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# Marine Scotland

## East Mainland Coast, Shetland Special Protection Area (SPA) Business and Regulatory Impact Assessment

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marinescotland

# Partial Business and Regulatory Impact Assessment

## Title of Proposal

East Mainland Coast, Shetland Special Protection Area (SPA)

## Purpose and intended effect

### • Background

The Scottish Government is committed to a clean, healthy, safe, productive and biologically diverse marine and coastal environment that meets the long term needs of people and nature. In order to meet this commitment our seas must be managed in a sustainable manner - balancing the competing demands on marine resources. Biological and geological diversity must be protected to ensure our future marine ecosystem is capable of providing the economic and social benefits it yields today.

The EU Wild Birds Directive (2009/147/EC as codified) requires Member States to classify as Special Protection Areas (SPAs) the most suitable territories for wild birds. Building on the work of the SPA Review Working Group and taking account of existing guidelines on the identification of SPAs (JNCC, 1999), Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC) have identified 14 sites which they consider essential for marine SPA status. These proposals include sites supporting wintering waterfowl, important areas for red throated divers, terns, European shag and foraging seabirds.

The East Mainland Coast, Shetland Special Protection Area (SPA) stretches from Fish Holm and Lunna Ness in the north southwards, encompassing Whalsay, to the north coast of Bressay.

The area included within the SPA supports populations of European importance of the following Annex 1 species:

- Great northern diver (*Gavia immer*)
- Red-throated diver (*Gavia stellata*)
- Slavonian grebe (*Podiceps auritus*)

It also supports migratory populations of European importance of the following species:

- Common eider (*Somateria mollissima faeroeensis*)
- Long-tailed duck (*Clangula hyemalis*)
- Red-breasted merganser (*Mergus serrator*)

East Mainland Coast SPA comprises in total an area of 256.47 km<sup>2</sup>

Through much of the site water depths are generally less than 40 metres (m) but to the north depth of Whalsay rapidly increases (Barne *et al* 1997). The east coast

of Shetland is relatively sheltered compared to the west and much of the shore is cliff albeit well interspersed with sandy beaches and bays such that the sediments are largely gravel and sand.

Seaweed cover is common throughout but variable in extent and composition. Invertebrates are common, including a diversity of polychaete worms, gasteropod and bivalve molluscs dependent upon the sediments present. Both pelagic and demersal fish shoal and spawn in the seas surrounding Shetland, with the inshore waters forming nursery areas for a number of species including sandeels. The invertebrates and fish all form potential prey for waterbirds frequenting the area.

Divers and mergansers feed on a wide variety of fish that are associated with a range of seabed substrates. These birds catch fish by diving from the surface and pursuing their prey underwater. The fish species taken will be influenced by what is locally most readily available, but the diet of divers and merganser includes haddock *Melanogrammus aeglefinus*, cod *Gadus morhua*, herring *Clupea harengus*, sprats *Sprattus sprattus* and gurnard *Eutrigla gurnardus* along with smaller species such as sand-eels *Ammodytidae*, pipefish *Syngathidae*, gobies *Gobiidae*, flatfish *Pleuronectidae* and butterfish *Pholis gunnellus*.

Slavonian grebe feed on small fish species but their diet also includes small amphipods and other crustaceans. Great northern divers also feed opportunistically on small crustaceans.

Common eider and long-tailed duck feed almost exclusively on molluscs and small crustaceans, diving from the surface to pluck their prey from the seabed.

Diving activity varies among species but average foraging dive depths for most are shallower than 15m. However, substantially greater maximum dive depths have been recorded for some species, particularly great northern diver (maximum dive depth of 55m; Ropert-Coudert *et al* 2016).

The presence of high densities of wintering waterfowl in this area is indicative of the importance of these productive waters at this time of year. Eider (of the race *faeroeensis*) are resident throughout the year, but the long-tailed duck, great northern diver and Slavonian grebe migrate long distances from their northern breeding grounds to reach the wintering grounds. Red-breasted mergansers are typically short distance migrants, using coastal areas in winter.

Shetland supports nearly one third of the UK's breeding red-throated diver which feed almost exclusively at sea within a limited foraging range. During the summer months, east coast Mainland Shetland is an important foraging area for a high concentration of red-throated diver nesting territories on the adjacent Mainland.

- **Objective**

The EU Wild Birds Directive requires member states of the EU to identify SPAs for:

- rare or vulnerable bird species (as listed in Annex I of the Directive); and
- regularly occurring migratory bird species.

And to do so in the geographical sea and land area where the Directive applies.

The EU Wild Birds Directive was adopted in 1979 by the EU member states due to increasing concerns about declines in Europe's wild bird populations caused by pollution, loss of habitats and unsustainable exploitation. The EU Wild Birds Directive recognises that wild birds, many of which are migratory, are a shared heritage of the member states and that their conservation needs international co-operation. The creation of a network of protected sites, including SPAs, is one of several conservation measures that contribute to the protection of rare, vulnerable and migratory bird species.

Further work is required to complete a marine UK-wide network of SPAs at sea in order to meet the needs of seabirds and waterfowl. The Joint Nature Conservation Committee (JNCC) has been working over the past decade on behalf of all the countries' Statutory Nature Conservation Bodies (SNCBs) to complete a programme of data collection and analysis to inform the provision of advice on possible sites. Natural England, Natural Resources Wales, and the Department of Environment Northern Ireland (DoENI) are considering several possible marine SPAs in English, Welsh and Northern Irish inshore waters, including extensions to existing seabird colony SPAs and entirely marine SPAs.

