



# Humber Management Scheme 2015

## Introduction



Industry and nature in harmony in one of Europe's great estuaries

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## 1. The Humber Management Scheme Plan

The Humber Estuary is internationally important for wildlife and is designated as a European Marine Site (EMS). The organisations with statutory responsibilities for the Humber Estuary EMS, known as Relevant Authorities, established the Humber Management Scheme to deliver one single management plan for the Humber Estuary EMS. The Humber Management Scheme is administered and overseen by the Humber Nature Partnership.

This document provides an introduction to the importance of the Humber Estuary for wildlife and how the Humber Estuary EMS is managed.

More detailed information on the designated features of the Humber Estuary EMS and on how the Humber is management can be found on the Humber Nature Partnership website.

## 2. Introduction and management of the Humber Estuary

### 2.1 The Humber Estuary

The Humber Estuary is the second-largest coastal plain estuary in the UK, and the largest coastal plain estuary on the east coast of Britain. Coastal plain estuaries are formed when pre-existing valleys were flooded at the end of the last glaciation. The Humber estuary drains a catchment area of some 24,472 km<sup>2</sup>, around 20% of the total land surface of England. Water collected from this catchment flows into the estuary through many rivers and tributaries, the largest of these are the Aire, Derwent, Don, Ouse, Trent and Wharf.

A significant feature of the Humber is the large tidal range, this is due to its position within the North Sea basin; producing a mean spring tidal range of 5.7m at Spurn. The tidal range increases as the tide moves up the estuary; it is 7.4m at Saltend, and 6.9m at Hessle which is 45km inland. The Humber is classified as a macro-tidal estuary because of these large tidal ranges.

At its widest point the Humber Estuary is 14km across and its average depth is 6.5m. It covers over 30,550 ha (75,492 acres). The Humber's muddy appearance (turbidity) is due to suspended sediment. This comes mainly from the eroding boulder clay cliffs along the Holderness coast and also river sediments. This sediment is vital for the estuary's function and every tide carries over 1,500 tonnes. It is estimated that up to 1.26 million tonnes of sediment may be present in the water in the estuary. The deposited sediments maintain estuary's important habitats such as, mudflats, sandflats and saltmarsh. The Humber supports a rich variety of habitats and species and is recognised as one of the most important estuaries in Europe for overwintering birds. It supports 9 species of international importance.

The Humber estuary is also an important industrial area and trade gateway with an average of 40,000 ship movements per year. Its ports and wharves handle 14% of the UK's international trade. It is the country's largest port complex. Industries along the estuary include, chemical works, oil refinery complexes and power stations.

### 2.2 Humber Estuary Designations

The Humber Estuary is internationally important for wildlife and is designated as a Special Area of Conservation (SAC) and a Special Protection Area (SPA) under the Habitats Regulations and also considered an internationally important wetland under the Ramsar Convention. Together these designations form a European Marine Site (Map 1).

The Humber Estuary is also a Site of Special Scientific Interest (SSSI), as designated under the Wildlife and Countryside Act 1981 (as amended).

For the purposes of this document, some designated features have been grouped together. For more details please see the Humber Estuary SPA, SAC and Ramsar citations. The designated features considered as part of this management plan include:

- Estuary



Environment Agency

The Humber Estuary is the second largest coastal plain estuary in the UK and the largest coastal plain estuary on the east coast of Britain. The Humber, fed by the river Trent, Ouse and Hull is a muddy macro-tidal estuary. A macro tidal estuary is defined as having a tidal range greater than 4 metres, the Humber Estuary having a range of up to 7 metres. Suspended sediment loads are high and are derived mostly from the North Sea and the eroding bolder clay of the Holderness coast.

- Mud and sand flats

Intertidal mudflats and sandflats are submerged at high tide and exposed at low tide. In the Humber Estuary they include gravels and sands, muddy sands and mud, which reflects varying degrees of exposure to waves, currents and inflowing rivers. Substantial areas of mud and sandflat have been lost due to land claim but are still a major component of the Humber Estuary and represent 4.5% of the UK's total mud and sandflat resource.



