methods of control impacting the site? 22.d. How many marine non-native projects have been complete/are underway within the BNNC EMS?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
23. Oil/ Pollution Spill Prevention	23.1. Consider the BNNC EMS in all relevant oil and chemical spill response plans and ensure the details of cross-border responding authorities are included	MCA, NCC, SBC, EHT, BHC, NSHC	●	●	●	●	●
	23.2. Ensure oil and chemical spill response plans have taken the advice of nature conservation stakeholders into account	MCA	●	●	●	●	●
	23.3. Ensure harbours within the BNNC EMS are adequately prepared and trained to respond to incidents	MCA	●	●	●	●	●
	23.4. Ensure oil spill exercises incorporate cross-border collaboration and communication, and ensure the BNNC EMS is represented in exercises	MCA, NCC, SBC	●	●	●	●	●
	23.5. Harbour oil spill contingency plans to be maintained by Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission	EHT, BHC, NSHC	●	●	●	●	●
	23.6. North East Standing Environment Group maintain an up-to-date plan and consider developing guidelines for treating animals affected by spills, and how this will be co-ordinated during an incident	NE, EA, NCC, NIFCA, MMO, NWT	●	●			
	23.7. Continue to collect oil from Lindisfarne National Nature Reserve	NE(NNR), NCC	●	●	●	●	●
	23.8. Oil waste services to be provided at harbours	EHT, BHC, NSHC	●	●	●	●	●
	23.9. Develop a booming plan for Northumberland and Scottish Borders	NCC, SBC	●	●	●	●	●
Reporting Indicators: 23.a. Are national, local and harbour oil and chemical contingency plans in place and up to date? 23.b. Are there adequate oil waste facilities in place along the Berwickshire & Northumberland coast?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
24. Ordnance Disposal	24.1. Maintain communication with Natural England and other statutory nature conservation bodies to ensure guidance for ordnance disposal procedures cause minimal environmental damage to EMS features	MoD	●	●	●	●	●
	24.2. Work within environmental guidelines when clearing ordnance	MoD	●	●	●	●	●

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Reporting Indicators: 24.a. How many clearance incidents have taken place during the reporting period?

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
25. Recreation (land and water)	25.1. Monitor use of the Farne Islands National Nature Reserve for water-based recreation and keep activity at a level that does not cause disturbance to grey seal or protected birds	NT	●	●	●	●	●
	25.2. Maintain and enforce existing National Trust restrictions for water-based recreation within the Farne Islands National Nature Reserve	NT	●	●	●	●	●
	25.3. Maintain and enforce existing Lindisfarne National Nature Reserve byelaws to manage water-based recreation	NE(NNR)	●	●	●	●	●
	25.4. Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	NE(NNR), SNH, NT, NTS, AONB, NWT, EMS officer, VMR	●	●	●	●	●
	25.5. Consider recommendations that may develop through the IPENS project regarding the management of recreation	NE, NE(NNR), AONB, EMS officer	●	●			
	25.6. Identify recreational activity hotspots and consider the spatial distribution and intensity against environmental sensitivity	AONB, EMS officer		●	●		
	25.7. Develop a data gathering regime to gain a better understanding of recreational activity at the whole-site level	EMS officer	●	●	●		
	25.8. Ensure recreation and tourism strategies do not encourage intense levels of activity in sensitive locations within the BNNC EMS	NCC, SBC, AONB	●	●	●	●	●
	25.9. Consider the establishment of a recreational sub-group for the BNNC EMS to develop strategic management at a site-wide level	EMS officer	●	●			
Reporting Indicators: 25.a. Have recreational hotspots been mapped and compared against sensitive locations within the BNNC EMS? 25.b. Do we have enough information to assess whether levels of recreational activities are impacting the BNNC EMS? 25.c. Have management requirements been assessed and recommendations implemented?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
26. Seal Control	26.1. Maintain the seal shooting licensing system in Scotland and keep consents at a sustainable level which does not cause adverse effects to the grey seal population	MS	●	●	●	●	●
	26.2. Collect annual data on seal populations to inform licence consents and management of seal control	SMRU	●	●	●	●	●
	26.3. Collate information on seal shootings in England and enforce where unlawful shooting is suspected	MMO, NWT	●	●	●	●	●
	26.4. Work in partnership through the PAW marine wildlife enforcement group to tackle unlawful seal	MMO	●	●	●	●	●

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shooting						
26.5. Continue to review the need to formally gather intelligence on seal shootings through the PAW network if unlawful activity is occurring	MMO	●	●	●	●	●
Reporting Indicators: 26.a. How many licences are issued within the BNNC EMS? 26.b. How many seal strandings display shooting injuries as the cause of death and does this reflect the number of licences issued? 26.c. What priority is seal shooting given through PAW?						

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
27. Seal Stranding Response	27.1. Review the marine mammal stranding protocol annually to ensure contacts and procedures are kept up to date	NCC, SBC	●	●	●	●	●
	27.2. Ensure authorities are aware of their local and national stranding protocols	EMS officer	●	●	●	●	●
	27.3. Apply the adopted strandings protocol when dealing with a stranded marine mammal and feed data into relevant record centres and databases	NCC, SBC	●	●	●	●	●
	27.4. Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	NT, NE(NNR), NTS, NWT, AONB, VMR, EMS officer	●	●	●	●	●
Reporting Indicators: 27.a. Are stranding protocols up to date and implemented? 27.b. What awareness-raising has been delivered?							

Human Activity	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
28. Wildfowling and Punt Gunning	28.1. Continue to operate a wildfowling permit scheme with regular review and research into the impacts on the BNNC EMS	NE(NNR)	●	●	●	●	●
Reporting Indicators: 28.a. Have there been any breaches of permit conditions during the reporting period?							

Additional Themes	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
29. Managing the BNNC EMS in its wider context	29.1. Work with the Northumberland Coast AONB Partnership and staff team to address shared issues where possible	EMS officer, AONB	●	●	●	●	●
	29.2. Explore joint objectives and shared issues with management regimes, where they exist, for adjacent and overlapping nature conservation designations	EMS officer, AONB, NT, NTS, NE(NNR), VMR		●	●	●	
	29.3. Assess whether future extensions of coastal SPAs will be incorporated into this management scheme	NE, SNH		●	●		
Reporting Indicators: 29.a. Are overlapping and adjacent designations with shared features - Northumberland Coast AONB, Farne Islands and Lindisfarne NNRs - engaging with the management scheme for the BNNC EMS and is joint working taking place?							

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29.b. Is management of the Natura 2000 network on the Berwickshire & North Northumberland Coast integrated?
29.c. Are all authorities engaged in the BNNC EMS management scheme?

Additional Themes	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
30. Data, evidence and information sharing	30.1. Incorporate new conservation objectives and advice on operations into this scheme when available	EMS officer			●	●	
	30.2. Develop research and monitoring priorities alongside the management scheme	EMS officer	●	●			
	30.3. Share data and evidence relevant to the management of the BNNC EMS with partners	All data gathering authorities	●	●	●	●	●
	30.4. Use statutory site condition monitoring, plus other data and evidence, to inform adaptive management for the BNNC EMS	NE, SNH, EMS officer	●	●	●	●	●
	30.5. Promote projects that will further the management of the BNNC EMS among local education institutions and students	EMS officer, NE, NIFCA	●	●	●	●	●
	30.6. Ensure Conservation Advice and this management scheme are reviewed in light of new data and evidence and work collaboratively cross-border	NE, SNH, EMS officer			●	●	●
	30.7. Ensure all records are submitted to the relevant databases	All data gathering authorities	●	●	●	●	●
	30.8. Host annual Management Group meeting and forum	EMS officer	●	●	●	●	●
Reporting Indicators: 30.a. Are the monitoring and research requirements of the BNNC EMS clearly defined? 30.b. Are data gathering/sharing opportunities utilised, and is data considered at a whole-site scale to inform management? 30.c. Are management measures adaptive and reviewed in light of new data/evidence?							

Additional Themes	Management Measures	Lead Organisation(s)	Timeframe (financial years)				
			2014/15	2015/16	2016/17	2017/18	2018/19
31. Awareness-raising	31.1. Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	EMS officer, NT, NE(NNR), NTS, SBC, NWT, VMR, AONB	●	●	●	●	●
	31.2. Maintain EMS website and ensure the BNNC EMS is represented on partner websites if appropriate	EMS officer	●	●	●	●	●
	31.3. Produce a regular e-newsletter for the BNNC EMS	EMS officer	●	●	●	●	●
	31.4. Disseminate emerging policy and legislation related to site management to the management group	EMS officer	●	●	●	●	●
Reporting Indicators: 31.a. Is an annual programme of events in place to raise awareness of BNNC EMS issues and sensitivities, and do partners cover site issues in their programmes? 31.b. Is the BNNC EMS website up to date?							

Additional	Management Measures	Lead	Timeframe (financial years)
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Themes		Organisation(s)	2014/15	2015/16	2016/17	2017/18	2018/19
32. Site Condition Priorities	32.1. Increasing macroalgae may be affecting seagrass on mud flats around Holy Island – identify sources and implement management where appropriate	NE, EA	●	●	●		
	32.2. Extent of mussel (<i>Mytilus edulis</i>) beds on Ross Sands is reducing and recruitment of new individuals is poor – identify pressures and implement management where appropriate	NE, EA, NIFCA	●	●			
Reporting Indicators: 32.a. Which features are in favourable condition and which are not? 32.b. Where features are not in favourable condition, have the pressures been identified? 32.c. Where pressures have been identified, are management measures identified and in place?							



Management Action Plan by Organisation

Statutory authorities are identified in **bold green text** • Statutory duties are identified in **bold blue text**.

Name	Management Measure	Cross Ref. Activity Action Plan
Amble Angling Club	Carry out beach cleans at angling hotspots	2.4
Berwick Harbour Commission	Obtain all relevant permissions and consents for harbour works, and ensure small scale maintenance does not impact on the condition of the site	14.1
	Ensure compliance with the Port Marine Safety Code	14.2 & 19.3
	Harbours to provide and promote waste and recycling services	15.1
	Waste management plans to be maintained (Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission) and reviewed in line with UK regulations	15.2
	Oil waste services to be provided at harbours	15.3 & 23.8
	Promote the Check, Clean, Dry campaign amongst boat owners/users	22.9
	Consider the BNNC EMS in relevant oil and chemical spill response plans and ensure details of cross-border responding authorities are included	23.1
	Harbour oil spill contingency plans to be maintained by Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission	23.5
BNNC EMS Implementation Officer	Identify key anchoring hotspots within the BNNC EMS and compare locations with sensitive areas of the site	1.1
	Promote the importance of the BNNC EMS and its management needs to angling clubs by inviting club representatives to stakeholder events	2.5
	Evaluate existing data gathering for boat launching within the BNNC EMS, and work with slip providers to improve data gathering where opportunities exist	5.4
	Evaluate existing data gathering for diving intensity within the BNNC EMS, and work with slip providers to improve data gathering where opportunities exist	11.1
	Identify microlight hotspots within the BNNC EMS and compare against sensitive locations within the site	20.1
	Work with light aircraft industry bodies, local airfields and user groups to develop environmental guidance for existing codes of conduct	20.2
	Work with the Big Sea Survey data and other datasets to identify presence/absence, abundance and distribution of marine non-native species within and close to the EMS, identify monitoring indicator species, and assess the impact to the EMS	22.1
	Identify key vectors for the introduction of marine non-native species to the BNNC EMS	22.2
	Develop a monitoring strategy to look at presence/absence, abundance and distribution of target species over time	22.3
	Following research and monitoring, consider the need for a biosecurity plan for the BNNC EMS	22.4
	Identify and monitor a set of climate change indicator species to inform natural change within the BNNC EMS	22.5

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Promote student projects that involve the gathering and analysis of data related to marine non-native species within and adjacent to the BNNC EMS	22.6
Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
Consider recommendations that may develop through the IPENS project regarding the management of recreation	25.5
Identify recreational activity hotspots and consider the spatial distribution and intensity against environmental sensitivity	25.6
Develop a data gathering regime to gain a better understanding of recreational activity at the whole-site level	25.7
Consider the establishment of a recreational sub-group for the BNNC EMS to develop strategic management at a site-wide level	25.9
Ensure authorities are aware of their local and national stranding protocols	27.2
Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	27.4
Work with the Northumberland Coast AONB Partnership and staff team to address shared issues where possible	29.1
Explore joint objectives and shared issues with management regimes, where they exist, for adjacent and overlapping designations	29.2
Incorporate new conservation objectives and advice on operations into this scheme when available	30.1
Develop research and monitoring priorities alongside the management scheme	30.2
Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
Use statutory site condition monitoring, plus other data and evidence, to inform adaptive management for the BNNC EMS	30.4
Promote projects that will further the management of the BNNC EMS among local education institutions and students	30.5
Ensure conservation advice and this management scheme are reviewed in light of new data and evidence and work collaboratively cross-border	30.6
Ensure all records are submitted to the relevant databases	30.7
Host annual management group meeting and forum	30.8
Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1
Maintain EMS website and ensure the BNNC EMS is represented on partner websites if appropriate	31.2
Produce regular e-newsletter for the BNNC EMS	31.3
Disseminate emerging policy and legislation related to site management to the management group	31.4

Centre for Environment, Fisheries & Aquaculture Science	Review consents for the current scale of the <i>C. gigas</i> operation at Ross Sands, taking account of new evidence of natural settlement on the Firth of Forth and Solway coast. Mitigate impacts and monitor the operation.	3.1
	Monitor local climatic conditions and sea surface temperature to project when local conditions might support the natural establishment of <i>C. gigas</i> within the BNNC EMS. Review consents in light of changes	3.2
	Understand the effects of the <i>C. gigas</i> operation on the native mussel beds and related features	3.5
	Support ongoing data gathering and research to inform the sustainable management of creel/pot fisheries within the BNNC EMS	7.7

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Environment Agency	Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible	2.1 & 12.4
	Ensure Catchment Sensitive Farming and other land management schemes seek to address the impact of agricultural effluent on the marine environment	8.1
	Use sediment modelling from SMP Coastal Squeeze Study to inform nutrient transport from the rivers Eye and Tweed and its contribution to elevated nutrients around Holy Island	8.2
	Identify the sources of nutrient enrichment around Holy Island and implement management measures to reduce levels	8.3
	Continue to monitor the Budle Bay Nitrate Vulnerable Zone and other areas within the BNNC EMS that are vulnerable to elevated nutrient levels	8.4
	Consider effects on the whole BNNC EMS (including effects that materialise cross-border) when prioritising water quality issues	8.5
	English and Scottish regulators to collaborate on coastal water quality issues where the Rivers Eye and Tweed might influence quality	8.6
	Ensure water quality impacts on the BNNC EMS are considered in Catchment Management Plans	8.7
	Understand the cumulative impact of coastal septic tanks and misconnections on the condition of the BNNC EMS and implement management where necessary	9.1
	Ensure that net fishing south of the Tweed and Eye Fisheries District is carried out in line with Environment Agency licence requirements	12.2
	Ensure the level of fishing pressure of permissible net fisheries remains at a sustainable level, in accordance with international guidelines and which does not impact the BNNC EMS	12.3
	Promote and encourage flood and coastal defence schemes that work with natural processes at the coast, rather than implementing hard defence measures for protection	13.5
	When defence structures come to the end of their life, seek innovative ways to work with natural processes, rather than replacing hard defence structures	13.6
	Raise awareness among property owners of the damage caused by inappropriate fly tipping and unconsented/inappropriate private coastal defence interventions within the BNNC EMS through promotional material	13.7
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10
	North East Standing Environment Group maintain an up-to-date plan and consider developing guidelines for treating animals affected by spills, and how this will be co-ordinated during an incident	23.6
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Ensure all records are submitted to the relevant databases	30.7
Increasing macroalgae may be affecting seagrass on mud flats around Holy Island - identify sources and implement management where appropriate	32.1	
Extent of mussel (<i>Mytilus edulis</i>) beds on Ross Sands is reducing and recruitment of new individuals is poor - identify pressures and implement management where appropriate	32.2	
English Heritage	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3

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	Ensure all records are submitted to the relevant databases	30.7
Eyemouth Harbour Trust	Promote the Scottish Wildlife Watching Codes with Scottish charter boat operators	5.3
	Boat launch facilities to share non-sensitive data on charter boat numbers with the EMS officer	5.5
	Dive launching facilities to share non-sensitive data on dive boat numbers with the EMS officer	11.2
	Obtain all relevant permissions and consents for harbour works, and ensure small scale maintenance does not impact on the condition of the site	14.1
	Ensure compliance with the Port Marine Safety Code	14.2 & 19.3
	Harbours to provide and promote waste and recycling services	15.1
	Waste management plans to be maintained (Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission) and reviewed in line with UK regulations	15.2
	Oil waste services to be provided at harbours	15.3 & 23.8
	Implement harbour related elements of the Scottish Marine Litter Strategy	15.4 & 17.6
	Maintain the Fishing for Litter initiative in Scotland and promote to local fishermen	17.1
	Promote the Check, Clean, Dry campaign amongst boat owners/users	22.9
	Consider the BNNC EMS in all relevant oil and chemical spill response plans and ensure the details of cross-border responding authorities are included	23.1
	Harbour oil spill contingency plans to be maintained by Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission	23.5