The network of marine SPAs in Scotland is being progressed by Scottish Natural Heritage (SNH) where these fall largely within 12 nautical miles from shore and by Joint Nature Conservation Committee (JNCC) where they fall largely beyond 12 nautical miles. SNH and JNCC have identified 14 sites which they consider essential for the completion of a list of marine SPAs. These proposals include sites supporting wintering waterfowl, important areas for red throated divers, terns, European shag and foraging seabirds.

Evidence in this BRIA is drawn from the work of statutory nature conservation bodies and consultants ABPmer and ettec<sup>1</sup>. It brings together the science-led arguments for classification and the projected potential social and economic consequences of such action. This will inform Scottish Ministers of the possible impacts of designating the SPA, and due to requirements of the Birds Directive this will be for informational purposes only as the decision to classify SPAs can only be on the basis of scientific evidence. The site has been identified for classification as an SPA due to the confirmed presence of biodiversity features detailed above.

This BRIA examines the socio-economic impact of designating the proposed East Mainland Coast, Shetland site as an SPA. The assessment period covers the 20 year period from 2015 to 2034 - reflecting the time horizon within which the majority of impacts are expected to occur. As with any socio-economic assessment related to environmental classifications, the findings should be considered as estimates, and in cases where greater uncertainty exists, such as for fisheries, are deliberately presented as worst-case scenarios to build in necessary caution.

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<sup>1</sup> The Scottish MPA Project: Second Iteration of Site Proposals – Developing the Evidence Base for Impact Assessments, ABPmer

In addition a range of scenarios are presented to account for the inherent uncertainty associated with such proposals. Lower, intermediate and upper scenarios have been developed to reflect the requirements for management measures, the spatial extent of features and the extent to which OSPAR/BAP<sup>2</sup> features are already afforded protection. The intermediate scenario is viewed as the best estimate. The estimated impacts across the three scenarios commonly vary quite significantly.

- **Rationale for Government intervention**

The EU Wild Birds Directive (2009/147/EC as codified) requires Member States to classify as Special Protection Areas (SPAs) the most suitable territories for wild birds. The Scottish Government is responsible for identifying SPAs for Scotland.

In addition, the Scottish Government has a number of international commitments to deliver a network of MPAs. Scotland's marine environment provides: food; energy sources (wind, wave and tidal power, minerals and fossil fuels); routes and harbours for shipping; tourism and recreational opportunities; and sites of cultural and historical interest. Scotland's seas contain important distinctive habitats and support a diverse range of species that require protection in order to be conserved or for recovery to be facilitated. Due to the competing demands placed upon Scotland's marine resources, more effective management is required so that a balance between conservation and sustainable use can be struck. Currently there is not sufficient protection in place to ensure that the marine environment is properly protected and complex ecosystems safeguarded.

The SPAs will form part of an ecologically coherent network of well-managed MPAs that is vital to conserve and regenerate our seas, in turn protecting the many goods and services they provide now, and for generations to come.

## **Consultation**

- **Within Government**

Consultation has been undertaken with policy colleagues within Marine Scotland, including aquaculture, nature conservation, marine renewables, fisheries and fresh water fisheries, and with Transport Scotland.

Historic Environment Scotland and the Scottish Environmental Protection Agency have also been consulted. Meetings were held with policy officials within these public bodies to discuss the development of these SPAs. We have also been working with Defra and other UK Departments on the join up between the Scottish MPA network, which includes SPAs, and the wider UK contribution to the OSPAR MPA network.

- **Public Consultation**

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<sup>2</sup> Biodiversity Action Plan

A full public consultation took place in Autumn 2016. Further consultation took place in Autumn 2018 on a Network Assessment for the proposed set of sites and the SEA. An update to the SEA was consulted on in the summer of 2019.

- **Business**

Routine updates are provided to the Marine Strategy Forum and are supplemented with

bilateral meetings across sectors including the fishing industry, environmental NGOs, tourism and recreation, nature conservation, renewable energy, aquaculture, ports and harbours, defence and local community groups.

A National Workshop attended by a wide range of stakeholders was held in March 2016 to present the proposals and gather feedback on the proposed consultation package.<sup>3</sup>

## **Options**

### **Option 1: Do nothing**

Option 1 is the 'Do nothing' option; this is the baseline scenario. Under this option, there is no change to the management measures in place at the at the proposed East Mainland Coast, Shetland site. Accordingly, no additional management measures would be required.

### **Option 2: Classify site as a Special Protection Area**

Option 2 involves the formal classification of the East Mainland Coast, Shetland site. Classification would provide recognition and protection to the natural features of the site while also contributing to the wider Scottish and UK SPA network.

- **Sectors and groups affected**

The following sectors have been identified as present (or possibly present in the future) within the proposed East Mainland Coast, Shetland site and potentially interact with one or more of the features:

- Aquaculture (Finfish)
- Aquaculture (Shellfish)
- Coastal defense and flood protection
- Commercial fisheries (GVA)
- Ports and harbours
- Public Sector

Affected sectors may be impacted to a greater or lesser degree by classification depending on which scenario is pursued and which management option is preferred.

<sup>3</sup> <http://www.gov.scot/Topics/marine/marine-environment/mpanetwork/marinespas/spaworkshop>

- **Benefits**

### **Option 1: Do nothing**

No additional benefits are expected to arise from this policy option.

### **Option 2: Classify site as a Special Protection Area**

The extent and quality of habitat and available food around Scotland's coast supports huge numbers of different species of seabirds. Few countries can match this and we have an international responsibility to protect what we have around Scotland. Therefore the appropriate action is to protect and maintain Scotland's seabird and water bird populations and meet the requirements of the EU Wild Birds Directive.