- Saline lagoons



Emma Giles

The Humber Estuary supports 10% of the total UK resource of coastal lagoons. Saline lagoons are bodies of saline water separated from the sea by a physical barrier which restricts tidal movement or renders them tideless. Salinity may be very low or very high (hypersaline) depending on water exchange and evaporation regime. Saline lagoons are unusual habitats with limited distribution throughout Europe. As well as being significant as a geophysical feature, lagoons are also important because of the specialist species and biotopes they support.

- Saltmarsh

Coastal saltmarsh generally form on sheltered coasts between the level of mean high water spring and mid neap tides. Saltmarsh develops when salt tolerant plants colonise intertidal mud and sand flats. There are approximately 630 hectares of saltmarsh on the Humber, accounting for only 2% of estuarine area compared to a national average of 6%. This is due to large historical losses from land claim. The composition of Humber saltmarsh is also unusual compared to other UK estuaries.



The saltmarsh designations split saltmarsh into two separate features; pioneer saltmarsh and Atlantic saltmeadow.

- Sub-tidal sandbanks

Sub-tidal sandbanks are permanently covered by seawater, typically at depths less than 20m. The sub-tidal environment of the Humber Estuary is highly dynamic and varies according to the composition of the bottom sediments, salinity, sediment load and turbidity, dissolved oxygen and anthropogenic factors relating to water quality and dredging. The sub-tidal area of the Humber accounts for 55% of total estuary area.

- Breeding birds

There are 4 breeding birds which are designated as part of the Humber SPA:



Avocet, Natural England

**Avocet** prefer shallow, brackish coastal lagoons with bare or sparsely vegetated islands for breeding. The restricted availability of larger areas of this habitat around the Humber limits the current breeding distribution of this species, with the majority of the breeding population concentrated on Read's Island but with smaller numbers found at a number of other sites around the Estuary (including Blacktoft Sands, Far Ings and Kilnsea Wetlands).

**Bittern** are mainly restricted to *Phragmites australis* reedbed and mixed fen habitat. This habit is demonstrated on the Humber, with successful breeding (both recent and historic) in and immediately adjacent to the SPA restricted to reedbed sites including Blacktoft Sands, Far Ings, Faxfleet and Barrow Haven.

**Marsh Harriers** require open freshwater wetlands with dense, tall vegetation (particularly reedbeds) for nesting. Marsh harrier numbers on the Humber have increased notably in the last 20 years, as they have nationally, but numbers are still well below historic highs.

**Little terns** on the Humber have historically bred at Tetney Marshes, the Spurn peninsula and Easington and Beacon Lagoons, with occasional attempts at other sites on the Outer South bank of the Estuary.

- **Wintering and passage birds**

The Humber Estuary plays an international role in bird migration and is one of the most important wetland sites in the UK. It provides a safe feeding and roosting area for species moving from breeding sites in the arctic and sub arctic to wintering grounds in southern Europe and Africa, as well as for species which use the Humber as an overwintering site. Waders and waterfowl utilise the extensive and highly productive intertidal mudflats of the estuary as a source of food and a roost site.



Golden plover, Graham Catley

In ecological terms, the Humber Estuary is highly valuable as it supports a large number of passage and overwintering wildfowl and waders that regularly use the mudflat and saltmarsh habitats. The numbers of passage and overwintering birds can reach an annual peak of up to 130 000<sup>1</sup>.

- Grey seals



Clare Langrick

Grey seals are the larger and more abundant of the two seal species found in British Waters. In general they have a coastal distribution although they are known to travel considerable distances whilst feeding. The main haul out site used throughout the year by grey seals on the Lincolnshire coast is Donna Nook. The Donna Nook population is thought to have originally been an overspill from the Farne Island breeding colonies and small breeding groups began to establish at Donna Nook in the late 1960s. The seals are protected at Donna Nook due to the beach being privately owned by the MoD and managed by the Lincolnshire Wildlife Trust which manages access during the winter breeding season. The site is open access when not being used as air weapons range

- River and sea lamprey

Lamprey are a member of the jawless fishes *Petromyzonidae*. Lamprey are one of the most primitive of all living vertebrate animals having a distinct mouth with no lower jaw, instead it is surrounded by a round sucker-like disc within which the adults have strong, rasping teeth.