Marine Management Organisation	Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible	2.1 & 12.4
	Work with charter boat operators to promote the significance and sensitivities of the BNNC EMS and develop codes of conduct if necessary	5.2
	Raise awareness among property owners of the damage caused by inappropriate fly tipping and unconsented/inappropriate private coastal defence interventions within the BNNC EMS through promotional material	13.7
	Ensure new dredge and disposal proposals undergo a Habitat Regulations Assessment	19.1
	Ensure CEFAS and EA guidelines for levels of contaminants in dredge spoil are applied when assessing proposals	19.2
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	North East Standing Environment Group maintain an up-to-date plan and consider developing guidelines for treating animals affected by spills, and how this will be co-ordinated during an incident	23.6
	Collate information on seal shootings in England and enforce where unlawful shooting is suspected	26.3
	Work in partnership through the PAW marine wildlife enforcement group to tackle unlawful seal shooting	26.4
	Continue to review the need to formally gather intelligence on seal shootings through the PAW network if unlawful activity is occurring	26.5
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Ensure all records are submitted to the relevant databases	30.7

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Marine Scotland	Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible	2.1 & 12.4
	Maintain and enforce fixed gear reserve in Scottish section of the BNNC EMS and ensure that any derogations to the order consider the impact on the BNNC EMS	6.1
	Respond to SNH risk review in Scottish section of the BNNC EMS and implement fisheries management measures if necessary	6.4 & 7.5
	Marine Scotland and Northumberland IFCA to work in partnership to enforce fisheries regulation in cross-border fisheries	6.6
	Continue to explore opportunities to establish pot limitation scheme in Scotland	7.6
	Support ongoing data gathering and research to inform the sustainable management of creel/pot fisheries within the BNNC EMS	7.7
	Implement actions from the Scottish Marine Litter Strategy and Scotland's Zero Waste Plan within the BNNC EMS	17.6
	Ensure new dredge and disposal proposals undergo a Habitat Regulations Assessment	19.1
	Ensure CEFAS and EA guidelines for levels of contaminants in dredge spoil are applied when assessing proposals	19.2
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Maintain the seal shooting licensing system in Scotland and keep consents at a sustainable level which does not cause adverse effects to the grey seal population	26.1
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
Ensure all records are submitted to the relevant databases	30.7	
Maritime and Coastguard Agency	Ensure fishing vessels are disposing of fishing-related waste in a manner that complies with relevant MARPOL legislation	6.5 & 7.8
	Provide guidelines for ballast water management, and information about the potential consequences of unwanted organisms transferred through ballast water	10.1
	Provide guidelines for the discharge of substances into the sea and enforce requirements under the MARPOL Convention	10.2
	Waste management plans to be maintained (Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission) and reviewed in line with UK regulations	15.2
	Consider the BNNC EMS in all relevant oil and chemical spill response plans and ensure the details of cross-border responding authorities are included	23.1
	Ensure oil and chemical spill response plans have taken the advice of nature conservation stakeholders into account	23.2
	Ensure harbours within the BNNC EMS are adequately prepared and trained to respond to incidents	23.3
	Ensure oil spill exercises incorporate cross-border collaboration and communication, and ensure the BNNC EMS is represented in exercises	23.4
Ministry of Defence	Maintain low flying exclusion zones around the Farne Islands and Holy Island	18.1
	Maintain communication with Natural England and other nature conservation bodies to ensure guidance for disposal procedures cause minimal environmental damage to EMS features	24.1

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	Work within environmental guidelines when clearing ordnance	24.2
National Trust	Monitor the impact of anchoring within the BNNC EMS and implement management measures where necessary	1.2
	Maintain anchoring at a level that does not adversely affect the rocky reefs around the Farnes through the Farne Islands National Nature Reserve Management Plan	1.3
	Monitor boat landings within the Farne Islands NNR, maintain and enforce restrictions in order to meet the conservation objectives for features covered by this scheme	5.1
	Work with charter boat operators to promote the significance and sensitivities of the BNNC EMS and develop codes of conduct if necessary	5.2
	Promote good practice codes of conduct amongst divers	11.4
	Raise awareness of the impacts of marine litter among site users	17.5
	Promote and support beach cleans throughout the site	17.7
	Identify microlight hotspots within the BNNC EMS and compare against sensitive locations within the site	20.1
	Work with light aircraft industry bodies, local airfields and user groups to develop environmental guidance for existing codes of conduct	20.2
	Encourage the creation of microlight avoidance zones around sensitive areas	20.3
	Collect intelligence about microlights within sensitive areas of the BNNC EMS and share amongst partners	20.4
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Promote the Check, Clean, Dry campaign amongst boat owners/users	22.9
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10
	Monitor use of the Farne Islands NNR for water-based recreation and keep activity at a level that does not cause disturbance to grey seal or protected birds	25.1
	Maintain and enforce existing National Trust restrictions for water-based recreation within the Farne Islands NNR	25.2
	Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
	Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	27.4
	Explore joint objectives and shared issues with management regimes, where they exist, for adjacent and overlapping nature conservation designations	29.2
Share data and evidence relevant to the management of the BNNC EMS with partners	30.3	
Ensure all records are submitted to the relevant databases	30.7	
Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1	
National Trust for Scotland	Promote the Scottish Wildlife Watching Codes with Scottish charter boat operators	5.3
	Raise awareness of the impacts of marine litter among site users	17.5
	Implement actions from the Scottish Marine Litter Strategy and Scotland's Zero Waste Plan within the BNNC EMS	17.6
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10

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	Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
	Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	27.4
	Explore joint objectives and shared issues with management regimes, where they exist, for adjacent and overlapping nature conservation designations	29.2
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Ensure all records are submitted to the relevant databases	30.7
	Provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1

Natural England	Monitor the impact of anchoring within the BNNC EMS and implement management measures where necessary	1.2
	Review consents for the current scale of the <i>C. gigas</i> operation at Ross Sands, taking account of new evidence of natural settlement on the Firth of Forth and Solway coast. Mitigate impacts and monitor the operation.	3.1
	Monitor local climatic conditions and sea surface temperature to project when local conditions might support the natural establishment of <i>C. gigas</i> within the BNNC EMS. Review consents in light of changes	3.2
	Understand the effects of the <i>C. gigas</i> operation on the native mussel beds and related features	3.5
	Support ongoing data gathering and research to inform the sustainable management of creel/pot fisheries within the BNNC EMS	7.7
	Ensure Catchment Sensitive Farming and other land management schemes seek to address the impact of agricultural effluent on the marine environment	8.1
	English and Scottish regulators to collaborate on coastal water quality issues where the Rivers Eye and Tweed might influence quality	8.6
	Promote and encourage flood and coastal defence schemes that work with natural processes at the coast, rather than implementing hard defence measures for protection	13.5
	Consider recommendations that may develop through the IPENS project and other projects regarding the management of bait digging	16.3
	Following research and monitoring, consider the need for a biosecurity plan for the BNNC EMS	22.4
	Promote student projects that involve the gathering and analysis of data related to marine non-native species within and adjacent to the BNNC EMS	22.6
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10
	Place settlement panels within and close to the BNNC EMS to gather early warning signs of the presence of marine non-natives	22.11
	Continue to support the UK MarClim project within the BNNC EMS to maintain dataset on climate change indicator species	22.12
	North East Standing Environment Group maintain an up-to-date plan and consider developing guidelines for treating animals affected by spills, and how this will be co-ordinated during an incident	23.6
	Consider recommendations that may develop through the IPENS project regarding the management of recreation	25.5
Assess whether future extensions of coastal SPAs will be incorporated into this management scheme	29.3	
Share data and evidence relevant to the management of the BNNC EMS with partners	30.3	

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	Use statutory site condition monitoring, plus other data and evidence, to inform adaptive management for the BNNC EMS	30.4
	Promote projects that will further the management of the BNNC EMS among local education institutions and students	30.5
	Ensure conservation advice and this management scheme are reviewed in light of new data and evidence and work collaboratively cross-border	30.6
	Ensure all records are submitted to the relevant databases	30.7
	Increasing macroalgae may be affecting seagrass on mud flats around Holy Island - identify sources and implement management where appropriate	32.1
	Extent of mussel (<i>Mytilus edulis</i>) beds on Ross Sands is reducing and recruitment of new individuals is poor - identify pressures and implement management where appropriate	32.2

Natural England (Lindisfarne National Nature Reserve)	Work with charter boat operators to promote the significance and sensitivities of the BNNC EMS and develop codes of conduct if necessary	5.2
	Maintain existing bylaws to manage intertidal hand gathering within the Lindisfarne NNR	16.4
	Work with angling groups to raise awareness of good environmental practice when bait-digging within the BNNC EMS. Develop codes of conduct if necessary	16.6
	Raise awareness of the impacts of marine litter among site users	17.5
	Promote and support beach cleans throughout the site	17.7
	Identify microlight hotspots within the BNNC EMS and compare against sensitive locations within the site	20.1
	Work with light aircraft industry bodies, local airfields and user groups to develop environmental guidance for existing codes of conduct	20.2
	Encourage the creation of microlight avoidance zones around sensitive areas	20.3
	Collect intelligence about microlights within sensitive areas of the BNNC EMS and share amongst partners	20.4
	Promote student projects that involve the gathering and analysis of data related to marine non-native species within and adjacent to the BNNC EMS	22.6
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10
	Place settlement panels within and close to the BNNC EMS to gather early warning signs of the presence of marine non-natives	22.11
	Continue to collect oil from Lindisfarne National Nature Reserve	23.7
	Maintain and enforce existing Lindisfarne National Nature Reserve byelaws to manage water-based recreation	25.3
	Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
	Consider recommendations that may develop through the IPENS project regarding the management of recreation	25.5
	Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	27.4
	Continue to operate a wildfowling permit scheme with regular review and research into the impacts on the BNNC EMS	28.1
Explore joint objectives and shared issues with management regimes, where they exist, for adjacent and overlapping nature conservation designations	29.2	
Share data and evidence relevant to the management of the BNNC EMS with partners	30.3	

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	Promote projects that will further the management of the BNNC EMS among local education institutions and students	30.5
	Ensure all records are submitted to the relevant databases	30.7
	Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1
North Sunderland Harbour Commission	Boat launch facilities to share non-sensitive data on charter boat numbers with the EMS officer	5.5
	Dive launching facilities to share non-sensitive data on dive boat numbers with the EMS officer	11.2
	Obtain all relevant permissions and consents for harbour works, and ensure small scale maintenance does not impact on the condition of the site	14.1
	Ensure compliance with the Port Marine Safety Code	14.2 & 19.3
	Harbours to provide and promote waste and recycling services	15.1
	Waste management plans to be maintained (Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission) and reviewed in line with UK regulations	15.2
	Oil waste services to be provided at harbours	15.3 & 23.8
	Promote the Check, Clean, Dry campaign amongst boat owners/users	22.9
	Consider the BNNC EMS in all relevant oil and chemical spill response plans and ensure the details of cross-border responding authorities are included	23.1
Harbour oil spill contingency plans to be maintained by Eyemouth Harbour Trust, Berwick Harbour Commission and North Sunderland Harbour Commission	23.5	
Northern Lighthouse Board	When establishing, maintaining and decommissioning aids to navigation within the BNNC EM, ensure adverse impacts to the site are kept to a minimum	21.1
	Ensure contractors are aware of the sensitivities of the BNNC EMS and that required consents are obtained before the commencement of works	21.2
Northumberland Coast AONB	Work with angling groups to raise awareness of sensitive locations and promote good practice, particularly regarding litter	2.3
	Carry out beach cleans at angling hotspots	2.4
	Continue to facilitate community beach cleans within the BNNC EMS and AONB as part of the Marine Conservation Society Beach Watch	17.3
	Raise awareness of the impacts of marine litter among site users	17.5
	Promote and support beach cleans throughout the site	17.7
	Identify microlight hotspots within the BNNC EMS and compare against sensitive locations within the site	20.1
	Work with light aircraft industry bodies, local airfields and user groups to develop environmental guidance for existing codes of conduct	20.2
	Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
	Consider recommendations that may develop through the IPENS project regarding the management of recreation	25.5
	Identify recreational activity hotspots and consider the spatial distribution and intensity against environmental sensitivity	25.6

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	Ensure recreation and tourism strategies do not encourage intense levels of activity in sensitive locations within the BNNC EMS	25.8
	Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	27.4
	Work with the BNNC EMS Management Group and officer to address shared issues where possible	29.1
	Explore joint objectives and shared issues with management regimes, where they exist, for adjacent and overlapping nature conservation designations	29.2
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Ensure all records are submitted to the relevant databases	30.7
	Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1
Northumberland County Council	Avoid mechanical cleaning on all beaches in the BNNC EMS	4.1
	Boat launch facilities to share non-sensitive data on charter boat numbers with the EMS officer	5.5
	Seek early advice from statutory nature conservation body on all local authority flood and coastal defence schemes within and adjacent to the BNNC EMS and obtain relevant consents	13.1
	Ensure the BNNC EMS is considered in strategic flood and coastal defence planning - including local authority Local Plans and Neighbourhood Plans – and ensure long-term shoreline management takes habitat squeeze into account	13.2
	Complete a study on coastal squeeze for protected habitats along the Cell 1 frontage as a result of shoreline management planning policies	13.3
	When providing advice on flood and coastal protection, ensure that advised actions will not negatively impact the BNNC EMS	13.4
	Promote and encourage flood and coastal defence schemes that work with natural processes at the coast, rather than implementing hard defence measures for protection	13.5
	When defence structures come to the end of their life, seek innovative ways to work with natural processes, rather than replacing hard defence structures	13.6
	Raise awareness among property owners of the damage caused by inappropriate fly tipping and unconsented/inappropriate private coastal defence interventions within the BNNC EMS through promotional material	13.7
	Maintain agreement with bait diggers to avoid the north area of Boulmer Haven, while recognising this restriction is in place for boat access	16.5
	Continue to collect rubbish generated from community beach cleans within the BNNC EMS and Northumberland Coast AONB	17.4
	Consider the BNNC EMS in all relevant oil and chemical spill response plans and ensure the details of cross-border responding authorities are included	23.1
	Ensure oil spill exercises incorporate cross-border collaboration and communication, and ensure the BNNC EMS is represented in exercises	23.4
	North East Standing Environment Group maintain an up-to-date plan and consider developing guidelines for treating animals affected by spills, and how this will be co-ordinated during an incident	23.6
	Continue to collect oil from Lindisfarne National Nature Reserve	23.7
	Develop a booming plan for Northumberland and Scottish Borders	23.9
Ensure recreation and tourism strategies do not encourage intense levels of activity in sensitive locations within the BNNC EMS	25.8	
Review the marine mammal stranding protocol annually to ensure contacts and procedures are kept up to date	27.1	

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	Apply the adopted strandings protocol when dealing with a stranded marine mammal and feed data into relevant record centres	27.3
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Ensure all records are submitted to the relevant databases	30.7
Northumberland Inshore Fisheries and Conservation Authority	Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible	2.1 & 12.4
	Using the Angling 2012 findings, and by continuing to collect data on recreational fishing activity through the NIFCA Angling Strategy, identify the angling hotspots within the BNNC EMS and assess against sensitive site locations	2.2
	Work with angling groups to raise awareness of sensitive locations and promote good practice, particularly regarding litter	2.3
	Consider the opportunity to monitor the <i>C. gigas</i> operation at the same time as the annual mussel survey	3.3
	Ensure the management regime for the <i>C. gigas</i> operation at Ross is included in the NIFCA Strategic Environmental Assessment and implement recommended management measures	3.4
	Understand the effects of the <i>C. gigas</i> operation on the native mussel beds and related features	3.5
	Prohibit mobile gear designed to contact the seabed in areas of rocky reef and seagrass within the English section of the BNNC EMS	6.2
	Assess the impact of mobile gear on the integrity of the BNNC EMS and implement additional management measures, if necessary (Habitats Directive - Article 6)	6.3
	Marine Scotland and Northumberland IFCA to work in partnership to enforce fisheries regulation in cross-border fisheries	6.6
	Maintain the pot limitation scheme in Northumberland and manage the activity at a sustainable level	7.1
	Maintain and promote the importance of the v-notching scheme in Northumberland	7.2
	Maintain and enforce byelaws for minimum landing sizes, plus any maximum landing sizes that are established in the future	7.3
	Carry out a Habitat Regulations Assessment to establish impact of the creel/pot in the English section of the BNNC EMS, and implement management measures if necessary	7.4
	Support ongoing data gathering and research to inform the sustainable management of creel/pot fisheries within the BNNC EMS	7.7
	Maintain NIFCA byelaws for the removal of species; monitor and enforce amongst divers	11.3
	Promote good practice codes of conduct amongst divers	11.4
	Ensure that beach T and J netting south of the Tweed and Eye Fisheries District is carried out in line with Environment Agency licence requirements	12.2
	Prohibit bait digging in areas of sea grass within the BNNC EMS	16.1
	Undertake a Habitat Regulations Assessment for all commercial intertidal hand gathering in the BNNC EMS - shellfish, bait species, <i>Littorina littorea</i> - and establish additional management measures where necessary	16.2
	Consider recommendations that may develop through the IPENS project and other projects regarding the management of bait digging	16.3
Work with angling groups to raise awareness of good environmental practice when bait-digging within the BNNC EMS. Develop codes of conduct if necessary	16.6	
Recognising the different rights that apply to recreational and commercial bait digging, explore the possibility of a management regime that separates the two	16.7	