SPAs are created to meet international commitments under the EU Wild Birds Directive, which promotes the conservation of wild birds. SPAs are managed to safeguard the birds and avoid significant disturbance and deterioration of their habitats. This means that proposed activities likely to affect an SPA are assessed for their potential to cause such disturbance or deterioration. The relevant consenting authority must ensure beyond reasonable scientific doubt that any impact is not significant before permitting the activity.

While it may not be possible with current levels of research to monetise benefits with a satisfactory degree of rigour, it is clear that many of the benefits relate to aspects of our lives that we take for granted and for which it is good practice and common sense to maintain through protection measures such as SPAs.

### **Contribution to an Ecologically Coherent network**

Scotland's seas support a huge diversity of marine life and habitats, with around 6,500 species of plants and animals, with plenty more no doubt to be found in the undiscovered deeps of the north and west of Scotland. Our seas account for 61% of UK waters and remain at the forefront of our food and energy needs, through fishing, aquaculture, oil and gas, and new industries such as renewables, as well as recreation activities and ecotourism. This SPA is a contribution to a wider network of Marine Protected Areas designed to conserve and regenerate our seas. This in turn will help ensure that ecosystem goods and services continue to support current and future generations. It is likely that an ecologically coherent network of marine protected areas is likely to provide greater benefit than the sum of its individual components.

### **Ecosystem Services Benefits**

Ecosystems are very complex, and it is thought that the more complex an ecosystem is the more resilient it is to change. Therefore, if it is damaged or if a species or habitat is removed from that ecosystem, the chances of survival for those services reduce as the ecosystem becomes weaker. However, by conserving or allowing the species and habitats that make up that ecosystem to

recover, we can be more confident of the continuation of the long term benefits the marine environment provides.

### **Non-Use Values**

Non-use value of the natural environment is the benefit people get simply from being aware of a diverse and sustainable marine environment even if they do not themselves use it. We take for granted many of the things we read about or watch, such as bright colourful fish, reefs and strange shaped deep sea curiosities, to lose them would be a loss to future generations that will not be able to experience them. It is challenging to put a precise value on this, but the high quality experience derived from Scotland's seas can be better preserved through measures such as SPAs.

It is expected that non-use value will be attained as a result of classification and the support of wider conservation objectives. Whilst ecosystem services benefits at an individual site level cannot be readily calculated, the one-off non-use value to Scottish households of marine conservation in Scottish waters generated by the additional 13 SPAs is estimated to be in the region of £74 million.<sup>4</sup> This figure uses valuation evidence across several sites with similar features and characteristics and highlights the significant positive non-use value that divers and anglers within the Scottish marine environment place on securing the quality of the marine resources they use as a result of protection against degradation.

### **Use Values**

There could be a major transformative effect on inshore habitat and a significantly enhanced flow of environmental goods and services. We know the inherent capacity of the system and the flora and fauna that it could support. Achieving that could see the expansion of recreational activities such as diving, sea-angling, and other tourism alongside sustainable methods of fishing.

Research by Kenter et al<sup>5</sup> has been used to estimate the use benefits to divers and anglers specifically, as a result of classifications safeguarding the total recreational value of the sites. The additional increase in recreational value as result of implementing management measures for the 13 new SPAs has an estimated total present value of £2.1-6.2 million over the 20 year assessment period.<sup>6</sup>

In addition there is likely to be increased activity for businesses in the marine wildlife and tourism sector. This includes those directly involved (e.g. operating boat trips) and those benefiting indirectly (e.g. accommodation providers). The scale of this increase across the proposed sites cannot be quantified, but it can be expected to be some increment of the existing value of these activities. Given the marine wildlife tourism market is currently estimated to be worth £100's of millions

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<sup>4</sup> Developing the Evidence Base for Impact Assessments, ABPMer

<sup>5</sup> <http://uknea.unep-wcmc.org/LinkClick.aspx?fileticket=Mb8nUAph%2bY%3d&tabid=82>

<sup>6</sup> Developing the Evidence Base for Impact Assessments, ABPMer



per year, an increment of this could be expected to be worth in the region of £10 million per year across the network to the Scottish wildlife tourism market.<sup>7</sup>

### **Summary of Benefits**

The uncertainties in each of the benefits assessed result in a large range of estimated values. Based on the available evidence, the combined total present value of the benefits for the new network (based on the additional benefits of the 13 new proposals) is tentatively estimated to be between in the region of £80 million over the 20 year assessment period. This is comprised of a one-off non-use value attained at designation to Scottish households of marine conservation in Scottish waters generated by the additional 13 SPAs of £74 million and an additional use value as result of implementing management measures for the 13 new SPAs of £2.1-£6.2 million.

For a qualitative summary of anticipated benefits to ecosystem services in this particular site see appendix A.

- **Costs**

#### **Option 1: Do nothing**

This option is not predicted to create any additional costs to the sectors and groups outlined above.

However failure to classify the “most suitable territories” as SPAs would leave the Scottish Government exposed to a high risk of EC infraction proceedings, which may result in substantial one off and recurring fines.

In addition it should be noted that the societal cost of not designating could be both large and irreversible relative to the current condition of the marine environment. The absence of management measures to conserve the identified features may produce future economic and social costs in terms of increased marine habitat and biodiversity degradation. The option to not classify holds the potential to undermine the overall ecological coherence of the Scottish SPA Network. This potentially large and irreversible societal cost avoided is presented within the benefits section of the ‘do classify’ scenario (option 2) to avoid double counting the same impact.

