



Marine Scotland

Moray Firth Marine Protection Area Business and Regulatory Impact Assessment

December 2020

Business and Regulatory Impact Assessment

Title of Proposal

Moray Firth 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 Moray Firth is the most northerly large estuary in mainland Britain. The SPA is an extensive site stretching seaward from the Helmsdale coast in the north, to Portsoy in the east and it includes the outer Dornoch and Cromarty Firths, Beaully and Inverness Firths, as well as part of the wider Moray Firth.

The numerous firths, inlets and sandy bays provide sheltered areas where birds can moult, roost, rest and feed. These areas are important refuges for wintering birds, some of which have migrated thousands of miles from their breeding grounds in northern Europe and western Siberia.

The Moray basin is an extensive site stretching seaward from Buckie in the south to Helmsdale in the north and encompassing several different geographically separate water bodies; the Beaully Firth, the Inner Moray Firth, the Cromarty Firth, Dornoch Firth, Loch Fleet and the vast open water area in the outer Moray Firth.

It qualifies under **Article 4.1** by regularly supporting a non-breeding population of European importance of the following **Annex 1** species:

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

The site further qualifies under **Article 4.2** by regularly supporting populations of European importance of the following migratory species:

- **Greater scaup** *Aythya marila*
- **Common eider** *Somateria mollissima*
- **Long-tailed duck** *Clangula hyemalis*
- **Common scoter** *Melanitta nigra*
- **Velvet scoter** *Melanitta fusca*,
- **Common goldeneye** *Bucephala clangula*,
- **Red-breasted merganser** *Mergus serrator*
- **European shag** *Phalacrocorax aristotelis*.

The Moray Firth SPA comprises in total an area of 1,762.36 km²

The Moray Firth SPA is a funnel-shaped body of sea on the north-east mainland coast of Scotland. Most of the Firth is shallow water (less than 20 metres(m) over a sandy substrate (Barne *et al* 1996), apart from a 50m deep channel running east-west through muddy substrate Firth (Tilbrook, 1986). Tidal flows are relatively weak with a maximum tidal range of 3m (Harding-Hill, 1993) and the Firth is relatively sheltered, at least in comparison to the exposure of the Atlantic west coasts.

In winter, both salinity and temperature increase along a south-west to north-east gradient due to the considerable input of fresh water from rivers flowing into the Moray Firth.

The Moray Firth supports a wide variety of both pelagic and demersal fish and is an important spawning ground and/or nursery for several fish species. Shellfish, such as Norway lobster *Nephrops norvegicus*, mussels *Mytilus edulis* (Hopkins 1986; Harding-Hill 1993) and other bivalves also form part of the diverse fauna. All are important prey species for marine waterbirds.

Divers, mergansers and shags 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*. Sand-eels are favoured by shags during the breeding season, but adult birds take a wide variety of species.

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, velvet scoter, common scoter, and long-tailed duck feed almost exclusively on molluscs and small crustaceans, diving from the surface to pluck their prey from the seabed. Common goldeneye and greater scaup feed mainly on

a variety of invertebrates such as molluscs, worms, aquatic insects and crustaceans but will take also small fish.

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) and shag.

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 and shag are resident throughout the year, but the long-tailed duck, great northern diver, common goldeneye, greater scaup 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.

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 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 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 proposed 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 effec¹. 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 classifying the SPA, and due to requirements of the EU Wild 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 classifying the Moray Firth 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.

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/BAP² 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.

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

² Biodiversity Action Plan

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

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.³

Options

Option 1: Do nothing

Option 1 is the 'Do nothing' option; this is the baseline scenario. Under this option the proposed Moray Firth site is not classified. 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 Moray Firth 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. Requisite management would be required to maintain the status of the site.

- **Sectors and groups affected**

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

The following sectors have been identified as present (or possibly present in the future) within the Moray Firth site and potentially interact with one or more of the features:

- Coastal defence and flood protection
- Commercial fisheries (GVA)
- Military
- Ports and harbours
- Recreational boating
- Water sports
- 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.

- **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 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 depths 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 14 SPAs is estimated to be in the region of £74 million.⁴ 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.

⁴ Developing the Evidence Base for Impact Assessments, ABPMer

Research by Kenter et al⁵ 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 14 new SPAs has an estimated total present value of £2.1-6.2 million over the 20 year assessment period.⁶

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 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.⁷

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 14 new sites) 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 14 SPAs of £74 million and an additional use value as result of implementing management measures for the 14 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 EU infraction proceedings, which may result in substantial one off and recurring fines.