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	Work with local sea bait trade outlets to educate them on the law regarding commercial digging, particularly within the BNNC EMS	16.8
	Continue to survey the mussel stocks to the south of Holy Island annually	16.9
	Continue to explore the possibility of establishing a Fishing for Litter initiative in Northumberland	17.2
	Raise awareness of the impacts of marine litter among site users	17.5
	Promote student projects that involve the gathering and analysis of data related to marine non-native species within and adjacent to the BNNC EMS	22.6
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	North East Standing Environment Group maintain an up-to-date plan and consider developing guidelines for treating animals affected by spills, and how this will be co-ordinated during an incident	23.6
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Promote projects that will further the management of the BNNC EMS among local education institutions and students	30.5
	Ensure all records are submitted to the relevant databases	30.7
	Extent of mussel (<i>Mytilus edulis</i>) beds on Ross Sands is reducing and recruitment of new individuals is poor - identify pressures and implement management where appropriate	32.2

Northumbrian Water Ltd	Seek opportunities through the Living Waterways project to assess the impact of coastal developments not connected to the main sewerage system, including septic tanks and mis-connections	9.2
	Promote the reduction of Sewage Related Debris (SRD) being discharged to the freshwater and marine environment	17.9
	Raise awareness of the impacts of placing inappropriate items into the sewerage system	17.10

Northumberland Wildlife Trust	Work with angling groups to raise awareness of sensitive locations and promote good practice, particularly regarding litter	2.3
	Carry out beach cleans at angling hotspots	2.4
	Work with charter boat operators to promote the significance and sensitivities of the BNNC EMS and develop codes of conduct if necessary	5.2
	Seek opportunities through the Living Waterways project to assess the impact of coastal developments not connected to the main sewerage system, including septic tanks and mis-connections	9.2
	Promote good practice codes of conduct amongst divers	11.4
	Raise awareness of the impacts of marine litter among site users	17.5
	Promote and support beach cleans throughout the site	17.7
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Promote the Check, Clean, Dry campaign amongst boat owners/users	22.9
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10

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	North East Standing Environment Group maintain an up-to-date plan and consider developing guidelines for treating animals affected by spills, and how this will be co-ordinated during an incident	23.6
	Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
	Collate information on seal shootings in England and enforce where unlawful shooting is suspected	26.3
	Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	27.4
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Ensure all records are submitted to the relevant databases	30.7
	Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1
River Tweed Commission	Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible	2.1 & 12.4
	Ensure management regimes in the Tweed and Eye Fisheries District have regard to the qualifying features of the BNNC EMS to minimise fishing-related damage and disturbance	2.6 & 12.1
	Ensure the level of fishing pressure of permissible net fisheries remains at a sustainable level, in accordance with international guidelines and which does not impact the BNNC EMS	12.3
Scottish Borders Council	Avoid mechanical cleaning on all beaches in the BNNC EMS	4.1
	Seek early advice from statutory nature conservation body on all local authority flood and coastal defence schemes within and adjacent to the BNNC EMS and obtain relevant consents	13.1
	Ensure the BNNC EMS is considered in strategic flood and coastal defence planning - including local authority Local Plans and Neighbourhood Plans – and ensure long-term shoreline management takes habitat squeeze into account	13.2
	When providing advice on flood and coastal protection, ensure that advised actions will not negatively impact the BNNC EMS	13.4
	Promote and encourage flood and coastal defence schemes that work with natural processes at the coast, rather than implementing hard defence measures for protection	13.5
	When defence structures come to the end of their life, seek innovative ways to work with natural processes, rather than replacing hard defence structures	13.6
	Maintain the Fishing for Litter initiative in Scotland and promote to local fishermen	17.1
	Consider the BNNC EMS in all relevant oil and chemical spill response plans and ensure the details of cross-border responding authorities are included	23.1
	Ensure oil spill exercises incorporate cross-border collaboration and communication, and ensure the BNNC EMS is represented in exercises	23.4
	Develop a booming plan for Northumberland and Scottish Borders	23.9
	Ensure recreation and tourism strategies do not encourage intense levels of activity in sensitive locations within the BNNC EMS	25.8
	Review the marine mammal stranding protocol annually to ensure contacts and procedures are kept up to date	27.1
	Apply the adopted strandings protocol when dealing with a stranded marine mammal and feed data into relevant record centres	27.3
	Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1

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Scottish Environmental Protection Agency	Ensure Catchment Sensitive Farming and other land management schemes seek to address the impact of agricultural effluent on the marine environment	8.1
	Consider effects on the whole BNNC EMS (including effects that materialise cross-border) when prioritising water quality issues	8.5
	English and Scottish regulators to collaborate on coastal water quality issues where the Rivers Eye and Tweed might influence quality	8.6
	Ensure water quality impacts on the BNNC EMS are considered in Catchment Management Plans	8.7
	Understand the cumulative impact of coastal septic tanks and misconnections on the condition of the BNNC EMS and implement management where necessary	9.1
	Implement actions from the Scottish Marine Litter Strategy and Scotland's Zero Waste Plan within the BNNC EMS	17.6
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Ensure all records are submitted to the relevant databases	30.7
Scottish Natural Heritage	English and Scottish regulators to collaborate on coastal water quality issues where the Rivers Eye and Tweed might influence quality	8.6
	Promote and encourage flood and coastal defence schemes that work with natural processes at the coast, rather than implementing hard defence measures for protection	13.5
	Raise awareness of the impacts of marine litter among site users	17.5
	Following research and monitoring, consider the need for a biosecurity plan for the BNNC EMS	22.4
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Ensure methods of control for established non-native species do not adversely impact the BNNC EMS	22.10
	Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
	Assess whether future extensions of coastal SPAs will be incorporated into this Management Scheme	29.3
	Share data and evidence relevant to the management of the BNNC EMS with partners	30.3
	Use statutory site condition monitoring, plus other data and evidence, to inform adaptive management for the BNNC EMS	30.4
Ensure conservation advice and this management scheme are reviewed in light of new data and evidence and work collaboratively cross-border	30.6	
Scottish Water	Promote the reduction of Sewage Related Debris (SRD) being discharged to the freshwater and marine environment	17.9
	Raise awareness of the impacts of placing inappropriate items into the sewerage system	17.10

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Sea Mammal Research Unit	Collect annual data on seal populations to inform licence consents and management of seal control	26.2
St Abbs and Eyemouth Voluntary Marine Reserve	Work with angling groups to raise awareness of sensitive locations and promote good practice, particularly regarding litter	2.3
	Promote the Scottish Wildlife Watching Codes with Scottish charter boat operators	5.3
	Evaluate existing data gathering for diving intensity within the BNNC EMS, and work with slip providers to improve data gathering where opportunities exist	11.1
	Dive launching facilities to share non-sensitive data on dive boat numbers with the EMS officer	11.2
	Promote good practice codes of conduct amongst divers	11.4
	Raise awareness of the impacts of marine litter among site users	17.5
	Implement actions from the Scottish Marine Litter Strategy and Scotland's Zero Waste Plan within the BNNC EMS	17.6
	Promote and support beach cleans throughout the BNNC EMS	17.7
	Promote and facilitate underwater litter picks	17.8
	Make use of existing data collection opportunities to gather data on marine non-native species	22.7
	Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary	22.8
	Promote the Check, Clean, Dry campaign amongst boat owners/users	22.9
	Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary	25.4
	Raise public awareness about the behaviour of pups hauling out along the coast to ensure pups are left alone and not mistaken as 'stranded'	27.4
	Explore joint objectives and shared issues with management regimes, where they exist, for adjacent and overlapping nature conservation designations	29.2
Share data and evidence relevant to the management of the BNNC EMS with partners	30.3	
Ensure all records are submitted to the relevant databases	30.7	
Run shore events, provide talks and educational opportunities to raise awareness of the BNNC EMS and management pressures	31.1	
St Abbs Harbour Trust	Promote the Scottish Wildlife Watching Codes with Scottish charter boat operators	5.3
	Boat launch facilities to share non-sensitive data on charter boat numbers with the EMS officer	5.5
	Dive launching facilities to share non-sensitive data on dive boat numbers with the EMS officer	11.2
	Obtain all relevant permissions and consents for harbour works, and ensure small scale maintenance does not impact on the condition of the site	14.1
	Ensure compliance with the Port Marine Safety Code	14.2 & 19.3
	Harbours to provide and promote waste and recycling services	15.1
	Implement harbour related elements of the Scottish Marine Litter Strategy	15.4 & 17.6



	Promote the Check, Clean, Dry campaign amongst boat owners/users	22.9
Trinity House	When establishing, maintaining and decommissioning aids to navigation within the BNNC EM, ensure adverse impacts to the site are kept to a minimum	21.1
	Ensure contractors are aware of the sensitivities of the BNNC EMS and that required consents are obtained before the commencement of works	21.2



Glossary

Annex I Habitats	A natural habitat(s) listed in Annex 1 of the Habitats Directive for which Special Areas of Conservation can be selected.
Annex II Species	A species listed in Annex II of the Habitats Directive for which Special Areas of Conservation can be selected.
Appropriate Assessment	The process and documentation associated with the statutory requirement under the EC Habitats Directive to assess the impact of a plan or project on a European site.
Area of Outstanding Natural Beauty	Area of high landscape value protected by law to conserve and enhance its natural beauty.
Assemblage	A collection of plants and/or animals characteristically associated with a particular environment.
Birds Directive	The abbreviated term for Council Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.
Cleeking	A method of catching lobsters in the intertidal zone using a long pole with a hook on the end.
Coastal Change Management Areas	Areas at the coast which have specific temporal and spatial planning policies attached to mitigate the long term impact of coastal change.
Competent Authority	Any minister, government department, public or statutory undertaker, public body or person holding a public office that exercises legal powers (see also relevant authority).
Conservation Objective	The goal of maintaining or restoring natural habitats and populations of species of wild fauna and flora at a favourable conservation status.
Environmental Impact Assessment (EIA)	The assessment of environmental effects of major projects and development proposals to inform decision making. EIA is a European requirement.
European Site	A Special Protection Area (SPA) designated under the EC Birds Directive, or a Special Area of Conservation (SAC) designated under the EC Habitats Directive.
European Marine Site	A European site (SAC or SPA) which consists of, or in so far as it consists of, marine areas.
Favourable Condition	A range of conditions for a natural habitat or species at which the sum of the influences acting upon that habitat or species are not adversely affecting its distribution, abundance, structure or function within an individual Natura 2000 site in the long term. The condition in which the habitat or species is capable of sustaining itself on a long term basis.
Feature	A natural or semi-natural feature for which a European site has been selected.



Fixed Gear Reserve	An area where no mobile fishing gear can be used.
Habitat	The place in which an animal or plant lives.
Habitats Directive	The abbreviated term for Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Habitat Regulations Assessment	An assessment required under the EC Habitats Directive of the impacts of plans or projects on European sites.
Implementation	Putting policies and proposals into effect.
Implementation Officer	The officer employed by the Management Group to develop the management scheme and support implementation of the scheme
Integrated Coastal Zone Management (ICZM)	Co-ordinated management of the coastal and inshore marine area across multiple sectors, taking a long-term approach to planning.
Likely Significant Effect (LSE)	The first step of a Habitat Regulations Assessment to determine whether a plan or project might impact a European site.
Littoral	The margins of a body of water, an area which is occasionally washed by the tide.
Management Group	A group of statutory and non-governmental organisations working in partnership to manage a European Marine Site.
Management Scheme	The framework established by the relevant authorities at a European marine site under which their functions are exercised to secure, in relation to that site, compliance with the requirements of the Habitats Directive.
Marine Conservation Zone (MCZ)	Marine areas in English waters designated under the Marine and Coastal Access Act 2009 to protect marine habitats and species typical of UK waters.
Marine Protected Area	A marine area that is protected by statutory or voluntary measures to control human activity. The term is also used to describe Scotland's national network of marine nature conservation sites.
Natura 2000 Network	The European network of protected sites established under the Birds Directive and the Habitats Directive, made up of SPAs and SACs.
National Nature Reserve (NNR)	Important areas for wildlife which are protected, managed and accessible.
Plan or Project	Any proposed development that is within a relevant authority's function to control, or over which a competent authority has a statutory function to decide on applications for consents, authorisations, licences or permissions.
Ramsar Site	A site held on the list of wetlands of international importance, especially as habitats for wildfowl, under the Ramsar convention.
Relevant Authority	The specific competent authority which has powers or functions which have, or could have, an impact on the marine environment within or adjacent to a



European marine site.

Restore	The action required for an bring a qualifying feature back to favourable condition.
Site of Special Scientific Interest (SSSI)	Areas designated in the UK for their internationally important flora, fauna and geological features.
Shoreline Management Plan	A document setting out strategic guidance for the management of coastal defence over the next 20, 50 and 100 years.
Special Area of Conservation (SAC)	An area designated under the European Habitats Directive 92/43/EEC.
Special Protection Area (SPA)	An area designated under the European Birds Directive 79/409/EEC
Statutory Nature Conservation Body	Government's main advisors for the natural environment – Natural England and Scottish Natural Heritage in England and Scotland respectively.
Steering Group	A group of statutory and non-governmental organisations with delegated powers from the Management Group. The Steering Group oversees the work of the Implementation Officer.
Strategic Environmental Assessment (SEA)	The assessment of environmental effects of major strategic plans. SEA is a European requirement.
Sub-Feature	An important component part of a qualifying feature – i.e. kelp forests are a sub-feature of the rocky reef.
Voluntary Marine Reserve	A marine area that is protected through voluntary agreements with site users.



Abbreviations

AA	Appropriate Assessment	NSHC	North Sunderland Harbour Commission
AAC	Amble Angling Club	NT	National Trust
AONB	Area of Outstanding Natural Beauty	NTS	National Trust for Scotland
AT	Angling Trust	NWL	Northumbrian Water Ltd
BHC	Berwick Harbour Commission	NWT	Northumberland Wildlife Trust
BNNC	Berwickshire and North Northumberland Coast	PAW	Partnership for Action Against Wildlife Crime
CEFAS	Centre for Environment, Fisheries and Aquaculture Science	RTC	River Tweed Commission
COPLAR	Code of Practice on Litter and Refuse	RYA	Royal Yachting Association
EA	Environment Agency	SAC	Special Area of Conservation
EMS	European Marine Site	SAHT	St Abb's Harbour Trust
EHT	Eyemouth Harbour Trust	SBC	Scottish Borders Council
IPENS	Improvement Programme for England's Natura 2000 Sites	SEA	Strategic Environmental Assessment
MARPOL	International Convention for the Prevention of Pollution from Ships	SE IFG	South East Inshore Fisheries Group
MCA	Maritime and Coastguard Agency	SEPA	Scottish Environmental Protection Agency
MCZ	Marine Conservation Zones	SEPG	Scottish Emergency Planning Group
MMO	Marine Management Organisation	SMP	Shoreline Management Plan
MoD	Ministry of Defence	SMRU	Sea Mammal Research Unit
MPA	Marine Protected Area	SNCB	Statutory Nature Conservation Body
MS	Marine Scotland	SNH	Scottish Natural Heritage
NCC	Northumberland County Council	SPA	Special Protection Area
NE	Natural England	SRD	Sewage Related Debris
NE NNR	Natural England National Nature Reserve	SSSI	Site of Special Scientific Interest
NIFCA	Northumberland Inshore Fisheries and Conservation Authority	SW	Scottish Water
NLB	Northern Lighthouse Board	TH	Trinity House
NNR	National Nature Reserve	VMR	St Abbs and Eyemouth Voluntary Marine Reserve
		WFD	Water Framework Directive



References

English Nature & Scottish Natural Heritage. 2000. *Berwickshire and North Northumberland Coast European Marine Site. English Nature's and Scottish Natural Heritage's advice given in compliance with Regulation 33 (2) and in support of the implementation of The Conservation (Natural Habitats &c.) Regulations 1994.*

Thompson, D. & Duck, C. (2010) *Berwickshire and North Northumberland Coast European Marine Site: grey seal population status*. Report to Natural England: 20100902-RFQ.