#### **Option 2: Classify site as a Special Protection Area**

Costs have been evaluated based on the implementation of potential management measures. Where feasible costs have been quantified, where this has not been possible costs are stated qualitatively. All quantified costs have been discounted in line with HM Treasury guidance using a discount rate of 3.5%. Discounting reflects the fact that individuals prefer present consumption over future consumption.

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<sup>7</sup> Developing the Evidence Base for Impact Assessments, ABP Mer

## Aquaculture (Finfish)

There are 17 finfish aquaculture sites within the boundary of the East Mainland Coast, Shetland SPA. These are East Voe Laxfirth, Wadbister Voe, Gletness, Taing of Railsbrough Catfirth, Swining Voe 1, Swining Voe 2, Collafirth I, Taing of Kelswick, Collafirth 2, Swining Voe 3, Poseidon, Collafirth 3, Boatsroom Voe, Bight of Foraness, Bomlo, Linga (Setterness) and Fish Holm. There is also an additional finfish farm within 1km of the SPA (Girlista Hatchery).

### Economic Costs on the Activity of Classification of the Site as an SPA

	Lower Estimate	Intermediate Estimate	Upper Estimate
Assumptions for cost impacts	<ul style="list-style-type: none"> <li>▪ Additional assessment to support planning applications; and</li> <li>▪ Additional assessment to support CAR Applications.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Additional assessment to support planning applications; and</li> <li>▪ Additional assessment to support CAR Applications.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Additional assessment to support planning applications;</li> <li>▪ Additional assessment to support CAR Applications; and</li> <li>▪ Additional bird surveys.</li> </ul>
Description of one-off costs	<p>Under all scenarios:</p> <p>SSPO estimates that there will be a 12 planning applications across the SPAs in the next five years. For the purposes of this assessment, it has been assumed that similar rates of application occur in subsequent periods of the impact assessment and the distribution of planning applications is in proportion to the number of existing sites in each SPA. It is assumed that the additional assessments will fall in 2017, 2022, 2027 and 2032 and the costs of each assessment will be £5.2k; and</p> <p>It has been assumed that additional assessment will be required to support CAR licence applications at a cost of £5.2k per licence application incurred once every 10 years for each finfish farm installation within 1km of a new marine SPA where these installations are not already within an existing site (SAC, SPA or MPA). The CAR licence applications are assumed to be in 2020 and 2030 for all installations.</p> <p>For upper scenario only:</p> <p>It is assumed that a condition of the licence for each of the 12 planning applications will be to provide annual monitoring returns of bird entanglement at a cost of £0.5k per site per year starting in the year following submission of the planning application.</p>		

Description of recurring costs	▪ None.	▪ None.	▪ None.
Description of non-quantified costs	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.

**Quantified Costs on the Activity of Classification of the Site as an SPA (£millions)**

<b>Total costs (2015–2034)</b>	0.072	0.072	0.129
<b>Average annual costs</b>	0.004	0.004	0.006
<b>Present value of total costs (2015–2034)</b>	0.053	0.053	0.089

**Aquaculture (Shellfish)**

There are 18 shellfish aquaculture sites within the boundary of the East Mainland Cost, Shetland SPA. These are Dales Voe, North West of Skerby Ayre, Hawksness, East of Wadbister Ness, Wadbister Voe, East of Brunt Hamersland, North of Quoy, West of Little Holm, Catfirth 1, North West of Cul Houb, Dales Voe North, Inner Collafirth Delting, Lunna, Scarva Ayre 1, South Side Dales Voe, Scarva Ayre 2, West Taing and West of Foraness. There is an additional shellfish site within 1km of the SPA (Catfirth 2).

**Economic Costs on the Activity of Classification of the Site as an SPA**

	<b>Lower Estimate</b>	<b>Intermediate Estimate</b>	<b>Upper Estimate</b>
Assumptions for cost impacts	▪ Additional assessment to support planning applications.	▪ Additional assessment to support planning applications.	▪ Additional assessment to support planning applications.
Description of one-off costs	<p>Under all scenarios:</p> <p>It has been assumed that there will be 15 planning applications (new installations or extensions) that may be submitted at a national level in the next five years within or adjacent (within 1km) to new SPA proposals. For subsequent periods of the IA, it has been assumed that this number will reduce to 10 planning applications within new SPAs every 5 years. The total number of planning applications in each five year period has been</p>		

	assigned to individual new SPAs based on the relative number of existing installations within each new SPA It is assumed that the additional assessments will fall in 2017, 2022, 2027 and 2032 and the costs of each assessment will be £5.2k.		
Description of recurring costs	▪ None.	▪ None.	▪ None.
Description of non-quantified costs	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.

**Quantified Costs on the Activity of Classification of the Site as an SPA (£million)**

Total costs (2015–2034)	0.078	0.078	0.078
Average annual costs	0.004	0.004	0.004
Present value of total costs (2015–2034)	0.060	0.060	0.060

**Coastal defence and flood protection**

There is one coast protection and flood defence structure (1 x Embankment) which overlaps the East Mainland Coast, Shetland SPA boundary or within the 10km buffer. Therefore, management costs may be incurred under the assumption that structures will require maintenance or construction works once every 20 years (starting in 2024).

Seasonal controls will be applied to construction activity, where necessary, to minimise impacts to protected features. It has been assumed that these seasonal restrictions can be accommodated without imposing any additional cost on the construction programme.