The river and sea lamprey are anadromous species which spawns in freshwater but complete part of their lifestyle in estuaries or at sea. Estuaries are considered important migratory routes with near-shore coastal margins being important migratory and feeding grounds.



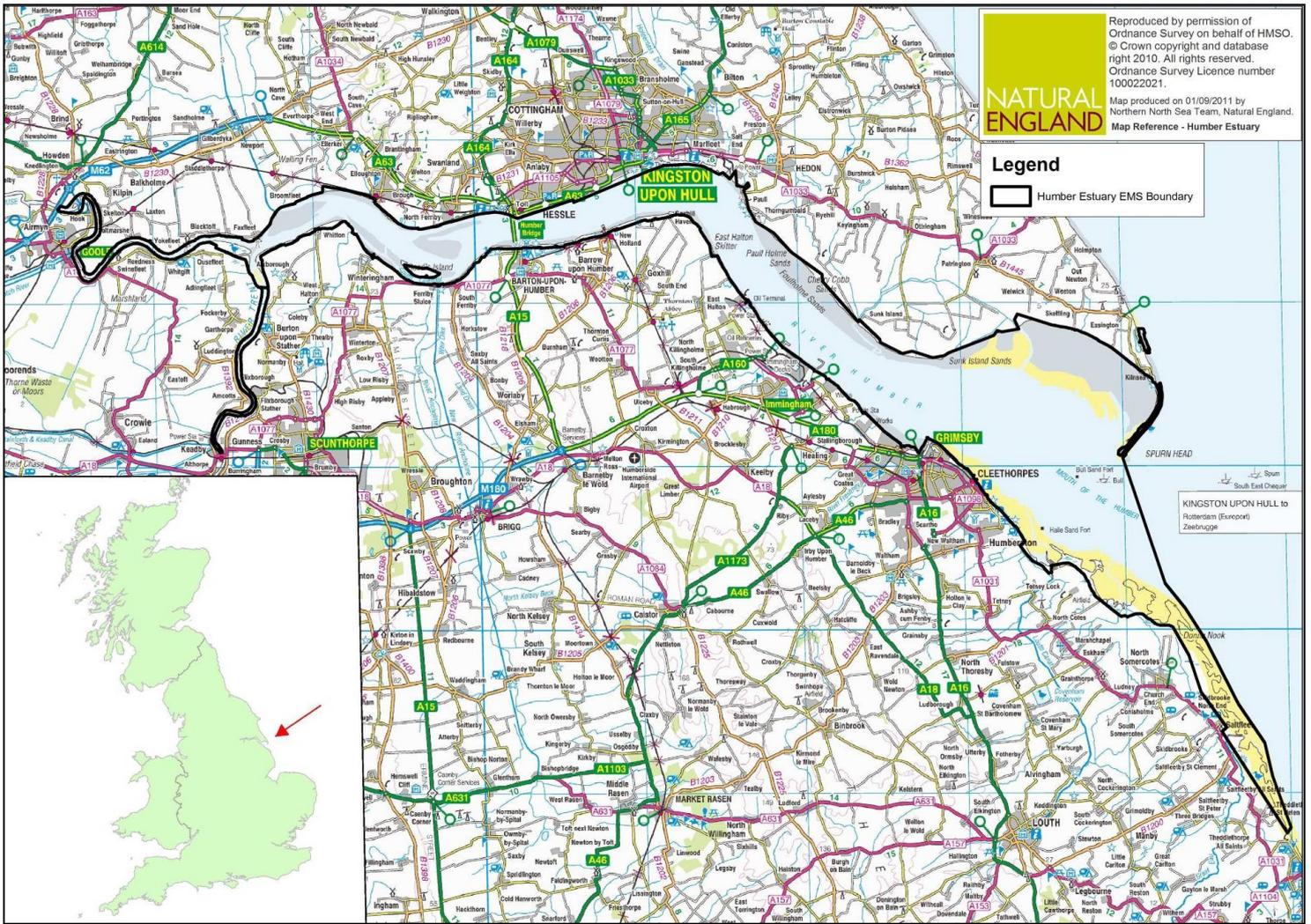
Brian Morland

Adult sea lamprey are the largest of the lamprey species and may measure up to 120cm in length. River lamprey reach a maximum length of 45cm.