Appendix I: Management Tables

1. Anchoring							
Location:	Potentially throughout BNNC EMS - favoured sites include the Farne Islands, St Abbs and Eyemouth, plus bays throughout the site						
Features Affected:	Reefs, seagrass beds (<i>Zostera</i> spp.), birds						
Frequency:	Mainly during summer months						
Issues:	<ul style="list-style-type: none"> Physical damage to reefs and associated species, plus seagrass. Anchoring is associated with charter dive and angling boats, plus passenger vessels. There is also the potential for passing ships to require anchoring at unplanned locations within the site from time to time. Moored boats could cause bird disturbance. 						
Current Regulation:	<p>None specific to anchoring but the following apply:</p> <ul style="list-style-type: none"> EU Habitats Directive EU Birds Directive Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS Wildlife & Countryside Act 1981 - covering areas of the BNNC EMS that lie within a Site of Special Scientific Interest (SSSI) Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 						
Existing Management:	<ul style="list-style-type: none"> National Trust records numbers and locations of vessels anchoring around the Farne Islands National Nature Reserve (NNR) and advises visiting vessels about suitable anchoring sites. The Trust also manages moorings in Embleton Bay. Management Plan for the Farne Islands NNR is signed off by Natural England, which assesses the number of vessels allowed to land and anchor. Harbours within the BNNC EMS have designated anchoring areas. The St Abbs & Eyemouth Voluntary Marine Reserve Committee monitors the use of the Reserve. If vessels wish to stop or wait offshore within the BNNC EMS, the Maritime & Coastguard Agency advises on suitable anchorages. 						
Organisations with statutory powers:	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">National Trust (NT)</td> <td style="width: 33%;">Marine Scotland (MS)</td> <td style="width: 33%;">Marine Management Organisation (MMO)</td> </tr> <tr> <td>Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC)</td> <td>Maritime & Coastguard Agency (MCA)</td> <td>Natural England (NE)</td> </tr> </table>	National Trust (NT)	Marine Scotland (MS)	Marine Management Organisation (MMO)	Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC)	Maritime & Coastguard Agency (MCA)	Natural England (NE)
National Trust (NT)	Marine Scotland (MS)	Marine Management Organisation (MMO)					
Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC)	Maritime & Coastguard Agency (MCA)	Natural England (NE)					
Gaps in Management:	<ul style="list-style-type: none"> Information on anchoring is gathered at hotspots within the site but this has not been considered at the whole-site level. The data needs to be collated and assessed against sensitive sites within the BNNC EMS to determine potential impacts. 						
Management Requirements:	<ol style="list-style-type: none"> 1.1. Identify key anchoring hotspots within the BNNC EMS and compare locations with sensitive areas of the site 1.2. Monitor the impact of anchoring within the BNNC EMS and implement management measures where necessary 1.3. Maintain anchoring at a level that does not adversely affect the rocky reefs around the Farnes through the Farne Islands National Nature Reserve Management Plan 						
Reporting Indicators:	<ol style="list-style-type: none"> 1.a. Are levels of anchoring within the BNNC EMS known/have they changed from previous years? 1.b. Have anchoring hotspots been assessed against sensitive locations within the BNNC EMS? 1.c. Have management requirements been assessed and recommendations implemented? 						

2. Angling (Shore and Sea)			
Location:	Throughout the BNNC EMS - popular locations include St Abbs, Eyemouth, Cullernose Point, Bamburgh, Dunstanburgh		
Features Affected:	Various species affected by angling related litter, possible bird disturbance		
Frequency:	Continuous		
Issues:	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"> <ul style="list-style-type: none"> Removal of species from the system Disturbance to habitats and birds </td> <td style="width: 50%;"> <ul style="list-style-type: none"> For angling-related bait digging - see box 16 below Angling-related litter </td> </tr> </table>	<ul style="list-style-type: none"> Removal of species from the system Disturbance to habitats and birds 	<ul style="list-style-type: none"> For angling-related bait digging - see box 16 below Angling-related litter
<ul style="list-style-type: none"> Removal of species from the system Disturbance to habitats and birds 	<ul style="list-style-type: none"> For angling-related bait digging - see box 16 below Angling-related litter 		

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Current Regulation:	<ul style="list-style-type: none"> • EU Birds Directive • EU Habitats Directive • Salmon & Freshwater Fisheries Act 1975 • Marine and Coastal Access Act 2009 (Section 155-162) - power for Northumberland Inshore Fisheries & Conservation Authority (NIFCA) to make byelaws - current byelaws in place • Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS • Wildlife & Countryside Act 1981 - covering areas of the BNNC EMS that lie within a Site of Special Scientific Interest (SSSI) • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance • Inshore Fishing (Scotland) Act 1984 • Scotland Act 1998 (River Tweed) Order 2006 • Eel (England & Wales) Regulations 2009 								
Existing Management:	<ul style="list-style-type: none"> • Under the Scotland Act 1998 (River Tweed) Order 2006, the River Tweed Commission (RTC) regulates angling activity for freshwater migratory species within an area of the BNNC EMS. Their geographical district - the Tweed and Eye Fisheries District - stretches from just north of Cockburnspath in Berwickshire, down to just north of Holy Island in Northumberland, and out to five kilometres offshore. • South of the Tweed and Eye Fisheries District, the Environment Agency (EA) is responsible for regulating rod licences and the sea fishery (migratory species only) within six miles of the coast. • Anglers are also subject to Northumberland Inshore Fisheries & Conservation Authority (NIFCA) byelaws. The use of Brown Crab (<i>Cancer pagurus</i>) as bait is prohibited under NIFCA byelaws and anglers must adhere to minimum landing sizes for other species. • NIFCA, the EA and RTC share intelligence. • CEFAS recently carried out a survey of angling activity in England - Angling 2012 - and NIFCA is continuing to collect data on levels of recreational fishing within its district. NIFCA has published an Angling Strategy for 2013-14. • Leaflets raising awareness of angling-related litter have been distributed by the BNNC EMS to angling clubs in the past. • Beach cleans are carried out by Amble Angling Club. • Code of Conduct - including environmental awareness - is promoted by the Angling Trust. 								
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">River Tweed Commission (RTC)</td> <td style="width: 25%;">Northumberland Inshore Fisheries & Conservation Authority (NIFCA)</td> <td style="width: 25%;">Environment Agency (EA)</td> <td style="width: 25%;">Marine Scotland (MS)</td> </tr> <tr> <td colspan="4">Marine Management Organisation (MMO)</td> </tr> </table>	River Tweed Commission (RTC)	Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	Environment Agency (EA)	Marine Scotland (MS)	Marine Management Organisation (MMO)			
River Tweed Commission (RTC)	Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	Environment Agency (EA)	Marine Scotland (MS)						
Marine Management Organisation (MMO)									
Gaps in Management:	<ul style="list-style-type: none"> • Information is now available about the angling hotspots in Northumberland through the national Angling 2012 initiative, and through the Northumberland IFCA Sea Angling Strategy 2013-14 which will continue into future years, but it has not been assessed against sensitive areas within the BNNC EMS to determine potential impacts. 								
Management Requirements:	<ol style="list-style-type: none"> 2.1. Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible 2.2. Using the Angling 2012 findings, and by continuing to collect data on recreational fishing activity through the NIFCA Angling Strategy, identify the angling hotspots within the BNNC EMS and assess against sensitive site locations 2.3. Work with angling groups to raise awareness of sensitive locations and promote good practice, particularly regarding litter 2.4. Carry out beach cleans at angling hotspots 2.5. Promote the importance of the BNNC EMS and its management needs to angling clubs by inviting club representatives to stakeholder events 2.6. Ensure management regimes in the Tweed and Eye Fisheries District have regard to the qualifying features of the BNNC EMS to minimise fishing-related damage and disturbance 								
Reporting Indicators:	<ol style="list-style-type: none"> 2.a. Are levels of angling within the BNNC EMS known/have they changed from previous years? 2.b. Have angling hotspots been assessed against sensitive locations within the BNNC EMS? 2.c. Have management requirements been assessed and recommendations implemented? 								

3. Aquaculture (Pacific oyster - *Crassostrea gigas*)

Location:	Ross, Holy Island. Oyster trestles are located on the shore below Mean Low Water Spring
Features Affected:	Sand and mud flats and associated species (mussels), birds
Frequency:	Continuous
Issues:	Establishment of non-native species within the BNNC EMS. Introduction of disease, impact on mussel beds and birds, plus hydrodynamics of the area if natural beds form. Disturbance caused by access for harvesting. Waters off Northumberland are currently too cold for natural establishment of <i>Crassostrea gigas</i> , but natural settlement is now confirmed in the Solway and Firth of Forth.

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Reporting Indicators:	4.a. Are all beaches within the EMS cleaned by non-mechanical means?
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5. Boating (chartered trips - wildlife watching, angling and diving)									
Location:	Throughout the BNNC EMS - favoured areas include St Abbs, Eyemouth, Farne Islands, Seahouses and Beadnell Bay. Boats from Amble also sail to the Farne Islands.								
Features Affected:	Reefs, grey seal								
Frequency:	Continuous but increased activity in summer months								
Issues:	<ul style="list-style-type: none"> • Disturbance to seals and seabirds, damage from anchoring on reefs (see also anchoring box above) 								
Current Regulation:	<ul style="list-style-type: none"> • EU Habitats Directive • EU Birds Directive • The Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations 1998 (boats carrying less than 12 people) • The Merchant Shipping (Passenger Ships on Domestic Voyages) Regulations 2000 (boats carrying more than 12 people) • Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 								
Existing Management:	<ul style="list-style-type: none"> • All charter boats have to be certified by the Maritime & Coastguard Agency (MCA). Boats are assessed and monitored for waste disposal management as part of the certification. Boats must comply with MCA codes of practice which include operational controls to safeguard the environment. • The National Trust restricts the number of landings within the Farne Islands National Nature Reserve (NNR). Only 10 vessels are licensed to land twice a day between May and July. They visit Staple Island in the morning and Inner Farne in the afternoon. Each island is open to visitors for three hours per day during the breeding season. The vessels can land on Inner Farne during April, August and September. • The National Trust monitors water sport activity within the Farne Islands NNR. • There are restrictions on the numbers of vessels launched from North Sunderland Harbour and Beadnell Bay. • Codes of Conduct and Voluntary Agreements at the St Abbs & Eyemouth Voluntary Marine Reserve (VMR). • Northumberland Wildlife Trust is hoping to work with Marine Life to develop marine wildlife watching codes of conduct that will be shared with boat operators, and Natural England is also hoping to progress work on this topic. • Lindisfarne National Nature Reserve (NNR) byelaws. • The Scottish Marine Wildlife Watching Code is promoted within the Scottish section of the BNNC EMS. • Northumberland Marine Wildlife Watching Boating Code of Conduct developed with local boat operators. 2015 update 								
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">National Trust (NT)</td> <td style="width: 25%;">Natural England (NE)</td> <td style="width: 25%;">St Abbs Harbour Trust (SAHT)</td> <td style="width: 25%;">North Sunderland Harbour Commission (NSHC)</td> </tr> <tr> <td>Marine Management Organisation (MMO)</td> <td>Eyemouth Harbour Trust (EHT)</td> <td>Maritime & Coastguard Agency (MCA)</td> <td></td> </tr> </table>	National Trust (NT)	Natural England (NE)	St Abbs Harbour Trust (SAHT)	North Sunderland Harbour Commission (NSHC)	Marine Management Organisation (MMO)	Eyemouth Harbour Trust (EHT)	Maritime & Coastguard Agency (MCA)	
National Trust (NT)	Natural England (NE)	St Abbs Harbour Trust (SAHT)	North Sunderland Harbour Commission (NSHC)						
Marine Management Organisation (MMO)	Eyemouth Harbour Trust (EHT)	Maritime & Coastguard Agency (MCA)							
Gaps in Management:	<ul style="list-style-type: none"> • Natural England is currently considering, together with the National Trust, whether the number of boats that visit the Farne Islands is damaging the site • Recent increase in wildlife watching, especially for cetaceans, and codes of conduct need to be developed/promoted • Information on activity intensity is gathered at hotspots within the site but this has not been considered at the whole-site level • The data needs to be collated and assessed against sensitive sites within the BNNC EMS to determine potential impacts 								
Management Requirements:	<ol style="list-style-type: none"> 5.1. Monitor boat landings within the Farne Islands NNR, maintain and enforce restrictions in order to meet the conservation objectives for features covered by this scheme 5.2. Work with charter boat operators to promote the significance and sensitivities of the BNNC EMS and develop codes of conduct if necessary 5.3. Promote the Scottish Wildlife Watching Codes with Scottish charter boat operators 5.4. Evaluate existing data gathering for boat launching within the BNNC EMS, and work with slip providers to improve data gathering where opportunities exist 5.5. Boat launch facilities to share non-sensitive data on charter boat numbers with the EMS officer 								
Reporting Indicators:	<ol style="list-style-type: none"> 5.a. Is the level of charter boat activity within the BNNC EMS known/has it changed from previous years? 5.b. Has the level of charter boat activity been assessed for its impact on the BNNC EMS? 5.c. Have management requirements been assessed and recommendations implemented? 								

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6. Commercial Fishing (Mobile Gear)			
Location:	Sub littoral sediment areas and intertidal sand and mud flats within English section of the BNNC EMS (mobile gear is banned within the Scottish section)		
Features Affected:	Reefs, sand and mud flats, seagrass, grey seal, birds		
Frequency:	Infrequently - south east corner of the site		
Issues:	<ul style="list-style-type: none"> Loss of reef fauna and flora due to collateral abrasion damage from dredges operating near reef areas 		
Current Regulation:	<ul style="list-style-type: none"> EU Habitats Directive EU Birds Directive EU Common Fisheries Policy EU Council Regulation for the conservation of fishery resources through technical measures for the protection of juveniles (and associated secondary legislation) The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) Marine and Coastal Access Act 2009 (Section 155-162) - power for IFCAs to make byelaws Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance Sea Fisheries (Shellfish) Act 1967 - fixed gear reserve Scallop Fishing (England) Order 2012 Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) 		
Existing Management:	<ul style="list-style-type: none"> Dredging: <ul style="list-style-type: none"> Fixed gear reserve in Scottish section of BNNC EMS (no dredging allowed). Northumberland Inshore Fisheries & Conservation Authority (NIFCA) byelaws in English section - the total number of dredges used by any vessel shall not exceed 10 at any one time, and mouth of dredges will not exceed 75cm. Lindisfarne National Nature Reserve byelaws restrict fishing activity in the reserve. Commercial fishing is now a 'plan or project' under the Habitat Regulations and dredging will be banned through NIFCA byelaws in sensitive reef and seagrass areas in England by the end of 2013. Dredging will be subject to a Habitat Regulations Assessment for all other BNNC EMS features and management measures, if necessary, will be implemented by 2016. New activities will be subject to Habitat Regulations Assessment. Trawling: <ul style="list-style-type: none"> Fixed gear reserve in Scottish section of BNNC EMS (no trawling allowed). NIFCA byelaws in English section restrict the size of vessels operating trawling gear within the three mile and six mile fishery limits. This is thought to limit the type of gear that vessels operating within those areas can use, as well as the areas where they can operate. Multi-rigging, Pair Trawling and Pair Seining are all banned within the district. Only a single trawl fitted with a single codend and utilising one pair of otter boards can be used. Commercial fishing is now a 'plan or project' under the Habitat Regulations and trawling was banned through NIFCA byelaws in sensitive reef and seagrass areas in England at the end of 2013. Trawling will be subject to a Habitat Regulations Assessment for all other BNNC EMS features and management measures, if necessary, will be implemented by 2016. New activities will be subject to Habitat Regulations Assessment. Purse Seine Netting is prohibited in the Northumberland District as well as the Scottish section of the BNNC EMS. There has been ongoing interest in the establishment of a squid fishery within the Scottish section of the BNNC EMS. If formal proposals were put forward in the future, it is possible that they will be regarded as a 'plan or project' under the Habitat Regulations and would be subject to a Habitat Regulations Assessment. Scottish Natural Heritage has provided advice in the past but would require further information before a formal assessment of impact on the BNNC EMS could be determined. All vessels are certified by the Maritime & Coastguard Agency (MCA) and must discard fishing-related waste in a manner that is compliant with certification conditions. Large vessels are required to have waste management plans. The Marine Management Organisation (MMO) has the power to place restrictive conditions on vessel fishing licences. 		
Organisations with statutory powers:	Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	Marine Scotland (MS)	Marine Management Organisation (MMO)
Gaps in Management:	<ul style="list-style-type: none"> Uncertainty around the level of unlawful fishing within English waters, which is then landed in Scottish harbours. 		