**Economic Costs on the Activity of Classification of the Site as a SPA**

	<b>Lower Estimate</b>	<b>Intermediate Estimate</b>	<b>Upper Estimate</b>
Assumptions for cost impacts	▪ Additional assessment to support planning application (maintenance or	▪ Additional assessment to support planning application (maintenance or	▪ Additional assessment to support planning application (maintenance or

	construction works).	construction works).	construction works).
Description of one-off costs	<ul style="list-style-type: none"> <li>Additional assessment to support planning application (maintenance or construction works) - £5.2k per application. Applications estimated for two developments to be submitted in 2024.</li> </ul>	<ul style="list-style-type: none"> <li>Additional assessment to support planning application (maintenance or construction works) - £5.2k per application. Applications estimated for two developments to be submitted in 2024.</li> </ul>	<ul style="list-style-type: none"> <li>Additional assessment to support planning application (maintenance or construction works) - £5.2k per application. Applications estimated for two developments to be submitted in 2024.</li> </ul>
Description of recurring costs	<ul style="list-style-type: none"> <li>None.</li> </ul>	<ul style="list-style-type: none"> <li>None.</li> </ul>	<ul style="list-style-type: none"> <li>None.</li> </ul>
Description of non-quantified costs	<ul style="list-style-type: none"> <li>Seasonal controls applied to construction activity.</li> </ul>	<ul style="list-style-type: none"> <li>Seasonal controls applied to construction activity.</li> </ul>	<ul style="list-style-type: none"> <li>Seasonal controls applied to construction activity.</li> </ul>

**Quantified Costs on the Activity of Classification of the Site as an SPA (£million)**

Total costs (2015–2034)	0.005	0.005	0.005
Average annual costs	<0.001	<0.001	<0.001
Present value of total costs (2015–2034)	0.004	0.004	0.004

**Commercial Fisheries:**

According to VMS-based estimates and ICES rectangle landings statistics, pelagic trawls, whitefish trawls, whitefish seines, dredges, other trawls and other gears (over-15m) and dredges, pots, lines, whitefish trawls, other trawls and nephrops trawls (under-15m vessels) operate within the East Mainland Cost, Shetland SPA. The value of catches from the East Mainland Cost, Shetland area was £384,000 (over-15m vessels) and £217,000 (under-15m vessels, indicated from ICES rectangle landings data) (annual average for 2009–2013, 2015 prices). Landings from the over-15m vessels are predominantly into Lerwick (39% by value) and Floro (10%). For the over-15m fleet, a total of 167 UK vessels operated in the East Mainland Cost, Shetland area in the period 2009-2013, comprising mainly

whitefish trawls (130), whitefish seines (28), pelagic trawls (11), and other trawls (11). Whitefish trawls and whitefish seines operate in the north-east and south-west parts, and dredges operate mainly in the east and north-east parts of the SPA.

Management measures for the scenarios have been developed based on the sensitivity and vulnerability of the features to the pressures caused by different gear types and SNH recommendations.

Updated ScotMap data (under-15m vessels) indicate that the annual average earnings from the East Mainland Coast, Shetland SPA was £56,000 for the period 2007-2011, with dredges contributing the highest value. However, the ScotMap data does not cover this region therefore, the Updated ScotMap data for the under-15m fleet is based solely on ICES rectangle landings data.

Non-UK VMS ping data indicate that 46 non-UK vessels were active in the EMC area in 2011 to 2013, from Norway (25), Ireland (9), France (4), Sweden (4), Denmark (3) and Germany (1). Based on the EU vessel register, it appears that 18 of these vessels fish with mobile bottom and pelagic gears and therefore would be impacted by the management measures assessed under the intermediate and upper scenarios. No information was available on gear types used by the Norwegian vessels or one of the Danish vessels.

<b>Economic Costs on the Activity of Classification of the Site as a SPA</b>			
	<b>Lower Estimate</b>	<b>Intermediate Estimate</b>	<b>Upper Estimate</b>
Assumptions for cost impacts	<ul style="list-style-type: none"> <li>▪ No change to existing</li> </ul>	<ul style="list-style-type: none"> <li>▪ 10% reduction in mobile bottom gear effort across the site</li> <li>▪ 10% reduction in pelagic gear effort across the site</li> </ul>	<ul style="list-style-type: none"> <li>▪ 30% reduction in mobile bottom gear effort across the site</li> <li>▪ 25% reduction in pelagic gear effort across the site</li> </ul>
Description of one-off costs	<ul style="list-style-type: none"> <li>▪ None</li> </ul>	<ul style="list-style-type: none"> <li>▪ None</li> </ul>	<ul style="list-style-type: none"> <li>▪ None</li> </ul>
Description of recurring costs	<ul style="list-style-type: none"> <li>▪ None.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Loss of &gt;15m fishing income (annual values, £ k):               <ul style="list-style-type: none"> <li>- pelagic trawls (23.1);</li> <li>- whitefish trawls (5.7);</li> <li>- all seines (5.6);</li> <li>- dredges (3.4) and</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Loss of &gt;15m fishing income (annual values, £ k):               <ul style="list-style-type: none"> <li>- pelagic trawls (57.8);</li> <li>- whitefish trawls (17.1);</li> <li>- all seines (16.7);</li> <li>- dredges (10.1) and</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- other trawls (0.6).</li> <li>▪ Loss of &lt;15m fishing income (annual values, £ k): <ul style="list-style-type: none"> <li>- dredges (11.0);</li> <li>- whitefish trawls (0.4);</li> <li>- other trawls (0.3); and</li> <li>- nephrops trawls (0.07).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- other trawls (1.9).</li> <li>▪ Loss of &lt;15m fishing income (annual values, £ k): <ul style="list-style-type: none"> <li>- dredges (33.0);</li> <li>- whitefish trawls (1.1);</li> <li>- other trawls (0.9); and</li> <li>- nephrops trawls (0.2).</li> </ul> </li> </ul>
Description of non-quantified costs	<ul style="list-style-type: none"> <li>▪ None.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Loss of value of catches from non-UK vessels using mobile bottom contact and pelagic gears in the SPA (Ireland, France, Sweden, Denmark and Germany (18 vessels) and possibly Norway (25 vessels); and</li> <li>▪ Displacement impacts (additional fishing pressure on other areas, potential conflict with other vessels, additional steaming time/fuel costs, gear development and adaptation costs, and additional quota costs).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Loss of value of catches from non-UK vessels using mobile bottom contact and pelagic gears in the SPA (Ireland, France, Sweden, Denmark and Germany (18 vessels) and possibly Norway (25 vessels); and</li> <li>▪ Displacement impacts (additional fishing pressure on other areas, potential conflict with other vessels, additional steaming time/fuel costs, gear development and adaptation costs, and additional quota costs).</li> </ul>