The designations list river and sea lamprey as two separate features.

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<sup>1</sup> See the BTO WeBS data for accurate bird data <http://www.bto.org/volunteer-surveys/webs>



Map 1: Humber Estuary European Marine Site

### 2.3 Condition of the Humber Estuary European Marine Site

Natural England undertakes regular monitoring of the Humber Estuary designated features and reports on the SSSI, SAC and SPA every six years. The SSSI was last reported in 2010 and the SAC (Article 17) was reported in 2013. The SPA has not yet been reported upon.

The HMS uses condition information to inform the action plan and to measure its success. Where information is not in place on the SAC or SPA feature condition, SSSI condition assessment information can be used to inform management actions. The Conservation status of the Humber Estuary SPA and SAC features can be found in table 1. Table 2 provides a summary of the Humber Estuary SSSI condition.

Feature	Conservation status
Estuary	SAC feature in unfavourable recovering condition.
Mud and sand flats	SAC feature in unfavourable recovering condition.
Saline lagoons	SAC feature in favourable condition.
Saltmarsh - Atlantic salt meadow and pioneer saltmarsh	Annex 1 (Habitats Directive) feature assessment not recorded at site level.
Sub-tidal sandbanks	SAC feature in favourable condition.
Breeding birds	No current SPA condition assessment.
Wintering and passage birds	No current SPA condition assessment.
Grey seals	SAC feature in favourable condition.
River and sea lamprey	Annex 1 (Habitats Directive) feature assessment not recorded at site level.

Table 1: Conservation status of Humber SPA and SAC features (provided by Natural England July 2014)

% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed
98.82%	7.54%	91.28%	0.20%	0.98%	0.00%

Table 2: Humber Estuary SSSI Condition (June 2014)

## 2.4 Statutory considerations

The 1992 EC Habitats Directive was transposed into English and Welsh law as the 1994 Conservation (Natural Habitats, &c.) Regulations, commonly known as the “Habitats Regulations”.

On the 1 April 2010 the Conservation of Habitats and Species Regulation 2010 replaced The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) in England and Wales. This updated the legislation and consolidated the many amendments which have been made to the regulations since they were first made in 1994.

On 25 July 2012, Defra laid “The Conservation of Habitats and Species (Amendment) Regulations 2012” before Parliament. These Regulations amend the Conservation of Habitats and Species Regulations 2010 (S.I. 2010/490).

The Habitats Regulations include various provisions for the designation, safeguard and management of sites of European importance for nature conservation. The key provisions which relate to European marine sites are outlined here; however for a complete understanding of the provisions reference should be made to the original text of the Habitats Regulations.

Regulation 6 outlines which types of organisations are considered Relevant Authorities. A Relevant Authority has local powers or functions which have, or could have, an impact on the marine area within or adjacent to a European Marine Site.

Regulation 7 outlines which organisations are considered Competent Authorities. A Competent Authority includes any statutory or public office exercising legislative powers whether on land or at sea.

Regulation 9 requires appropriate authorities and nature conservation bodies to exercise their functions under enactments relating to nature conservation to ensure compliance with the requirements of the Habitats Directive.

Regulation 35 outlines that the appropriate nature conservation body must advise other relevant authorities on the conservation objectives for the site, and any activity which may cause the deterioration of the European Marine Site. Natural England is currently updating Conservation Advice for the Humber Estuary EMS which fulfils these obligations.

Regulation 36 of the Habitats Regulations allows relevant authorities to set up a Management Scheme for the Humber Estuary, which is classed as a European Marine Site.

All public authorities have a duty to conserve biodiversity under section 40 of the Natural Environment and Rural Communities Act 2006. They are also bound by section 28G of the Wildlife and Countryside Act 1981 (as amended) to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of a SSSI's features.

## **2.5 Humber EMS management**

The HMS was established under the Habitats Regulations to allow those organisations with statutory duties to work together to deliver the management of the Humber Estuary European Marine Site through one single management plan. It is a simple and efficient way to deliver the management of a complex estuary.