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Management Requirements:	<p>6.1. Maintain and enforce fixed gear reserve in Scottish section of the BNNC EMS and ensure that any derogations to the order consider the impact on the BNNC EMS</p> <p>6.2. Prohibit mobile gear designed to contact the seabed in areas of rocky reef and seagrass within the English section of BNNC EMS</p> <p>6.3. Assess the impact of mobile gear on the integrity of the BNNC EMS and implement additional management measures, if necessary (Article 6)</p> <p>6.4. Respond to SNH risk review of fishing in Scottish section of the BNNC EMS and implement fisheries management measures if necessary</p> <p>6.5. Ensure fishing vessels are disposing of fishing-related waste in a manner that complies with relevant MARPOL legislation</p> <p>6.6. Marine Scotland and Northumberland IFCA to work in partnership to enforce fisheries regulation in cross-border fisheries</p>
Reporting Indicators:	<p>6.a. Have mobile fishing gear methods been assessed for their impact to the Scottish section of the BNNC EMS and management measures considered/implemented?</p> <p>6.b. Have all mobile fishing gear methods that take place within the English section of the BNNC EMS been subject to a Habitat Regulations Assessment under the Habitat Regulations?</p> <p>6.c. Have management measures been assessed and implemented as a result of the above assessments?</p> <p>6.d. Are regulations complied with and enforced?</p>

7. Creel/Pot Fisheries

Location:	Potentially anywhere in the permanently subtidal areas of the site
Features Affected:	Reefs and associated species
Frequency:	Throughout the year with decreased intensity during the winter
Issues:	Removal of target species from reefs
Current Regulation:	<ul style="list-style-type: none"> • EU Habitats Directive • EU Birds Directive • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Marine and Coastal Access Act 2009 (Section 155-162) - power for Northumberland Inshore Fisheries & Conservation Authority (NIFCA) to make byelaws - current regulation exists • Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance • Inshore Fishing (Scotland) Act 1984 • Sea Fisheries (Shellfish) Act 1967 • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland)
Existing Management:	<ul style="list-style-type: none"> • EU minimum landing sizes for edible crab (<i>Cancer pagarus</i>), lobster (<i>Homarus gammarus</i>), Nephrops and Velvet Crab (<i>Necora puba</i>). • All under 12m vessels must have a national potting permit • Northumberland Inshore Fisheries & Conservation Authority (NIFCA) pot limitation scheme in English section of the BNNC EMS. • NIFCA byelaws in place to implement EU and national minimum landing sizes discussed above, and the introduction of a maximum landing size is currently being considered. • V-notching scheme in Northumberland. • CEFAS crab and lobster assessments for sustainable exploitation have recently been carried out. • NIFCA has begun a shellfish survey which will estimate stock levels based on landings and catches. This will provide an ongoing baseline for stock levels and trends. • The management regime for the creel/pot fisheries will be included in the NIFCA Strategic Environmental Assessment (SEA). • Creel/pot fisheries will be subject to a Habitat Regulations Assessment and management measures, if necessary, will be implemented by 2016. • Scottish Natural Heritage is undertaking a risk review for all Scottish EMS which will include creel/pot fisheries.
Organisations with statutory powers:	Northumberland Inshore Fisheries & Conservation Authority (NIFCA) Marine Scotland (MS) Marine Management Organisation (MMO) Centre for Environment, Fisheries & Aquaculture Science (CEFAS)
Gaps in Management:	<ul style="list-style-type: none"> • No pot limitation scheme in the Scottish section of the site but this may be explored in the future. • No upper limit for permits for the Northumberland creel/pot fishery has been established.

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Management Requirements:	<p>7.1. Maintain the pot limitation scheme in Northumberland and manage the activity at a sustainable level</p> <p>7.2. Maintain and promote the importance of the v-notching scheme in Northumberland</p> <p>7.3. Maintain and enforce byelaws for minimum landing sizes, plus any maximum landing sizes that are established in the future</p> <p>7.4. Carry out a Habitat Regulations Assessment to establish impact to English section of the BNNC EMS, and implement management measures if necessary</p> <p>7.5. Respond to SNH risk review in Scottish section of the BNNC EMS and implement management measures if necessary</p> <p>7.6. Continue to explore opportunities to establish pot limitation scheme in the Scottish section of the BNNC EMS</p> <p>7.7. Support ongoing data gathering and research to inform the sustainable management of creel/pot fisheries within the BNNC EMS</p> <p>7.8. Ensure fishing vessels are disposing of fishing-related waste in a manner that complies with relevant MARPOL legislation</p>
Reporting Indicators:	<p>7.a. Has potting been assessed for its impact to the Scottish section of the BNNC EMS and management measures considered/implemented?</p> <p>7.b. Has potting within the English section of the BNNC EMS been subject to a Habitat Regulations Assessment?</p> <p>7.c. Have management measures been assessed and implemented as a result of the above assessments?</p> <p>7.d. Are regulations/management measures complied with and enforced?</p>

8. Diffuse Pollution (land run-off)

Location:	Throughout the BNNC EMS		
Features Affected:	Reefs, sea caves, sand and mud flats, inlets and bays, birds		
Frequency:	Diffuse inputs are continuous from the River Eye and the River Tweed, as well as coastal streams and land run-off, although rainfall and other events in the catchment can cause levels to fluctuate.		
Issues:	<ul style="list-style-type: none"> • Nutrient enrichment • Organic enrichment • Particularly in areas surrounding Holy Island including Budle Bay and Fenham Flats. Elevated nutrient levels surrounding Holy Island may be causing an increased abundance of <i>Ulva intestinalis</i> (<i>Enteromorpha</i>) which is creating anoxic conditions within sediment and may be affecting the underlying benthos. It is also smothering the seagrass (<i>Zostera</i> spp.) beds and may be having an impact on the SPA habitats. 		
Current Regulation:	<table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> • EU Habitats Directive • Water Framework Directive • Bathing Water Regulations 2008 (England) • Water Environment and Water Services (Scotland) Act 2003 • Nitrates Directive • Water Environment (Controlled Activities) (Scotland) Regulations 2011 • Nitrates (Scotland) Regulations 1996 • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance </td> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> • EU Birds Directive • Bathing Waters Directive • Bathing Waters (Scotland) Regulations 2008 • Water Environment (England and Wales) Regulations 2003 (Statutory Instrument 2003 No. 3242) • Nitrate Pollution Prevention Regulations 2008 (as amended in 2013) • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) </td> </tr> </table>	<ul style="list-style-type: none"> • EU Habitats Directive • Water Framework Directive • Bathing Water Regulations 2008 (England) • Water Environment and Water Services (Scotland) Act 2003 • Nitrates Directive • Water Environment (Controlled Activities) (Scotland) Regulations 2011 • Nitrates (Scotland) Regulations 1996 • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 	<ul style="list-style-type: none"> • EU Birds Directive • Bathing Waters Directive • Bathing Waters (Scotland) Regulations 2008 • Water Environment (England and Wales) Regulations 2003 (Statutory Instrument 2003 No. 3242) • Nitrate Pollution Prevention Regulations 2008 (as amended in 2013) • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland)
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Existing Management:	<ul style="list-style-type: none"> • Water Framework Directive (WFD) monitoring and associated management measures. • Budle Bay Nitrate Vulnerable Zone monitoring. • River Basin Management Plans. • Tweed Catchment Management Plan. • Bathing Waters Directive monitoring and associated management measures. • Catchment Sensitive Farming schemes. • Eye Water is a priority catchment for diffuse pollution issues • There was considerable research and consideration of nutrient enrichment from various sources in England during the Environment Agency's review of consents. • Natural England has established a working group to discuss diffuse pollution issues around the Lindisfarne National Nature Reserve. Staff from Higher Level Stewardship Schemes, Catchment Sensitive Farming, Lindisfarne National Nature Reserve and EMS monitoring will liaise with the Environment Agency and Scottish partners. The EMS officer will help to facilitate communication with Scottish partners to discuss cross-border issues. The group may also consider the decline in mussel bed condition, bringing Northumberland Inshore Fisheries & Conservation Authority (NIFCA) in when necessary. • <i>Ulva intestinalis</i> (<i>Enteromorpha</i>) levels around Holy Island are monitored on an annual basis by the Environment Agency (EA). • In Scotland, Scottish Water's Sustainable Land Management (SLM) team operate an incentive scheme to protect drinking water sources from diffuse pollution within priority areas across Scotland. Diffuse pollution sources can include pesticide and nutrient applications or livestock access to watercourses. The SLM team responds to a wide variety of consultations on activities that take place in or near drinking water sources. These include: forest management and felling; wind farms; hydro schemes and aerial spraying of pesticides. 2015 update
Organisations with statutory powers:	Environment Agency (EA) Scottish Environment Protection Agency (SEPA) Natural England (NE)
Gaps in Management:	<ul style="list-style-type: none"> • The source of nutrient enrichment around Holy Island has yet to be identified. • The source may occur in Scotland, with effects materialising in England due to sediment and hydrological processes. Scottish prioritisation of issues does not always take into account effects which are not evident in Scottish waters. • Unclear of sediment transport and hydrology for north to south along the coast, but the Shoreline Management Plan Cell 1 coastal squeeze habitat study will be modelling sediment transport.
Management Requirements:	8.1. Ensure Catchment Sensitive Farming and land management schemes seek to address the impact of agricultural effluent on the marine environment 8.2. Use sediment modelling from SMP Coastal Squeeze Study to inform nutrient transport from the rivers Eye and Tweed and its contribution to elevated nutrients around Holy Island 8.3. Identify the sources of nutrient enrichment around Holy Island and implement management measures to reduce levels 8.4. Continue to monitor the Budle Bay Nitrate Vulnerable Zone and other areas within the BNNC EMS that are vulnerable to elevated nutrient levels 8.5. Consider effects on the whole BNNC EMS (including effects that materialise cross-border) when prioritising water quality issues 8.6. English and Scottish regulators collaborate to assess impacts of the rivers Tweed and Eye on the BNNC EMS and implement mitigation where necessary 8.7. Ensure water quality impacts on the BNNC EMS are considered in Catchment Management Plans
Reporting Indicators:	8.a. Are cross-border regulators working together to address diffuse pollution issues? 8.b. In relation to elevated nutrient levels around Holy Island, have point sources been identified and are action plans being developed? 8.c. Are nutrient levels and <i>Ulva intestinalis</i> levels reducing around Holy Island?

9. Discharges (from land)	
Location:	Point discharges at various locations in the BNNC EMS
Features Affected:	Reefs, sea caves, sand and mud flats, inlets and bays, grey seal, birds
Frequency:	Each point discharge operates with a frequency specific to that discharge

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Issues:	<ul style="list-style-type: none"> • Non-toxic contamination in the form of organic material, input of nutrients, changes in temperature or of salinity and increased turbidity • Toxic contamination due to synthetic inputs such as pesticides and non-synthetic inputs such as heavy metals. • Physical damage caused by siltation • Introduction of disease and pathogens • Properties not connected to the main sewerage network typically discharge waste to septic tanks or other private sewage treatment systems. In some cases, septic tanks are not used/ maintained correctly and the result is that they discharge waste which is not adequately treated and contains relatively high levels of pollutants such as phosphorus. 				
Current Regulation:	<table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> • EU Habitats Directive • EU Birds Directive • EU Water Framework Directive • EU Marine Strategy Framework Directive • EU Bathing Waters Directive • Flood and Water Management Act 2010 • EU Waste Framework Directive • The Waste (Scotland) Regulations 2012 • Marine and Coastal Access Act 2009 - licensing • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter • Merchant Shipping and Fishing Vessel Port Waste Reception Facilities Regulations 2003 • EU Port Waste Reception Directive - port reception facilities for ship-generated waste and cargo residues • International Convention for the Prevention of Marine Pollution from Ships (MARPOL 73/78) and its Annex V (which prohibits the at-sea disposal of plastics and garbage from ships) • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance </td> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> • EU Nitrates Directive • EU Groundwater Directive • EU Urban Wastewater Treatment Directive • Urban Waste Water Treatment (England and Wales) (Amendment) Regulations 2003 • Water Environment (Controlled Activities) (Scotland) Regulations 2011 • Urban Waste Water Treatment (Scotland) Amended Regulations 2003 • The Waste (Scotland) Regulations 2012 • The Waste (England and Wales) (Amendment) Regulations 2012 • Marine (Scotland) Act 2010 -licensing • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) </td> </tr> </table>	<ul style="list-style-type: none"> • EU Habitats Directive • EU Birds Directive • EU Water Framework Directive • EU Marine Strategy Framework Directive • EU Bathing Waters Directive • Flood and Water Management Act 2010 • EU Waste Framework Directive • The Waste (Scotland) Regulations 2012 • Marine and Coastal Access Act 2009 - licensing • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter • Merchant Shipping and Fishing Vessel Port Waste Reception Facilities Regulations 2003 • EU Port Waste Reception Directive - port reception facilities for ship-generated waste and cargo residues • International Convention for the Prevention of Marine Pollution from Ships (MARPOL 73/78) and its Annex V (which prohibits the at-sea disposal of plastics and garbage from ships) • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 	<ul style="list-style-type: none"> • EU Nitrates Directive • EU Groundwater Directive • EU Urban Wastewater Treatment Directive • Urban Waste Water Treatment (England and Wales) (Amendment) Regulations 2003 • Water Environment (Controlled Activities) (Scotland) Regulations 2011 • Urban Waste Water Treatment (Scotland) Amended Regulations 2003 • The Waste (Scotland) Regulations 2012 • The Waste (England and Wales) (Amendment) Regulations 2012 • Marine (Scotland) Act 2010 -licensing • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) 		
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Existing Management:	<ul style="list-style-type: none"> • Discharges (including septic tanks) are subject to consenting procedures which are regulated by the Environment Agency (EA) in England and the Scottish Environment Protection Agency (SEPA) in Scotland. Regulation is carried out in consultation with Natural England and Scottish Natural Heritage as the statutory nature conservation advisors. • Bathing water sampling carried out by the EA (England) and SEPA (Scotland). • Water Framework Directive (WFD) monitoring carried out by the EA (England) and SEPA (Scotland). • Some schemes are subject to marine licensing requirements where structures are in place on/under the sea bed - licences issued by the Marine Management Organisation (England) and Marine Scotland (Scotland). • The Living Waterways project run by North East Wildlife Trusts and the EA is helping towards achievement of WFD targets. Although focussing on urban waterways, there may be opportunities to look at the impact of coastal developments in Northumberland, including the impact of septic tanks and mis-connections. The project will work with local water companies. • For properties not connected to the public sewerage network; Scottish Water supports provision for private sewage systems to connect to a public sewerage network where it is promoted and agreed with our Regulators, there is a strong economic case, it is the most appropriate solution and is desired by the property owners affected. 2015 update. 				
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Environment Agency (EA)</td> <td style="width: 25%;">Scottish Environment Protection Agency (SEPA)</td> <td style="width: 25%;">Natural England (NE)</td> <td style="width: 25%;">Scottish Natural Heritage (SNH)</td> </tr> </table>	Environment Agency (EA)	Scottish Environment Protection Agency (SEPA)	Natural England (NE)	Scottish Natural Heritage (SNH)
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Gaps in Management:	<ul style="list-style-type: none"> • The cumulative impact of coastal developments that don't drain into the sewerage system, including individual septic tanks mis-connections, is unknown. Mis-connections can arise in a variety of situations and depending on ownership of pipes etc. and would have to be considered on a case by case basis. • Opportunities to use existing water quality monitoring data to inform site condition may be missed at present. 				
Management Requirements:	<p>9.1. Understand the cumulative impact of coastal septic tanks and misconnections on the condition of the BNNC EMS and implement management where necessary</p> <p>9.2. Seek opportunities through the Living Waterways project to assess the impact of coastal developments not connected to the main sewerage system, including septic tanks and mis-connections</p>				
Reporting Indicators:	<p>9.a. Do we have an understanding of the number of coastal septic tanks flowing into the BNNC EMS and have they been assessed for their cumulative impact on the BNNC EMS?</p> <p>9.b. Have management requirements been assessed and recommendations implemented?</p> <p>9.c. Is water quality monitoring data being used to inform site condition?</p>				

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Current Regulation:	<ul style="list-style-type: none"> • EU Habitats Directive • EU Birds Directive • NIFCA byelaws • Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance • Fisheries legislation determines the minimum size of lobsters and crabs that divers can legally land for their own consumption, plus the number of species that can be landed • Administrative factors currently limit the numbers of boats launched from harbours, slipways and other launch sites within the site • Activity is naturally regulated by the effects of wind, tide and weather • Merchant Shipping Act 1995 - reporting wreck 												
Existing Management:	<ul style="list-style-type: none"> • Seahouses Harbour Commission restricts the numbers of boats launched each day • Northumberland County Council limits the number of boats launched from Beadnell each day • NIFCA carries out regular patrols of divers to ensure they are only removing 2 lobsters, 5 brown crabs, 20 whelks and 5 prawns or less, and that shellfish are above minimum size • St Abbs Harbour Trust records the numbers of vessels using the harbour and can restrict the number launched if necessary • St Abbs & Eyemouth VMR and Harbour Trusts advise divers on good practice, promoting a VMR code of conduct. The existence of the VMR ranger and the presence of the seasonal wardens' post help improve relations between fishermen and the diving community • National Trust collects data on the numbers of dive boats visiting the Farne Islands National Nature Reserve and restricts landings upon the islands • Items removed from wrecks must be reported to the Receiver of Wreck at the Maritime & Coastguard Agency (MCA) • The British Sub-Aqua Club has its own code of conduct which is promoted amongst its members 												
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Northumberland Inshore Fisheries & Conservation Authority (NIFCA)</td> <td style="width: 25%;">National Trust (NT)</td> <td style="width: 25%;">Marine Management Organisation (MMO)</td> <td style="width: 25%;">North Sunderland Harbour Commission (NSHC)</td> </tr> <tr> <td>Northumberland County Council (NCC)</td> <td>Eyemouth Harbour Trust (EHT)</td> <td>St Abbs Harbour Trust (SAHT)</td> <td>Marine Scotland (MS)</td> </tr> <tr> <td>Maritime & Coastguard Agency (MCA)</td> <td></td> <td></td> <td></td> </tr> </table>	Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	National Trust (NT)	Marine Management Organisation (MMO)	North Sunderland Harbour Commission (NSHC)	Northumberland County Council (NCC)	Eyemouth Harbour Trust (EHT)	St Abbs Harbour Trust (SAHT)	Marine Scotland (MS)	Maritime & Coastguard Agency (MCA)			
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Northumberland County Council (NCC)	Eyemouth Harbour Trust (EHT)	St Abbs Harbour Trust (SAHT)	Marine Scotland (MS)										
Maritime & Coastguard Agency (MCA)													
Gaps in Management:	<ul style="list-style-type: none"> • Currently no co-ordination of the figures recording the number of dive boats launched annually from harbours and other launch sites within the BNNC EMS • A study on diving impacts around the Farnes was complete in 2006 but similar studies for other dive hotspots within the EMS have not been carried out. The study indicated no short-term impact but did not look at long-term impact. 												
Management Requirements:	<p>11.1. Evaluate existing data gathering for diving intensity within the BNNC EMS, and work with slip providers to improve data gathering where opportunities exist</p> <p>11.2. Dive launching facilities to share non-sensitive data on dive boat numbers with the EMS officer</p> <p>11.3. Maintain NIFCA byelaws for the removal of species; monitor and enforce amongst divers</p> <p>11.4. Promote codes of conduct amongst divers</p>												
Reporting Indicators:	<p>11.a. Are levels of diving within the BNNC EMS known/have they changed from previous years?</p> <p>11.b. Have diving hotspots been assessed against sensitive locations within the BNNC EMS?</p> <p>11.c. Have management requirements been assessed and recommendations implemented?</p>												