Commercial fisheries costs are presented below in terms of Gross Value Added (GVA). GVA more accurately reflects the wider value of the sector to the local area

and economy beyond the market value of the landed catch. Stating costs purely in terms of landed value would overstate the true economic cost of not fishing. If fishermen are prevented from catching fish they forgo the landed value of those fish but subsequently forgo the payment of intermediate costs such as fuel (it is assumed that no fishing activity is displaced). Costs are also presented in terms of the reduction in full-time equivalent (FTE) employment. It is also possible that effort not continuing in the area could be transferred to other locations resulting in no or reduced loss of income.

<b>Quantified Costs on the Activity of Classification of the Site as a SPA (£Million)</b>			
Total change in GVA (2015–2034)	0.000	0.487	1.343
Average annual change to GVA	0.000	0.024	0.067
Present value of total change in GVA (2015–2034)	0.000	0.358	0.988
Direct and Indirect reduction in Employment	0.0 jobs	0.6 jobs	2.1 jobs

These estimates represent a worst-case scenario, based on the assumption of zero displacement of fishing activity. In reality, it is likely that some commercial fishing activity will be displaced to other grounds and hence it is likely that the impacts on employment are likely to be lower than those estimated. A recent Marine Scotland study on fisheries displacement in relation to the 2015 Nature Conservation MPA classifications<sup>8</sup> indicated that a significant proportion of fishing effort affected by the classifications was likely to relocate elsewhere. In reality, vessels are likely to react to any management measures in place in order to maintain profitability (i.e. by changing target species/gear type) but this could add to their costs (i.e. the extra fuel cost associated with fishing elsewhere). This uncertainty surrounding the change in behaviour is the reasoning behind not attempting to quantify this cost impact. Other non-quantified costs include: potential conflict with other fishing vessels, environmental consequences of targeting new areas, longer steaming times and increased fuel costs, changes in costs and earnings, gear development and adaptation costs, and additional quota costs.

### **Ports and Harbours**

There are two major ports/harbours (Lerwick and Sullom Voe) located within the East Mainland Cost, Shetland SPA boundary or within the 5km buffer. Therefore, management costs may be incurred under the assumption that major ports/harbours will undertake development every 5 years (starting in 2018) within the assessment period (2015-2034).

<sup>8</sup> <http://www.gov.scot/Topics/marine/marine-environment/mpanetwork/Displacement>



There are two minor ports/harbours (Dales Voe and Heogan) located within the East Mainland Cost, Shetland SPA boundary or within the 1km buffer. Therefore, management costs may be incurred under the assumption that minor ports/harbours will undertake development every 10 years (starting in 2025) within the assessment period (2015-2034).

There is one open disposal sites (Lerwick) within the East Mainland Cost, Shetland SPA boundary (or 5km buffer). Therefore, management costs may be incurred under the assumption that disposal sites will require licence applications to be submitted every 3 years (starting in 2017) within the assessment period (2015-2034).

<b>Economic Costs on the Activity of Classification of the Site as an SPA</b>			
	<b>Lower Estimate</b>	<b>Intermediate Estimate</b>	<b>Upper Estimate</b>
Assumptions for cost impacts	<ul style="list-style-type: none"> <li>▪ Additional assessment of new port/harbour developments in or adjacent to SPA to support licence applications; and</li> <li>▪ Additional assessment of maintenance dredging disposal licence application affecting SPA.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Additional assessment of new port/harbour developments in or adjacent to SPA to support licence applications; and</li> <li>▪ Additional assessment of maintenance dredging disposal licence application affecting SPA.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Additional assessment of new port/harbour developments in or adjacent to SPA to support licence applications</li> <li>▪ Additional monitoring of development project (major ports/harbours only); and</li> <li>▪ Additional assessment of maintenance dredging disposal licence application affecting SPA.</li> </ul>
Description of one-off costs	<ul style="list-style-type: none"> <li>▪ Additional assessment of new port/harbour developments – £7.1k per application. Assessment estimated for two major ports (Lerwick, Sullom Voe) to be submitted in</li> </ul>	<ul style="list-style-type: none"> <li>▪ Additional assessment of new port/harbour developments – £7.1k per application. Assessment estimated for two major ports (Lerwick, Sullom Voe) to be submitted in</li> </ul>	<ul style="list-style-type: none"> <li>▪ Additional assessment of new port/harbour developments – £7.1k per application. Assessment estimated for two major ports (Lerwick, Sullom Voe) to be submitted in 2018, 2023,</li> </ul>