The HMS action plan focuses on actions that will bring the greatest improvement in the Estuary. More details on how statutory organisations manage the estuary can be found on the FAQ - estuary management pages of the Humber Nature Partnership website.

## **2.6 The aim of the Humber Management Scheme**

To deliver the sustainable management of the Humber Estuary European Marine Site

## **2.7 The objectives of the Humber Management Scheme**

- To manage the estuary to meet the requirements of the conservation objectives
- To bring people and organisations together to deliver the sustainable management of the Humber Estuary European Marine Site
- To raise awareness and educate stakeholders about the Humber Estuary European Marine Site and increase participation in its management
- To identify information gaps and research requirements and to promote sharing and availability of data for the management of the Humber Estuary European Marine Site
- To ensure a coordinated approach to the management of the estuary and its hinterlands including planning for the future in respect to the features of the Humber Estuary European Marine Site.

## **2.8 Delivery of the Humber Management Scheme**

### **Humber Estuary Relevant Authorities Group (HERAG)**

There are 30 Relevant Authorities with responsibilities for the Humber Estuary EMS and together they form HERAG. This partnership includes Natural England, the Environment Agency, Marine Management Organisation, harbour authorities, Inshore Fisheries and Conservation Authority, MOD, water companies, local authorities and internal drainage boards. These bodies have obligations to fulfil the conservation objectives of the Humber Estuary European Marine Site and have gained considerable experience of collaborative working in a complex area over the past 10 years. See the HNP website for more details on the Humber Estuary Relevant Authorities.

### **Humber Nature Partnership and the Humber Nature Forum**

The Humber Management Scheme plan is overseen and administered by the Humber Nature Partnership. The Humber Nature Partnership supports HERAG to ensure the management of the Humber Estuary European Marine Site and delivers a wide range of projects as identified in the action plan.

The wide range of stakeholders with involvement and an interest in the Humber Estuary European Marine Site are represented through the Humber Nature Forum. The Forum is a well-established open membership voluntary group with wide and diverse expertise and membership across the Humber Estuary.

## **2.9 Wider Management of the Humber Estuary**

The Humber Nature Partnership works to ensure effective partnership arrangements are in place to support the management of the Humber Estuary European Marine Site. It does this by coordinating plans, reducing overlap and addressing emerging issues and working the Humber Local Enterprise Partnership. In addition it is developing a central bank of information on the plans and policies affecting the estuary as a resource to aid decision making and ensure the Estuary's natural environment is protected and enhanced for future generations.

Diagram 1 provides an overview of Humber Estuary management. For more information on how the major activities are managed on the Humber Estuary and the Relevant Authority responsibilities, please see the Humber Nature Partnership website.