12. Drift, T and J Netting

Location:	South side of Holy Island, fixed nets at Seahouses (north side of the harbour), the Aln at Boulmer and fixed nets for Goswick Sands (3-4 berths)
Features Affected:	Removal of species from the wider system and possible bycatch of birds
Frequency:	Season is March 26th-August 31st
Issues:	Bycatch and entanglement of other species including sea birds

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Current Regulation:	<ul style="list-style-type: none"> • Common Fisheries Policy - EU quotas and minimum landing sizes • EU Birds Directive • Salmon & Freshwater Fisheries Act 1975 • Net Limitation Order 2012 • Marine and Coastal Access Act 2009 (Section 155-162) - power for Northumberland Inshore Fisheries & Conservation Authority (NIFCA) to make byelaws - current regulation exists • Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 				
Existing Management:	<ul style="list-style-type: none"> • EU Habitats Directive • Inshore Fishing (Scotland) Act 1984 • The Scotland Act 1998 (River Tweed) Order 2006 • Marine and Coastal Access Act 2009 (Section 155-162) - power for IFCAs to make byelaws 				
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">River Tweed Commission (RTC)</td> <td style="width: 25%;">Environment Agency (EA)</td> <td style="width: 25%;">Northumberland Inshore Fisheries & Conservation Authority (NIFCA)</td> <td style="width: 25%;">Marine Management Organisation (MMO)</td> </tr> </table>	River Tweed Commission (RTC)	Environment Agency (EA)	Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	Marine Management Organisation (MMO)
River Tweed Commission (RTC)	Environment Agency (EA)	Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	Marine Management Organisation (MMO)		
Gaps in Management:	None				
Management Requirements:	<p>12.1. Ensure management regimes in the Tweed and Eye Fisheries District have regard to the qualifying features of the BNNC EMS to minimise fishing-related damage and disturbance</p> <p>12.2. Ensure that net fishing south of the Tweed and Eye Fisheries District is carried out in line with licence requirements</p> <p>12.3. Ensure the level of fishing pressure of permissible net fisheries remains at a sustainable level, in accordance with international guidelines and which does not impact the BNNC EMS</p> <p>12.4. Ensure collaborative working between inshore fisheries regulators within the BNNC EMS, and share resources and data where possible</p>				
Reporting Indicators:	<p>12.a. Are all licence holders operating within the BNNC EMS complying with conditions?</p> <p>12.b. Is there any unlicensed activity within the BNNC EMS?</p>				

13. Flood and Coastal Defence

Location:	Harbours, ports and some low lying areas of open coast in Northumberland
Features Affected:	Reefs, sea caves, sand and mud flats, inlets and bays, grey seal, birds
Frequency:	New schemes are infrequent, maintenance occurs as required
Issues:	<p>Inappropriate strategic planning could result in inappropriate schemes, leading to:</p> <ul style="list-style-type: none"> • Modification of inshore coastal processes potentially leading to changed rates of erosion/accretion • Modified hydrography/altered water movement • Increased turbidity causing decreased light penetration • Siltation caused by increased levels of particulate material due to construction works or dumping of material • Abrasion, most likely to affect reefs but also possibly caves • Smothering of habitat features (effective removal), due to dumping of material • Removal/destruction of habitat features • Non-toxic contamination caused by release of organic material from the land • Disturbance to seals and birds depending on location • Inappropriate fly tipping and impromptu, unconsented coastal defence occurs at spots within the BNNC EMS

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Current Regulation:	<ul style="list-style-type: none"> • EU Habitat Directive • EU Environmental Impact Assessment Directive • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Shoreline Management Plan for St Abbs to the River Tyne • Marine and Coastal Access Act 2009 - licensing • Wildlife and Countryside Act 1981 - SSSI consent • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 	<ul style="list-style-type: none"> • EU Birds Directive • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) • Local Authorities Flood and Water Management Act 2010 • Town & Country Planning Act 1990 • Marine (Scotland) Act 2010 - licensing 		
Existing Management:	<ul style="list-style-type: none"> • Individual schemes and projects are regulated through the terrestrial planning and marine licensing systems • Shoreline Management Plan (SMP) for St Abbs to the River Tyne covers most of the European marine site area (except St Abbs to Fast Castle Head) • Coastal Change Management Areas (CCMAs) will be created in the English section of the BNNC EMS. CCMAs will provide spatial policies to prevent inappropriate coastal development in areas likely to erode in the future, and where no additional defence is planned. This will minimise the need for hard defences within the BNNC EMS in the future. • Marine licence required from the Marine Management Organisation (MMO) or Marine Scotland (MS) for the removal or deposition of materials in intertidal and subtidal areas • Environment Agency has responsibility for flood protection in England, including sea defences. In Scotland, this role is fulfilled by the local authority and Scottish Executive • Forthcoming study into the coastal squeeze effects on protected habitats as a result of SMP2 policies • Consideration of "Likely Significant Effect" (LSE) and "appropriate assessment" of plans and projects under the English and Scottish Habitat Regulations. This process is not part of the management scheme for the BNNC EMS, but the management group authorities should be consulted separately as part of the assessment of new proposals • Some schemes will be subject to Environmental Impact Assessment (EIA) under European legislation • Northumberland County Council is leading on the production of a leaflet that will be distributed to coastal stakeholders and property owners. The leaflet provides information about coastal defence legislation and the impacts of fly tipping and inappropriate private coastal defences. 			
Organisations with statutory powers:	Northumberland County Council (NCC) Marine Management Organisation (MMO)	Scottish Borders Council (SBC) Northumbrian Water Ltd (NWL)	Marine Scotland (MS) Scottish Natural Heritage (SNH)	Environment Agency (EA) Natural England (NE)
Gaps in Management:	<ul style="list-style-type: none"> • Limited Scottish representation on the NECG • Scottish section of the BNNC EMS is outside the SMP area 			
Management Requirements:	<p>13.1. Seek early advice from statutory nature conservation body on all local authority flood and coastal defence schemes within and adjacent to the BNNC EMS and obtain relevant consents</p> <p>13.2. Ensure the BNNC EMS is considered in strategic flood and coastal defence planning - including local authority Local Plans and Neighbourhood Plans – and ensure long-term shoreline management takes habitat squeeze into account</p> <p>13.3. Complete a study on coastal squeeze for protected habitats along the Cell 1 frontage as a result of shoreline management planning policies</p> <p>13.4. When providing advice on flood and coastal protection, ensure that advised actions will not negatively impact the BNNC EMS</p> <p>13.5. Promote and encourage schemes that work with natural processes at the coast, rather than implementing hard defence measures for protection</p> <p>13.6. When defence structures come to the end of their life, seek innovative ways to work with natural processes, rather than replacing hard defence</p> <p>13.7. Raise awareness among property owners of the damage caused by inappropriate fly tipping and unconsented/inappropriate private coastal defence interventions within the BNNC EMS through promotional material</p>			
Reporting Indicators:	<p>13.a. How many new flood and coastal defence schemes have been established within the BNNC EMS?</p> <p>13.b. What is the level of unconsented flood and coastal defence schemes within the BNNC EMS?</p> <p>13.c. Does the coastal squeeze study indicate expected impact on BNNC EMS features as a result of shoreline management plan policies?</p>			

14. Harbour Development

Location:	All harbours
Features Affected:	Reefs, sand and mud flats, sea caves, inlets and bays, grey seals, birds
Frequency:	As required

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Issues:	<ul style="list-style-type: none"> • Loss of habitat by removal or smothering • Toxic contamination from materials used • Increased turbidity • Siltation by increased levels of particulate material 			
Current Regulation:	<ul style="list-style-type: none"> • EU Habitat Directive • EU Environmental Impact Assessment Directive • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Marine & Coastal Access (MCA) Act 2009 • Town & Country Planning Act 1990 • Marine (EIA) Regulations 2007 • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 			
Existing Management:	<ul style="list-style-type: none"> • EU Birds Directive • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) • Local Authorities Flood and Water Management Act 2010 • Marine (Scotland) (MS) Act 2010 • Town & Country Planning EIA Regulations 2011 			
Organisations with statutory powers:	Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC) Marine Scotland (MS)	Northumberland County Council (NCC) Natural England (NE)	Marine Management Organisation (MMO) Scottish Natural Heritage (SNH)	Scottish Borders Council (SBC)
Gaps in Management:	More work is needed to raise awareness of the qualifying features of the BNNC EMS and the requirements of the Habitat Regulations in relation to harbour works			
Management Requirements:	<p>14.1. Obtain all relevant permissions and consents for harbour works, and ensure small scale maintenance does not impact on the condition of the site</p> <p>14.2. Ensure compliance with the Port Marine Safety Code</p>			
Reporting Indicators:	14.a. How many new harbour development schemes have been implemented within the BNNC EMS?			

15. Harbour Waste Management

Location:	All harbours located within the BNNC EMS
Features Affected:	Reefs, sea caves, sand and mud flats, inlets and bays, grey seal, birds
Frequency:	Waste is continuously generated and disposed of
Issues:	<ul style="list-style-type: none"> • Toxic and non-toxic contamination • Physical damage caused by siltation • Introduction of disease and pathogens
Current Regulation:	<ul style="list-style-type: none"> • EU Habitats Directive • EU Birds Directive • The Waste (Scotland) Regulations 2012 • International Convention for the Prevention of Marine Pollution from Ships (MARPOL 73/78) and its Annex V (which prohibits the at-sea disposal of plastics and garbage from ships) • EU Port Waste Reception Directive - port reception facilities for ship-generated waste and cargo residues • Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other Matter • Merchant Shipping and Fishing Vessel Port Waste Reception Facilities Regulations 2003 • Scottish Marine Litter Strategy
Existing Management:	<ul style="list-style-type: none"> • EU Waste Framework Directive • EU Marine Strategy Framework Directive • The Waste (England and Wales) (Amendment) Regulations 2012 <p>• Harbour waste management plans are produced for Berwick, Eyemouth and North Sunderland and are sent to the MCA every three years for approval. Eyemouth and Berwick must produce plans, and North Sunderland produce a voluntary plan.</p>

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Existing Management:	<ul style="list-style-type: none"> • Recreational: Bait digging for personal/recreational use is ancillary to the right to fish from the foreshore. This right can be regulated and managed. A Lindisfarne National Nature Reserve byelaw restricts bait digging within the reserve, although a voluntary agreement with anglers allows some bait digging on either side of the Holy Island causeway. The area of this zone will likely be changed in the future in order to protect the seagrass under Article 6 of the Habitats Directive. A voluntary agreement is in place at Boulmer Haven involving Northumberland County Council, foreshore owners and angling organisations, combined with a local authority byelaw. The agreement and byelaw restrict bait digging in the north area of the bay to allow access to boats. The restrictions were not put in place for the purpose of environmental protection, but they do help to protect areas of the BNNC EMS. Collection of species from the rocky shore in England does not require a permit when for recreational/personal use but NIFCA byelaws for intertidal species collection enforce European and national minimum landing size for crab (edible and velvet), lobster and Nephrops, plus the number of individuals of crab (5), lobster (2), whelk (20) and prawn (5) that can be landed by an individual in any one day. In Scotland, the St Abbs & Eyemouth Voluntary Marine Reserve (VMR) has a voluntary no-take provision within its boundary that is generally well complied with. • Commercial: No legal right exists to gather bait for commercial sale or reward. Commercial bait digging requires consent from the land owner and any relevant authority. Collection of species from the rocky shore for commercial use requires a permit from NIFCA in England. There is an anecdotal commercial periwinkle (<i>Littorina littorea</i>) fishery off Lookout Point at Seahouses. There is currently no regulation in place for a fishery of this nature in that location. If in place it will require a Habitat Regulations Assessment under intertidal hand gathering. Buyers will apparently only buy individuals over a certain size, smaller individuals are sieved out and put back. The St Abbs & Eyemouth VMR has a voluntary no-take provision within its boundary that is generally well complied with. Historic mussel harvesting on beds south of Holy Island. This is a private fishery on private land. Northumberland IFCA carries out an annual mussel survey to assess the stocks and to provide a baseline from which future management decisions can be made, should the fishery open up again. • By 2016, intertidal hand gathering in the English section of the site will be subject to a Habitat Regulations Assessment under Article 6 of the Habitats Directive and additional management measures implemented, if necessary. A ban on hand gathering in areas of seagrass within the BNNC EMS was established on April 1st 2014. • The use of edible crab as bait is prohibited in the Northumberland IFCA District under the Sea Fisheries (Shellfish) Act 1967 • Natural England is currently producing thematic guidance for the management of activities within EMS as part of the Improvement Programme for England's Natura 2000 Sites (IPENS) This project is supported by EU Life+ and will aim to develop strategic action plans for the management of all Natura 2000 sites in England. Natural England will work with the Environment Agency to deliver IPENS. Recreational bait digging will be included as a specific theme. • Voluntary codes developed with the angling community are an effective management tool for bait digging activity in EMS. 						
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;">Northumberland Inshore Fisheries & Conservation Authority (NIFCA)</td> <td style="width: 33%; border: none;">Marine Scotland (MS)</td> <td style="width: 33%; border: none;">National Trust (NT)</td> </tr> <tr> <td style="border: none;">Natural England (NE)</td> <td style="border: none;">Northumberland County Council (NCC)</td> <td style="border: none;"></td> </tr> </table>	Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	Marine Scotland (MS)	National Trust (NT)	Natural England (NE)	Northumberland County Council (NCC)	
Northumberland Inshore Fisheries & Conservation Authority (NIFCA)	Marine Scotland (MS)	National Trust (NT)					
Natural England (NE)	Northumberland County Council (NCC)						
Gaps in Management:	<ul style="list-style-type: none"> • Enforcement and maintenance of management measures can be difficult. • No regulation for periwinkle (<i>Littorina littorea</i>) fishery. • Different legal rights belong to recreational vs. commercial bait digging activity. In the absence of a system to tell the activities apart, recreational is often treated the same as commercial, with all activity being banned. • Byelaws are generally not applicable to activities ancillary to the common right to fish, such as bait digging, although bait digging is still covered by the Habitats Directive. • Nothing to control turned boulders/cobbles – awareness-raising may be needed. 						
Management Requirements:	<ol style="list-style-type: none"> 16.1. Prohibit bait digging in areas of seagrass within the BNNC EMS 16.2. Undertake a Habitat Regulations Assessment for all commercial intertidal hand gathering in the BNNC EMS - shellfish, bait species, <i>Littorina littorea</i> - and establish additional management measures where necessary 16.3. Consider recommendations that may develop through the IPENS project and other projects regarding the management of bait digging 16.4. Maintain existing bylaws on Lindisfarne NNR to manage intertidal hand gathering within the Lindisfarne National Nature Reserve 16.5. Maintain agreement with bait diggers to avoid the north area of Boulmer Haven, while recognising this restriction is in place for boat access 16.6. Work with angling groups to raise awareness of good environmental practice when bait-digging within the BNNC EMS. Develop codes of conduct if necessary 16.7. Recognising the different rights that apply to recreational and commercial bait digging, explore the possibility of a management regime that separates the two 16.8. Work with local sea bait trade outlets to educate them on the law regarding commercial digging, particularly within the BNNC EMS 16.9. Continue to survey the mussel stocks to the south of Holy Island annually 						
Reporting Indicators:	<ol style="list-style-type: none"> 16.a. Has a Habitat Regulations Assessment been carried out to assess the impact of bait digging within the English section of the EMS, and what are the results? 16.b. Do management regimes reflect the different rights between commercial and recreational activity? 						