	<p>2018, 2023, 2028 and 2033 and two minor ports (Dales Voe and Heogan) to be submitted in 2025; and</p> <ul style="list-style-type: none"> <li>Additional assessment of maintenance dredging disposal licence application – £7.1k per application. Assessment estimated for one disposal site (Lerwick) to be submitted in 2017, 2020, 2023, 2026, 2029 and 2032.</li> </ul>	<p>2018, 2023, 2028 and 2033 and two minor ports (Dales Voe and Heogan) to be submitted in 2025; and</p> <ul style="list-style-type: none"> <li>Additional assessment of maintenance dredging disposal licence application – £7.1k per application. Assessment estimated for one disposal site (Lerwick) to be submitted in 2017, 2020, 2023, 2026, 2029 and 2032.</li> </ul>	<p>2028 and 2033 and two minor ports (Dales Voe and Heogan) to be submitted in 2025; and</p> <ul style="list-style-type: none"> <li>Additional monitoring of major port development – £30k per development. Monitoring estimated for two major ports (Lerwick, Sullom Voe) to be conducted in 2019, 2024, 2029 and 2034; and</li> <li>Additional assessment of maintenance dredging disposal licence application – £7.1k per application. Assessment estimated for one disposal site (Lerwick) to be submitted in 2017, 2020, 2023, 2026, 2029 and 2032.</li> </ul>
Description of recurring costs	<ul style="list-style-type: none"> <li>None.</li> </ul>	<ul style="list-style-type: none"> <li>None.</li> </ul>	<ul style="list-style-type: none"> <li>None.</li> </ul>
Description of non-quantified costs	<ul style="list-style-type: none"> <li>Costs of project delays during consenting; potential impact on investment opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Costs of project delays during consenting; potential impact on investment opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Costs of project delays during consenting; potential impact on investment opportunities.</li> </ul>
<b>Quantified Costs on the Activity of Classification of the Site as an SPA (£Million)</b>			
Total costs (2015–2034)	0.114	0.114	0.354

Average annual costs	0.006	0.006	0.018
Present value of total costs (2015–2034)	0.082	0.082	0.246

It should be noted that additional cost impacts could also arise as a result of consenting delays. The cost impacts and uncertainty associated with SPA classification may impact on potential investment opportunities.

**Public Sector:**

The decision to classify the East Mainland Coast, Shetland site as a SPA, would result in costs being incurred by the public sector in the following areas:

- Preparation of Marine Management Schemes
- Preparation of Statutory Instruments
- Development of voluntary instruments
- Site monitoring
- Compliance and enforcement
- Promotion of public understanding
- Regulatory and advisory costs associated with licensing decisions

Some of these costs will accrue at the national level and as such have not been disaggregated to site level.

<b>Site-specific Public Sector Costs (£Million, 2015-2034)</b>			
	<b>Lower Estimate</b>	<b>Intermediate Estimate</b>	<b>Upper Estimate</b>
Preparation of Marine Management Schemes	0.000	0.000	0.000
Preparation of Statutory Instruments	0.000	0.004	0.004
Development of voluntary measures	0.000	0.000	0.000
Site monitoring	0.088	0.088	0.088
Regulatory and advisory costs associated with licensing decisions	0.020	0.020	0.020

<b>Total Quantified Public Sector Costs</b>	<b>0.108</b>	<b>0.112</b>	<b>0.112</b>
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**Total Costs**

Total quantified costs are presented in present value terms. Commercial fisheries costs are presented in terms of GVA.

<b>Total Present Value of Quantified Costs (£Million, 2015-2034)</b>			
<b>Sector</b>	<b>Lower Estimate</b>	<b>Intermediate Estimate</b>	<b>Upper Estimate</b>
Aquaculture (Finfish)	0.053	0.053	0.089
Aquaculture (Shellfish)	0.060	0.060	0.060
Coastal defence and flood protection	0.004	0.004	0.004
Ports and harbours	0.082	0.082	0.246
Public Sector	0.108	0.112	0.112
<b>Total Present Value of Costs</b>	<b>0.307</b>	<b>0.311</b>	<b>0.511</b>

<b>GVA Impacts (£million 2015-2034)</b>			
<b>Commercial Fisheries</b>	<b>0.000</b>	<b>0.358</b>	<b>0.988</b>

<b>Total Non-Quantified Costs</b>			
<b>Scenario</b>	<b>Low</b>	<b>Intermediate</b>	<b>Upper</b>
<b>Sector/Group</b>			
Aquaculture (Finfish)	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.
Aquaculture (Shellfish)	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.	▪ Cost of uncertainty and delays in planning applications.

Coastal defence and flood protection	▪ Seasonal controls applied to construction activity.	▪ Seasonal controls applied to construction activity.	▪ Seasonal controls applied to construction activity.
Commercial fisheries	▪ None	▪ Loss of value of catches from non-UK vessels and ▪ Displacement impacts	▪ Loss of value of catches from non-UK vessels and ▪ Displacement impacts
Ports and harbours	▪ Costs of project delays during consenting; potential impact on investment opportunities.	▪ Costs of project delays during consenting; potential impact on investment opportunities.	▪ Costs of project delays during consenting; potential impact on investment opportunities.
Power interconnectors	▪ Costs of project delays during consenting; potential impact on investment opportunities.	▪ Costs of project delays during consenting; potential impact on investment opportunities.	▪ Costs of project delays during consenting; potential impact on investment opportunities.
Telecom cables	▪ Costs of project delays during consenting; potential impact on investment opportunities.	▪ Costs of project delays during consenting; potential impact on investment opportunities.	▪ Costs of project delays during consenting; potential impact on investment opportunities.

### **Scottish Firms Impact Test**

This section is informed by evidence gathered during the consultation phase.