# Management of the Humber Estuary – plans and policies

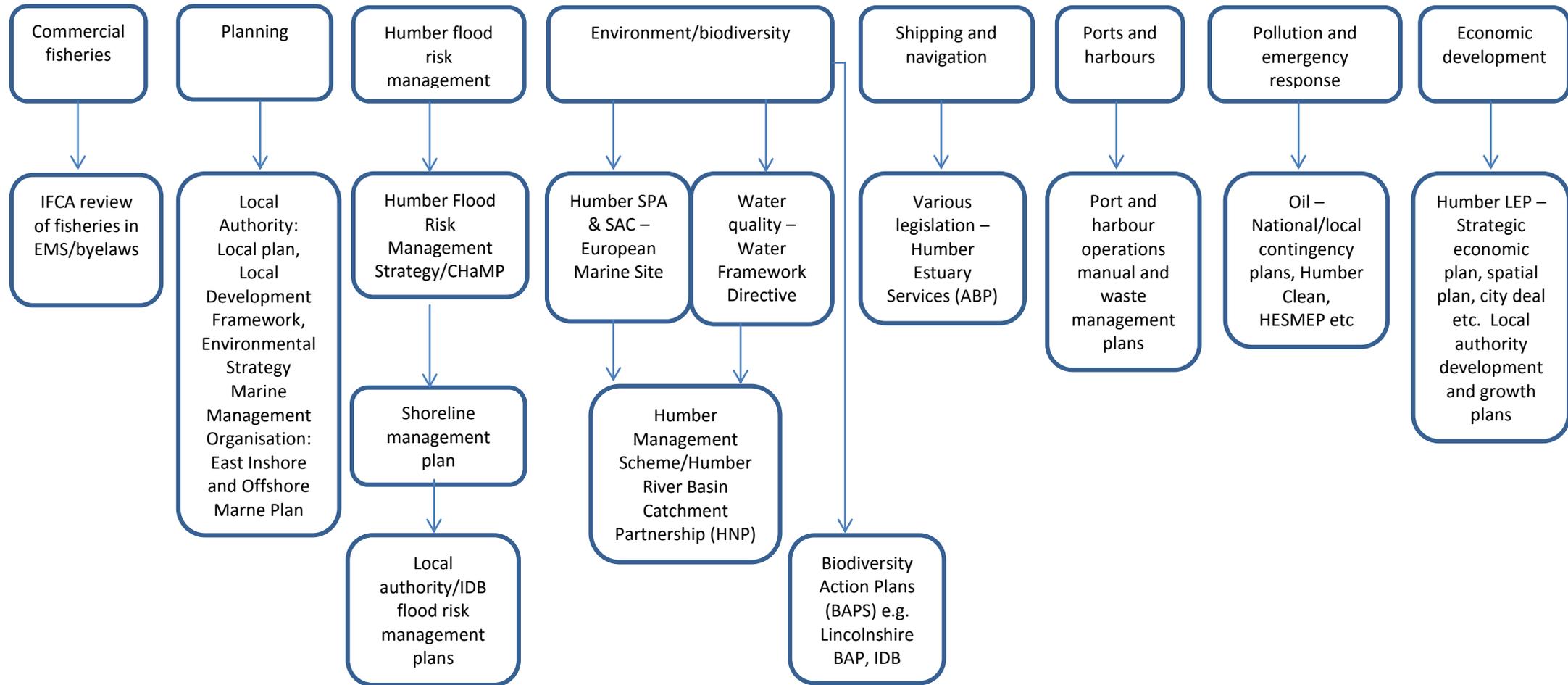


Diagram 1: Management of the Humber Estuary

### 3. Action plan

#### 3.1 How was the action plan developed?

The action plan was developed by reviewing the [conservation objectives](#) for each Humber Estuary designated feature, outlining the potential threats to the objectives and any existing management that is in place. Gaps in management were then identified which now forms the HMS action plan.

The action plan is split into 5 main themes:

1. Policy and legislation
2. Site safeguard and management
3. Research and monitoring
4. Advisory
5. Communications and publicity

Some actions are very broad and will be determined and defined over the action plan period. Other actions are very specific. Due to the broad action plan period, an annual delivery plan has also been created.

The action and delivery plan can be found on the Humber Nature Partnership website.

#### 3.2 How will the plan be monitored and updated?

The Humber Nature Partnership will use two main indicators to measure the success of the HMS action plan:

- Condition of the Humber SAC, SPA and SSSI, taking into account natural change and factors outside the control of the action plan and
- Outputs identified in the HMS action plan

The HMS plan will be reviewed annually and updated using the information as identified in diagram 2.