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17. Litter			
Location:	Throughout the BNNC EMS		
Features Affected:	Reefs, sea caves, sand and mud flats, inlets and bays, grey seal, birds		
Frequency:	Continuous		
Issues:	<ul style="list-style-type: none"> • Litter can cause entanglement and injury through ingestion of harmful material • Plastics make up the majority of marine litter and never fully break down, they only photo-degrade • Aesthetic effects of litter lead to adverse public perception of site quality 		
Current Regulation:	<ul style="list-style-type: none"> <li style="width: 50%;">• OSPAR Convention <li style="width: 50%;">• International Convention for the Prevention of Pollution from Ships <li style="width: 50%;">• EU Marine Strategy Framework Directive - Descriptor 10 <li style="width: 50%;">• EU Directive on Port Reception Facilities for Ship-generated Waste & Cargo Residues <li style="width: 50%;">• EU Water Framework Directive <li style="width: 50%;">• The Environmental Protection Act 1990 and its Code of Practice on Litter and Refuse <li style="width: 50%;">• Merchant Shipping (Port Waste Reception Facilities) Regulations 2003 <li style="width: 50%;">• London Dumping Convention 1975 <li style="width: 50%;">• Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 		
Existing Management:	<ul style="list-style-type: none"> • An International Conference on Prevention and Management of Marine Litter in European Seas was held in Berlin in April 2013. The Conference identified a number of priority actions for consideration. The Scottish Draft Marine Litter Strategy will be updated to reflect the outcome of further discussions at an EU level and between OSPAR countries. • Scottish Marine Litter Strategy - still draft. • Scottish National Litter Strategy. • Scottish Zero Waste Plan - funding for local authorities through <i>Keep Scotland Beautiful</i> to clean public areas. • Most beaches in the English section of the BNNC EMS are 'adopted' by local community groups who regularly clean and survey litter types. This feeds into the Marine Conservation Society (MCS) dataset and cleans are facilitated locally by the Northumberland Coast Area of Outstanding Natural Beauty (AONB), with litter collected by Northumberland County Council. • National Trust volunteers carry out regular beach cleans, Trust staff also runs occasional beach cleans with groups. • Northumberland Wildlife Trust cleans the beach at Cocklawburn. • The St Abbs & Eyemouth Voluntary Marine Reserve carries out regular beach cleans, as well as underwater cleans. • The Local Authorities International Environmental Organisation's (known as KIMO) 'Fishing for Litter' initiative provides litter bags for fishermen to fill and deposit on the quayside for collection. The scheme is being adopted by an increasing number of vessels operating out of Scotland's designated landing ports, including Eyemouth. • Lindisfarne NNR carries out beach cleans, mainly on the north shore at Holy Island. Targeted litter picks are carried out to remove damaging items. The NNR also supports the annual MCS beach cleans and surveys. • During the current investment period Strategic Review (SR)15, Scottish Water will carry out aesthetic studies to determine needs. Dependant on the outcome of the studies, we will invest in improvements to reduce Sewage Related Debris (SRD) being discharged to the freshwater and marine environment. 2015 update. • Scottish Water's Keep the Water Cycle Running Smoothly campaign aims to raise awareness and inform customers on the impact of placing kitchen fats, oils and grease down the sink and wipes from the bathroom, nappies and cotton buds into the sewerage system. 2015 update. • Northumbrian Water Ltd runs various awareness-raising initiatives through its 'Dwain Pipe' campaign. • The Marine Management Organisation (MMO) and Marine Scotland (MS) licenses dumping at sea. 		
Organisations with statutory powers:	Northumberland County Council (NCC) Marine Management Organisation (MMO)	Scottish Borders Council (SBC) Marine Scotland (MS)	Environment Agency (EA) Scottish Environment Protection Agency (SEPA)
Gaps in Management:	<ul style="list-style-type: none"> • There is currently no Fishing for Litter project established in Northumberland • Not all beaches within the BNNC EMS are 'adopted' as community beach clean areas 		

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Management Requirements:	<p>17.1. Eyemouth Harbour and Scottish Borders Council to maintain involvement in the Fishing for Litter initiative and promote to local fishermen</p> <p>17.2. Continue to explore the possibility of establishing a Fishing for Litter initiative in Northumberland</p> <p>17.3. Northumberland Coast AONB to continue to facilitate community beach cleans within the BNNC EMS and AONB as part of the Marine Conservation Society Beach Watch initiative</p> <p>17.4. Northumberland County Council to continue to collect rubbish generated from community beach cleans within the AONB and EMS</p> <p>17.5. Raise awareness of the impacts of marine litter among site users</p> <p>17.6. Implement actions from the Scottish Marine Litter Strategy within the BNNC EMS</p> <p>17.7. Promote and support beach cleans throughout the BNNC EMS</p> <p>17.8. Promote and facilitate underwater litter picks</p> <p>17.9. Promote the reduction of Sewage Related Debris (SRD) being discharged to the freshwater and marine environment</p> <p>17.10. Raise awareness of the impacts of placing inappropriate items into the sewerage system</p>
Reporting Indicators:	<p>17.a. How many beaches within the BNNC EMS are regularly litter picked?</p> <p>17.b. How many underwater cleans have taken place within the BNNC EMS?</p> <p>17.c. Has the Fishing for Litter initiative been established in Northumberland?</p>

18. Low Flying Military Aircraft

Location:	Throughout the BNNC EMS
Features Affected:	Grey seal and birds
Frequency:	Daily
Issues:	<ul style="list-style-type: none"> Noise disturbance to seals and birds
Current Regulation:	<ul style="list-style-type: none"> Low flying exclusion zones around important bird areas All UK SACs and SPAs feature in Naval Command HQ (NCHQ) guidance for naval activities, which is endorsed by UK statutory nature conservation bodies All UK marine SACs and SPAs are identified within generic NCHQ guidance to its Commanding Officers for operations in or adjacent to marine protected areas This guidance is followed during training evolutions and will be considered during active operations Where the guidance is incompatible with military requirements an escalating system of environmental assessment is employed to avoid any likely significant effect in accordance with the Conservation of Habitats and Species Regulations 2010 Military guidance is currently under review with the UK Statutory Nature Conservation Bodies
Existing Management:	<ul style="list-style-type: none"> Low flying exclusion zones are in place over the Farne Islands and Lindisfarne National Nature Reserves
Organisations with statutory powers:	Ministry of Defence (MOD)
Gaps in Management:	None
Management Requirements:	18.1. Maintain low flying exclusion zones around the Farne Islands and Holy Island
Reporting Indicators:	18.a. Are low flying exclusion zones still in place around the Farne Islands and Lindisfarne National Nature Reserves, and are they complied with?

19. Maintenance/Capital Dredging and Disposal

Location:	Potentially all harbours within the BNNC EMS, un-licensed deposits also occur within the site
Features Affected:	Reefs, associated species
Frequency:	As required

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Issues:	<ul style="list-style-type: none"> • Loss of reef and cave communities from the impact of dredge gear or smothering by dredge spoil • Release of TBT and other contaminants from historic sediments 			
Current Regulation:	<ul style="list-style-type: none"> • EU Habitat Directive • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Marine & Coastal Access Act 2009 • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance 	<ul style="list-style-type: none"> • EU Birds Directive • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) • Marine (Scotland) Act 2010 		
Existing Management:	<ul style="list-style-type: none"> • All removal of and deposition on the seabed must acquire a marine licence from either the Marine Management Organisation (MMO) or Marine Scotland (MS) and would be subject to a Habitat Regulations Assessment. From April 2014, all new and existing navigational dredging will require a marine licence. Where unconsented works occur, the MMO has the power to issue remediation notices and stop notices. • The Centre for Environment, Fisheries & Aquaculture Science (CEFAS) has issued guidelines for limits on levels of contaminants in dredge spoil for licensing of disposal at sea to ensure levels do not exceed environmental standards. • Environment Agency (EA) is a statutory consultee on all marine licence applications and advises on the contaminants within spoil and suitable deposit locations. The EA developed the UK dredging protocols and is currently working with the Marine Management Organisation to develop standard conditions on marine licences for spoil disposal. The EA is consulted on all applications, unlike Natural England which only comments on proposals that may impact on protected sites. • All harbours must comply with the Port Marine Safety Code (Department of Transport 2012) 			
Organisations with statutory powers:	Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC) Centre for Environment, Fisheries & Aquaculture Science (CEFAS)	Marine Scotland (MS) Natural England (NE)	Marine Management Organisation (MMO) Scottish Natural Heritage (SNH)	Environment Agency (EA)
Gaps in Management:	More work is needed to raise awareness of the qualifying features of the BNNC EMS and the requirements of the Habitat Regulations in relation to harbour works.			
Management Requirements:	19.1. Ensure new dredge and disposal proposals undergo a Habitat Regulations Assessment 19.2. Ensure CEFAS and EA guidelines for levels of contaminants in dredge spoil are applied when assessing proposals 19.3. Ensure compliance with the Port Marine Safety Code			
Reporting Indicators:	19.a. How many unauthorised dredge/dredge disposal incidents have taken place within the BNNC EMS over the reporting period?			

20. Microlights

Location:	Throughout the BNNC EMS, but main areas of impact around Holy Island and Little tern colony at Long Nanny
Features Affected:	Birds
Frequency:	Mainly summer months
Issues:	<ul style="list-style-type: none"> • Disturbance to birds - particular issues around Holy Island and the Little tern colony at the Long Nanny • Shadow and shape mimics predator and birds become stressed • Potential bird collision
Current Regulation:	<ul style="list-style-type: none"> • The National Private Pilot's Licence (NPPL) is a UK specific pilot's licence developed in 2002. To obtain a NPPL with a Microlight Class Rating you must complete flight training with a UK Civil Aviation Authority authorised flying instructor entitled to instruct on microlights. • The British Microlight Aircraft Association (BMAA) has developed codes of conduct but they are more focused on flight safety with only a small amount of information on environmental issues.
Existing Management:	<ul style="list-style-type: none"> • Intelligence gathering between the Lindisfarne National Nature Reserve (Natural England) and the Farne Islands National Nature Reserve (National Trust) • Monitoring of tags and ID numbers when seen flying over sensitive areas
Organisations with statutory powers:	Civil Aviation Authority (CAA)
Gaps in Management:	<ul style="list-style-type: none"> • No understanding of intensity of activity, or activity hotspots and how they correlate with sensitive areas within the BNNC EMS • Code of conduct produced by BMAA but could be stronger on environmental impact - encourages adherence to local avoidance zones but there are no such zones established in Northumberland • Unsure of where the flights originate but it is likely to be the Bockenfield Airfield off the A1. Some local interpretation may be helpful

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Management Requirements:	20.1. Identify microlight hotspots within the BNNC EMS and compare against sensitive locations within the site 20.2. Work with light aircraft industry bodies, local airfields and user groups to develop environmental guidance for existing codes of conduct 20.3. Encourage the creation of microlight avoidance zones around sensitive areas 20.4. Collect intelligence about microlights within sensitive areas of the BNNC EMS and share amongst partners
Reporting Indicators:	20.a. Which areas of the BNNC EMS are impacted by microlights? 20.b. Has the establishment of microlight avoidance zones been considered and explored? 20.c. Have discussions opened up with microlight user groups and are codes of conduct agreed?

21. Navigation (Establishing, Maintaining and Decommissioning Aids to Navigation)

Location:	Two lighthouses situated on the Farne Islands at Inner Farne and Longstone. One situated at Bamburgh. Two at Holy Island at Guile Point East and Heugh Hill. One in Scotland at St Abb's Head. Other aids to navigation such as daymark beacons, like those at Emmanuel Head, Holy Island, and buoys are also within the site.
Features Affected:	Intertidal reefs, sand and mud, inlets and bays, plus birds and grey seal
Frequency:	Continuous
Issues:	Disturbance to birds and seals. Damage to features during maintenance and repair to navigation aids at the coast
Current Regulation:	<ul style="list-style-type: none"> • EU Habitat Directive • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Merchant Shipping Act 1995 (as amended) • Wildlife & Countryside Act 1981 - covering areas of the BNNC EMS that lie within a Site of Special Scientific Interest (SSSI) • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, sea grass and rocky reefs as habitats of principal importance • EU Birds Directive • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) • Marine Navigation Act 2013
Existing Management:	<ul style="list-style-type: none"> • Aids to navigation that are provided in UK waters include lighthouses, buoys, light vessels and beacons together with electronic Aids to Navigation assist all mariners at all times and in all weathers. Trinity House in England operates within an Environmental Management System that is certified against the requirements of BS EN ISO 14001:2004 Environmental Management Systems, and expects all contractors to work to similar standards. Trinity House has an environmental management system that complies with ISO14001, and expects all suppliers to work to similar standards. Contractors must give priority to reducing environmental impacts and complying with regulatory environmental standards. Significant environmental aspects must be properly controlled and maintained with documented procedures. Field Operatives and Engineers and Mariners receive basic in house training on the importance of Environmental Designations and what they mean. Trinity House also displays details of local environmental designations at each lighthouse for staff reference. Contractors must be aware of the provisions in Part II of the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) Regulations 1991, which place a clear responsibility on the generators of waste to ensure that it is properly and safely disposed of. • The Lighthouse authorities have permitted development rights but these are subject to the Habitat Regulations in relation to European Sites. • The Maritime & Coastguard Agency issues navigation bulletins to vessels
Organisations with statutory powers:	Trinity House (TH) Northern Lighthouse Board (NLB) Natural England (NE) Scottish Natural Heritage (SNH)
Gaps in Management:	None
Management Requirements:	21.1. When establishing, maintaining and decommissioning aids to navigation within the BNNC EM, ensure adverse impacts to the site are kept to a minimum 21.2. Ensure contractors are aware of the sensitivities of the BNNC EMS and that required consents are obtained before the commencement of works
Reporting Indicators:	21.a. Have there been any major planned works to aids to navigation within the BNNC EMS? (Information received through Notices to Mariners)

22. Non-Native Species

Location:	Non-native species can potentially occur anywhere within or close to the BNNC EMS
Features Affected:	Reefs, sea caves, sand and mud flats, inlets and bays, grey seal, birds

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Frequency:	Continuous
Issues:	<ul style="list-style-type: none"> • Spread and introduction of non-native species can disrupt local species. • Control of non-native species can have harmful effects on non-target species. • Pacific oysters are now settling naturally on the Solway and the Forth, and it may not be long before conditions within the BNNC EMS are suitable for natural settlement. • Japanese skeleton shrimp was recorded on the North Shore of Holy Island in summer 2012, further monitoring has found no other records. <i>Botrylloides violaceus</i> (a colonial tunicate) has been recorded on boulders within the site at various locations, but the abundance, distribution and impact of this species is unknown. <i>Codium fragile</i> (a green algae) has been recorded at Beadnell for 20 years or more but doesn't appear to be increasing in abundance or causing any damage.
Current Regulation:	<ul style="list-style-type: none"> • EU Habitat Directive • Conservation (Natural Habitats, &c.) Regulations 1994 (Scotland) • Water Framework Directive • Wildlife and Natural Environment Act 2011 • GB Invasive Non Native Species Framework Strategy and Species Action Framework • Possession of Pesticides (Scotland) Order 2005 - regulates use of pesticides and herbicides on invasive non-native species in Scotland • Food and Environment Protection Act 1985 - regulates use of pesticides and herbicides on invasive non-native species in England • Pesticides Act 1998 - regulates use of pesticides and herbicides on invasive non-native species in England • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance • EU Birds Directive • The Conservation of Habitats and Species Regulations 2010 (England, certain sections applicable in Scotland) • Marine Strategy Framework Directive • The Wildlife and Countryside Act 1981 - areas of the BNNC EMS that lie within a Site of Special Scientific Interest (SSSI)
Existing Management:	<ul style="list-style-type: none"> • Tweed Catchment Biosecurity Plan 2011-16 (very terrestrial focused) • Check, Clean, Dry campaign to prevent the spread of aquatic non-natives from equipment, clothing and shoes • Best practice promoted through the Green Blue Campaign • Codes of conduct • Piri-piri burr remains a problem on and around Holy Island and methods for control will need to be appropriate for use within the BNNC EMS • <i>Spartina</i> spp. is now endemic around Holy Island. Small scale hand digging targets the removal of isolated clumps. • All contractors working on behalf of Natural England must report any non-native species as adopted best practice. The lead organisations responsible for coordinating a rapid response to new introductions of non-native species in the marine environment that impact biodiversity are Natural England and/or DEFRA • Scottish Environment Protection Agency (SEPA) staff undertaking Water Framework Directive monitoring also check for marine non-natives while at the coast
Organisations with statutory powers:	Many of the relevant authorities have a role to play in the prevention, monitoring and control of non-native species within the BNNC EMS.
Gaps in Management:	<ul style="list-style-type: none"> • No monitoring in place to predict when sea surface temperatures might reach a level that will allow Pacific oyster (<i>Crassostrea gigas</i>) to settle naturally within the site • We have sighting records from Big Sea Survey but they have not been assessed in the context of non-native invasive species within and close to the BNNC EMS, and we have no targeted monitoring to map abundance and distribution • No information on key vectors for spread and introduction within the BNNC EMS • Tweed Biosecurity Plan is mainly terrestrial species, no biosecurity plan covering the entire BNNC EMS, limited cross-border co-ordination
Management Requirements:	<p>22.1. Work with the Big Sea Survey data and other datasets to identify presence/absence, abundance and distribution of marine non-native species within and close to the BNNC EMS, identify monitoring indicator species, and assess the impact to the BNNC EMS</p> <p>22.2. Develop a monitoring strategy to look at presence/absence, abundance and distribution of target species over time</p> <p>22.3. Following research and monitoring, consider the need for a biosecurity plan for the BNNC EMS</p> <p>22.4. Identify key vectors for the introduction of marine non-native species to the BNNC EMS</p> <p>22.5. Identify and monitor a set of climate change indicator species to inform natural change within the BNNC EMS</p> <p>22.6. Promote student projects that involve the gathering and analysis of data related to marine non-native species within and adjacent to the BNNC EMS</p> <p>22.7. Make use of existing data collection opportunities to gather data on marine non-native species</p> <p>22.8. Report all non-native species sightings to the relevant bodies and record centres, and apply response measures where necessary</p> <p>22.9. Promote the Check, Clean, Dry campaign amongst boat owners/users</p> <p>22.10. Ensure methods of control for established non-native species do not adversely impact the BNNC EMS</p> <p>22.11. Place settlement panels within and close to the BNNC EMS to gather early warning signs of the presence of marine non-natives</p> <p>22.12. Continue to support of the UK MarClim project within the BNNC EMS</p>