Businesses affected include some small and micro-sized firms. Additional costs imposed by the classification of the site have the potential to fall on small businesses.

- **Competition Assessment**

Classification of the proposed site as a SPA may affect marine activities where businesses operate within a given spatial area or require a spatial licence for new or amended operations.

#### **Competition Filter Questions**

*Will the proposal directly limit the number or range of suppliers? e.g. will it award exclusive rights to a supplier or create closed procurement or licensing programmes?*

**No.** It is unlikely that classification of the site as a SPA will directly limit the number or range of suppliers.

*Will the proposal indirectly limit the number or range of suppliers? e.g. will it raise costs to smaller entrants relative to larger existing suppliers?*

**Limited / No Impact.** Classification of the site as a SPA could affect the spatial location of commercial fisheries activity and may restrict the output capacity of this sector. However, restrictions on fishing locations may well be negated by displacement i.e. vessels fishing elsewhere. It is not expected that the distribution of additional costs will be skewed towards smaller entrants relative to larger existing suppliers.

Classification could affect the preparation of applications, location of marine developments and activities, or requirements for marine developments which would apply to any developer of an affected licensed activity when preparing and submitting an application. Additional costs will potentially be incurred by developers submitting new licence applications, but they will apply to both new entrants and to incumbents looking to expand or alter their operations.

*Will the proposal limit the ability of suppliers to compete? e.g. will it reduce the channels suppliers can use or geographic area they can operate in?*

**No.** Classification of the proposed site will not directly affect firms' route to market or the geographical markets they can sell into.

*Will the proposal reduce suppliers' incentives to compete vigorously? e.g. will it encourage or enable the exchange of information on prices, costs, sales or outputs between suppliers?*

**No.** Classification of the site is not expected to reduce suppliers' incentives to compete vigorously.

### **Test run of business forms**

It is not envisaged that classification of the site will result in the creation of new forms for businesses to deal with, or result in amendments of existing forms.

### **Legal Aid Impact Test**

It is not expected that the SPA will have any impact on the current level of use that an individual makes to access justice through legal aid or on the possible expenditure from the legal aid fund as any legal/authorisation decision impacted by the SPA will largely affect businesses rather than individuals.

### **Enforcement, sanctions and monitoring**

The relevant competent authorities for each activity / industry has responsibility for compliance, monitoring and enforcement of the requirement to protect the site. This must be done in accordance with Article 6 of the EU Habitats Directive.

### **Implementation and delivery plan**

After classification of the site the relevant competent authorities must adhere to the legislative requirements so that adequate protection of the site occurs. Marine Scotland will be responsible for considering whether fisheries management measures are required.

### **Summary and recommendation**

Option 2: Classify site as a Special Protection Area – is the preferred option.

The extent and quality of habitat and available food around Scotland's coast supports huge numbers of different species of seabirds. Few countries can match this and we have an international responsibility to protect what we have around Scotland. Therefore the appropriate action is to protect and maintain Scotland's seabird and water bird populations and meet the requirements of the EU Birds Directive.

### **Declaration and publication**

I have read the Business and Regulatory Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs. I am satisfied that business impact has been assessed with the support of businesses in Scotland.

**Signed:**



**Date:**

3 December 2020

Mairi Gougeon, Minister for Rural Affairs and the Natural Environment

**Scottish Government Contact point:**

[marine\\_conservation@gov.scot](mailto:marine_conservation@gov.scot)

Appendix A - Ecosystem Services Benefits, East Mainland Coast, Shetland

Summary of Ecosystem Services Benefits arising from Classification of the Site as an SPA								
Services	Relevance to Site	Baseline Level	Estimated Impacts of Classification			Value Weighting	Scale of Benefits	Confidence
			Lower	Intermediate	Upper			
Fish for human consumption	Moderate, seabed contributes to the food web	Stocks not at MSY	Nil	Low, recovery of fish stocks possible in medium to long term from protection of benthic features (e.g. shellfish beds).	Low	Minimal - Low	Moderate	
Fish for non-human consumption		Stocks reduced from potential maximum						
Gas and climate regulation	Minimal, in coastal areas	Minimal	Nil			Low	Nil	High
Non-use value of natural environment	Moderate, bird species, and contribution of the site to MPA network, have non-use value.	Non-use value of the site may decline	Minimal	Low, maintain features of site	Moderate, protection of features of site from decline, possibly allowing some recovery	Moderate, contributes to maintaining marine biodiversity, other marine sites around Shetland have non-use value (e.g. Haroldswick, Kenter <i>et al.</i> 2013)	Low - Moderate	Moderate, response of feature to management measures, and value to society, uncertain
Recreation	Moderate, wildlife tourism and recreation at site contribute to Shetland tourism.	Recreation value of the site may decline	Minimal - Low, protection of site contributes to recreation, possibly allowing some recovery			Moderate, tourism supports jobs, but substitutes are available.	Minimal - Low	Moderate, significance of change from management measures uncertain.
Research and Education	Moderate, features have research value, but	Value of site may decline	Minimal	Low, protection maintains future research opportunities. Classification may play role in		Low, for individual features. Moderate for opportunity to understand	Low	Low – Moderate, extent to which



Summary of Ecosystem Services Benefits arising from Classification of the Site as an SPA								
Services	Relevance to Site	Baseline Level	Estimated Impacts of Classification			Value Weighting	Scale of Benefits	Confidence
			Lower	Intermediate	Upper			
	there are substitutes			communicating management needs.	response of range of features to management.		research uses site in future uncertain.	
Total value of changes in ecosystem services			Minimal for lower scenario, Low for intermediate and upper scenarios, based on non-use values.			Low - moderate	Moderate	



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