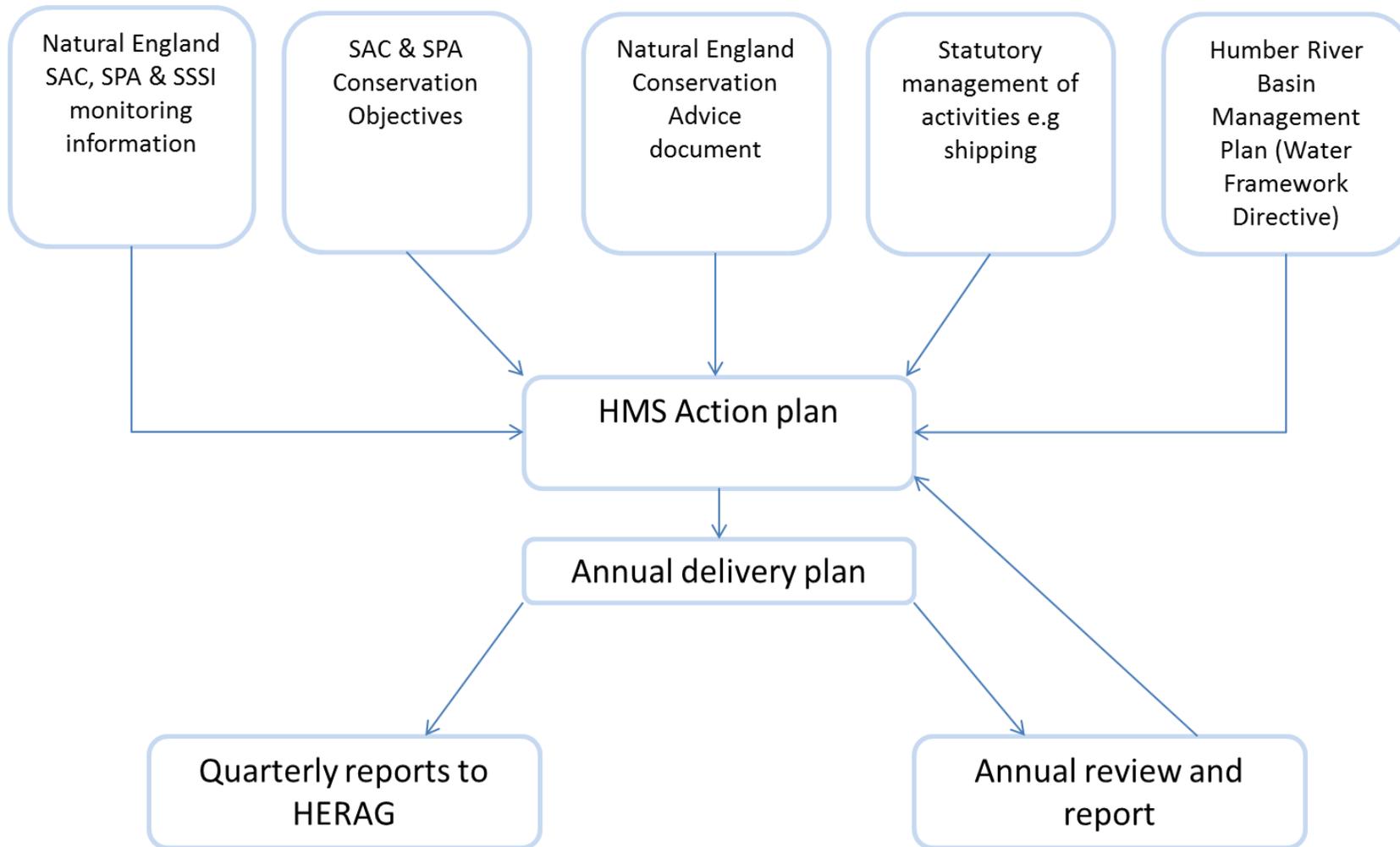


Diagram 2: Review and update of the HMS action plan



## About the Humber Nature Partnership

The Humber Nature Partnership aims to deliver the sustainable management of the Humber Estuary and its surroundings, providing an environment in which new and existing businesses can grow alongside the enhancement of the estuary's wildlife riches.

Our work includes:

- Delivering the Humber Management Scheme
- Providing ecological services
- Supporting economic growth
- Engagement and communication
- Ensuring high quality evidence and data exists



We have delivered projects with industry such as wetland habitat creation and woodland management work. We have also delivered range of research and data gathering projects such as ornithological surveys in the South Humber Gateway area to extensive work to understand the impact of recreation on Humber protected birds. We also deliver a range of education and awareness raising projects such as producing codes of conducts and signage. We aim to work in partnership on the delivery of projects and are always open to hearing new project ideas.

We offer the following skills and expertise:

- Partnership working
- Expertise in ecology and planning
- On site wildlife management
- Managing contracts
- Awareness raising and engagement
- Event organising
- Negotiation and conflict resolution

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