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Reporting Indicators:	22.a. Have invasive non-native marine species been identified within and close to the BNNC EMS, and is their location and distribution mapped? 22.b. Is a monitoring strategy in place for marine non-native species within and close to the BNNC EMS? 22.c. Which established non-native species are being controlled within and close to the BNNC EMS and are methods of control impacting the site? 22.d. How many marine non-native projects have been complete/are underway within the BNNC EMS?
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23. Oil/Pollution Spill Prevention

Location:	Potentially anywhere within the BNNC EMS. Spillage or discharge from vessels at sea, in harbour, or land-based spillage								
Features Affected:	Reefs, sea caves, sand and mud flats, inlets and bays, grey seal, birds								
Frequency:	Infrequent, but potentially at any time								
Issues:	<ul style="list-style-type: none"> • Toxic contamination of habitats and species by oil or chemical inputs • Toxic contamination of habitats and species from dispersants and clean-up methods • Smothering of habitats and species by oil or chemical inputs • Damage caused by clean-up operations 								
Current Regulation:	<ul style="list-style-type: none"> • The International Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC Convention) • Merchant Shipping (oil pollution preparedness, response and co-operation convention) Regulations 1998 - Oil Spill Plans • Civil Contingencies Act 2004 - requires local authority planning and response • Harbour waste management plans • Pollution prevention role of the Environment Agency and the Scottish Environment Protection Agency 								
Existing Management:	<ul style="list-style-type: none"> • In the event of a major pollution incident in UK waters arising from shipping or offshore oil and gas operations, the UK National Contingency Plan (NCP) is implemented. The production of the plan is led by the Maritime & Coastguard Agency (MCA) and is currently in a draft format. • A set of new guidelines has been developed to strengthen the response to oil and chemical spills at sea. The post-incident monitoring guidelines are a key output from the PREMIAM project (Pollution Response in Emergencies: Marine Impact Assessment and Monitoring) which was initiated in 2009. • In Scottish waters, under the NCP, Marine Scotland Science (MSS) provides a 24 hour emergency response through a duty officer service. In the event of an emergency, the duty officer works in collaboration with staff from Scottish Natural Heritage (SNH) and / or the Joint Nature Conservation Committee (JNCC). Together they provide advice to primary responders on the overall environmental benefit of using dispersants to treat spilled oil in particular situations. The Scottish Emergency Planning Group (SEPG) has a national plan for oil and chemical spills. • In English waters, under the NCP, spill response is co-ordinated by a representative of the Secretary of State, who works with key local response authorities, as well as the North East Standing Environment Group which is made up of authorities with a marine and conservation remit. The Marine Management Organisation advises on the use of dispersal agents and chemicals. • Eyemouth, Berwick and North Sunderland harbours are required to produce individual oil spill contingency plans due to their size and turnover - these plans must be reviewed every five years and the draft plans go out to consultation to stakeholders, including the statutory nature conservation bodies (SNCBs). The MCA formally signs the plans off and ensures environmental concerns are dealt with in line with MCA guidelines and the advice of the SNCBs. Harbours carry out smaller reviews, which don't require formal consultation, on an annual basis and changes are advertised and signed off by the MCA. • The MCA ensures that harbours run an appropriate number of exercises and that they have adequately trained response staff at a Tier Two Responder level, or access to a contractor should an incident occur. The MCA also provides training for responding authorities and Northumberland County Council hosted a MCA Beach Masters course in November 2013. • Northumberland County Council and Scottish Borders Council have whole area spill contingency plans in place. The Northumberland plan is up to date and the Scottish plan will be updated soon. • Both the Environment Agency and the Scottish Environment Protection Agency advise on risk of oil and chemical spillage from land, ensuring that adequate safety and contingency measures are in place. • Clean up equipment is placed strategically around the coast to respond to incidents. • Lindisfarne National Nature Reserve (NNR) has oil waste storage facilities to store oil drums that wash up in the NNR. Northumberland County Council collects the drums for disposal. • The illegal discharge of oil or chemical pollution can result in prosecution by the Environment Agency and the Scottish Environment Protection Agency. 								
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Harbour Commissions/Trusts (EHT, BHC, NSHC)</td> <td style="width: 25%;">Scottish Borders Council (SBC)</td> <td style="width: 25%;">Northumberland County Council (NCC)</td> <td style="width: 25%;">Maritime & Coastguard Agency (MCA)</td> </tr> <tr> <td>Marine Management Organisation (MMO)</td> <td>Marine Scotland (MS)</td> <td>Environment Agency (EA)</td> <td>Scottish Environment Protection Agency (SEPA)</td> </tr> </table>	Harbour Commissions/Trusts (EHT, BHC, NSHC)	Scottish Borders Council (SBC)	Northumberland County Council (NCC)	Maritime & Coastguard Agency (MCA)	Marine Management Organisation (MMO)	Marine Scotland (MS)	Environment Agency (EA)	Scottish Environment Protection Agency (SEPA)
Harbour Commissions/Trusts (EHT, BHC, NSHC)	Scottish Borders Council (SBC)	Northumberland County Council (NCC)	Maritime & Coastguard Agency (MCA)						
Marine Management Organisation (MMO)	Marine Scotland (MS)	Environment Agency (EA)	Scottish Environment Protection Agency (SEPA)						
Gaps in Management:	<ul style="list-style-type: none"> • Oil spill contingency plans do not always identify the location of BNNC EMS features. • More opportunities for cross-border collaboration on exercises. • Contingency plans do not always include information on the care and treatment of animals affected by spills, and how this will be co-ordinated. 								

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25. Recreation (land and water)							
Location:	Throughout the BNNC EMS. Activities include kite karting, coasteering, wildlife watching, dog walking, horse riding, walkers, watersports. Favoured areas for water-based activities include St Abbs, Eyemouth, Farne Islands, Seahouses, Budle Bay, Holy Island and Beadnell Bay. Land-based activities occur on most easily accessible beaches within the site.						
Features Affected:	Intertidal rocky shore, sand and mud flats, inlets and bays, grey seal, birds						
Frequency:	Continuous, with increased activity in summer months						
Issues:	Noise and visual disturbance to seals and birds, disturbance to intertidal rocky shore from movement of boulders/cobbles/seaweeds, trampling of other intertidal habitats						
Current Regulation:	<ul style="list-style-type: none"> • EU Habitats Directive • Lindisfarne National Nature Reserve byelaws • VMR codes of conduct and voluntary agreements • Various other codes of conduct • Regulation 38 of The Conservation of Habitats and Species Regulations 2010 (as amended 2012) gives the Marine Management Organisation the power to make byelaws for EMS • Harbour Authority regulations and restrictions for speed and navigation within the area of their jurisdiction • Natural Environment and Rural Communities (NERC) Act 2006 regards intertidal mudflats, blue mussel beds, seagrass and rocky reefs as habitats of principal importance • Protection of Seals (Designation of Haul-out Sites) (Scotland) Act 2014. 2015 update. <ul style="list-style-type: none"> • EU Birds Directive • National Trust byelaws around the Farne Islands National Nature Reserve • Green Blue environmental campaigns for leisure boating • The Wildlife and Countryside Act 1981 - areas of the BNNC EMS that lie within a Site of Special Scientific Interest (SSSI) 						
Existing Management:	<ul style="list-style-type: none"> • Use of water craft within the EMS is managed through the restriction of access points to the water. • Wildlife watching codes of conduct available and promoted. • Coasteering code of conduct developed by AONB and user groups. • Seashore code of conduct promoted. • Natural England is currently producing thematic guidance for the management of activities within EMS as part of the IPENS Project - recreation will be included as a specific theme. • Advice on good practice is given to water sports users launching at St Abbs Harbour. • Berwick Harbour Commission is encouraging jet-skiers to form a club where codes of conduct can be established. • Restrictions on water sport activity are in place within Lindisfarne NNR though byelaws. • No jet-skis are allowed in Eyemouth harbour. Boats can launch from concrete slip next to harbour, or from within the harbour for a fee. • VMR has a code of conduct that is promoted to visitors and divers - divers are asked to control their buoyancy and not use spear guns or hooks. • Northumberland Wildlife Trust is hoping to work with Marine Life to develop marine wildlife watching codes of conduct that will be shared with boat operators, and Natural England is also hoping to progress work on this topic. • Scottish Marine Wildlife Watching Codes are promoted within the Scottish section of the BNNC EMS. • Lindisfarne National Nature Reserve byelaws provide temporal and spatial zones for water sports. • Natural England and the Environment Agency are developing thematic action plans for all English Natura 2000 sites, with recreation as a key theme. • The Green Blue - an environmental programme created by the British Marine Federation (BMF) and Royal Yachting Association (RYA) - helps boat users, boating businesses, sailing clubs and training centres to reduce their impact on coastal and inland waters. • Designated seal haul out site at St Abbs for breeding grey seal. 2015 update. 						
Organisations with statutory powers:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Marine Management Organisation (MMO)</td> <td style="width: 33%;">Natural England (NE)</td> <td style="width: 33%;">Scottish natural Heritage (SNH)</td> </tr> <tr> <td>Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC)</td> <td>National Trust for Scotland (NTS)</td> <td>National Trust (NT)</td> </tr> </table>	Marine Management Organisation (MMO)	Natural England (NE)	Scottish natural Heritage (SNH)	Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC)	National Trust for Scotland (NTS)	National Trust (NT)
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Harbour Commissions/Trusts (SAHT, EHT, BHC, NSHC)	National Trust for Scotland (NTS)	National Trust (NT)					
Gaps in Management:	<ul style="list-style-type: none"> • Intensity data is collected at various recreational hotspots throughout the BNNC EMS but this is not done at a whole-site level • Where data is gathered, there is little co-ordination or analysis of what the figures mean for the BNNC EMS 						

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Management Requirements:	<p>25.1. Monitor use of the Farne Islands National Nature Reserve for water sports and keep activity at a level that does not cause disturbance to Grey seal or protected birds</p> <p>25.2. Maintain and enforce existing National Trust restrictions for water-based recreation around the Farne Islands National Nature Reserve</p> <p>25.3. Maintain and enforce existing Lindisfarne National Nature Reserve byelaws to manage water sports</p> <p>25.4. Promote existing codes of conduct to recreational user groups and clubs; develop further codes if necessary</p> <p>25.5. Consider recommendations that may develop through the IPENS project regarding the management of recreation</p> <p>25.6. Identify recreational activity hotspots and consider the spatial distribution and intensity against environmental sensitivity</p> <p>25.7. Develop a data gathering regime to gain a better understanding of recreational activity at the whole-site level</p> <p>25.8. Ensure recreation and tourism strategies do not encourage intense levels of activity in sensitive locations within the BNNC EMS</p> <p>25.9. Consider the establishment of a recreational sub-group for the BNNC EMS to develop strategic management at a site-wide level</p>
Reporting Indicators:	<p>25.a. Have recreational hotspots been mapped and compared against sensitive locations within the BNNC EMS?</p> <p>25.b. Do we have enough information to assess whether levels of recreational activities are impacting the BNNC EMS?</p> <p>25.c. Have management requirements been assessed and recommendations implemented?</p>

26. Seal Control	
Location:	Throughout the BNNC EMS
Features Affected:	Grey seal
Frequency:	Continuous
Issues:	Seal deaths
Current Regulation:	<ul style="list-style-type: none"> • EU Habitats Directive • Conservation of Seals (England) Order 1999 • Firearms Act 1968 • Conservation of Seals Act 1970 (England only) • Marine (Scotland) Act 2010 - Part 6 (Consolidates Conservation of Seal Act 1970 in Scotland) • The Conservation of Habitats and Species Regulations 2010 (As Amended 2012) - prohibited methods of killing seals within 12 nautical miles
Existing Management:	<p>• <u>Scotland</u>: It is an offence to kill or injure a seal except under licence or for welfare reasons, outlawing unregulated seal shooting that was permitted under previous legislation. The number of seals that can be shot in any given year is informed by the Potential Biological Removal (PBR) (number of individual seals that can be removed from the population without causing a decline in the population) which is calculated annually by Sea Mammal Research Unit (SMRU) using the latest seal counts. The seal licensing process considers all Special Areas of Conservation individually and collectively.</p> <p>• <u>England</u>: Shooting seals on land is not permitted. At sea, a wildlife licence is required under the Conservation of Seals Act 1970 (CoSA). The Act also provides a closed season when killing of seals is not permitted except using the netsman's defence or under licence from the Marine Management Organisation (MMO) or Natural England (NE). Outside of these periods it is permitted to kill seals providing the method is not prohibited (i.e. they must use the specified firearm).</p> <p>The Conservation of Seals (England) Order 1999 covers an area from Berwick to Newhaven. There is no open season and killing is only permitted using the 'netsman's defence' or a wildlife licence. The 'netsman's defence' applies all year round under both of these orders, and allows fishermen to shoot seals that are in the vicinity of their net. If someone is using a firearm on land to control seals and it is not connected to commercial fisheries and is not controlling seals in the vicinity of nets (e.g. an angler shooting them from the shore in estuaries), then this can only be done under a wildlife licence from the MMO/NE. If shooting is carried out as part of commercial fisheries, it does not require a wildlife licence as the 'netsman's defence' applies, but a Schedule 1 firearms licence is required. Using a firearm at sea is different - if the firearm remains on a vessel a firearms licence is not required for it to be used at sea as the Firearms Act allows vessels to hold Schedule 1 firearms without the need for a licence. Wildlife licence is required by fishermen for anything other than control of individual seals near nets, such as wanting to kill a certain number each year. An application of this type within an EMS would require consideration and advice from Natural England as to the impact. This may trigger management measures if there is a threat to the population. Measures could include voluntary agreements or codes of conduct by the MMO or Northumberland Inshore Fisheries & Conservation Authority (NIFCA).</p> <p>The MMO and the police enforce the Conservation of Seals Act in England. Monitoring of populations is carried out by SMRU and advice is provided by the statutory nature conservation bodies (Natural England and Joint Nature Conservation Committee) as to risks to the population and whether management measures are required. MMO liaises with the IFCAS and other bodies through the Partnership for Action Against Wildlife (PAW) Marine wildlife enforcement working group. Shooting incidents are reported to either the MMO or the police; however, generally all these can do is add to the snapshot of activity as enforcement is difficult due to the regulations mentioned above, and could be perfectly lawful. The Northumberland Wildlife Trust collects data on all seal strandings.</p>

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Frequency:	Seasonal activity in the winter months
Issues:	<ul style="list-style-type: none"> • Visual or noise disturbance to protected SPA birds • Removal of target species from the BNNC EMS • Disturbance to seals hauling out around Holy Island • Physical trampling on intertidal habitats and species
Current Regulation:	<ul style="list-style-type: none"> • Lindisfarne National Nature Reserve byelaws and permit scheme
Existing Management:	<ul style="list-style-type: none"> • Natural England operates a wildfowl permit scheme within Lindisfarne National Nature Reserve (NNR). Populations are regularly monitored and an annual end of season report provides data on returns for the year. A wildfowl warden enforces and monitors compliance with licence conditions. • Eight punt gun permits are available, four for the people of Holy Island, four for people who live off the island. Two island permits are currently issued, and all four off-island permits are in use. Punt gunning is further regulated by a restriction of only one boat being allowed to operate for the purpose of this activity at any one time. Tides, weather and the cost of shot also help to regulate punt gunning to a sustainable level. • Lindisfarne Refuge Project was initiated by Natural England and in collaboration with the British Association for Shooting and Conservation (BASC) and the Northumbria, Tyneside and Durham Wildfowlers, has set aside a part of the NNR where wildfowling is not allowed. The 'Refuge Area' covers Budle Bay and the south end of Fenham Flats, including half of the seagrass beds.
Organisations with statutory powers:	Natural England (NE)
Gaps in Management:	<ul style="list-style-type: none"> • Unsure of the wider impact of punt gunning
Management Requirements:	28.1. Continue to operate a wildfowling permit scheme with regular review and research into the impacts on the BNNC EMS
Reporting Indicators:	28.a. Have there been any breaches of permit conditions during the reporting period?