In addition it should be noted that the societal cost of not classifying 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

⁵ <http://uknea.unep-wcmc.org/LinkClick.aspx?fileticket=Mb8nUAphh%2bY%3d&tabid=82>

⁶ Developing the Evidence Base for Impact Assessments, ABP Mer

⁷ Developing the Evidence Base for Impact Assessments, ABP Mer

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.

Coastal defence and flood protection

There are four coast protection and flood defence structures (2 x Embankment, 1 x hard engineered scheme, 1 x groyne) which overlap the Moray Firth SPA boundary or within the 10km buffer. Therefore, management costs may be incurred under the assumption 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			
	Lower Estimate	Intermediate Estimate	Upper Estimate
Assumptions for cost impacts	<ul style="list-style-type: none"> Additional assessment to support planning application (maintenance or construction works). 	<ul style="list-style-type: none"> Additional assessment to support planning application (maintenance or construction works). 	<ul style="list-style-type: none"> Additional assessment to support planning application (maintenance or construction works).
Description of one-off costs	<ul style="list-style-type: none"> Additional assessment to support planning application (maintenance or construction works) – £5.2k per application. Applications estimated for four 	<ul style="list-style-type: none"> Additional assessment to support planning application (maintenance or construction works) – £5.2k per application. Applications estimated for four 	<ul style="list-style-type: none"> Additional assessment to support planning application (maintenance or construction works) – £5.2k per application. Applications estimated for four

	developments to be submitted in 2024.	developments to be submitted in 2024.	developments to be submitted in 2024.
Description of recurring costs	▪ None.	▪ None.	▪ None.
Description of non-quantified costs	▪ Seasonal controls applied to construction activity.	▪ Seasonal controls applied to construction activity.	▪ Seasonal controls applied to construction activity.

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

Total costs (2015–2034)	0.021	0.021	0.021
Average annual costs	0.001	0.001	0.001
Present value of total costs (2015–2034)	0.015	0.015	0.015

Commercial Fisheries:

According to VMS-based estimates and ICES rectangle landings statistics, other trawls, nephrops trawls, dredges, whitefish trawls and seines (over-15m) and nephrops trawls, pots, other trawls, dredges, whitefish trawls, lines and other gears (under-15m vessels) operate within the Moray Firth SPA. The value of catches from the Moray Firth area was £772,000 (over-15m vessels) and £1,269,000 (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 Buckie (62% by value) and Fraserburgh (26%). For the over-15m fleet, a total of 324 UK vessels operated in the Moray Firth area in the period 2009-2013, including nephrops trawls (150), other trawls (110), dredges (60), whitefish trawls (34) and whitefish seines (10). Other trawls, nephrops trawls and dredges mainly operate in the eastern 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.

Uprated ScotMap data (under-15m vessels) indicate that the annual average earnings from the Moray Firth SPA was £5,089,000 for the period 2007-2011, with nephrops trawls contributing the highest value. The coverage for ScotMap interviews in the region was 60% (total value of reported landings from the Fisheries Information Network for those vessels included in the ScotMap value analysis expressed as a percentage of the total reported landings for all vessels

<15m); the spatial representation of the value of fishing is more robust in regions where coverage is higher.

Non-UK VMS ping data indicate that 2 non-UK vessels were active in the Moray Firth area in 2011 to 2013, from Denmark (1) and Netherlands (1). Based on the EU vessel register, it appears that the Dutch vessel would not be impacted by the management measures assessed under the intermediate and upper scenarios. There was no information available on gear types used for the Danish vessel.

Economic Costs on the Activity of Classification of the Site as a SPA			
	Lower Estimate	Intermediate Estimate	Upper Estimate
Assumptions for cost impacts	<ul style="list-style-type: none"> ▪ No change to existing 	<ul style="list-style-type: none"> ▪ 10% reduction in mobile bottom gear effort across the site 	<ul style="list-style-type: none"> ▪ 30% reduction in mobile bottom gear effort across the site
Description of one-off costs	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ None
Description of recurring costs	<ul style="list-style-type: none"> ▪ None. 	<ul style="list-style-type: none"> ▪ Loss of >15m fishing income (annual values, £ k): <ul style="list-style-type: none"> ▪ other trawls (50.3); ▪ nephrops trawls (13.4); ▪ dredges (11.5); ▪ whitefish trawls (1.1); and ▪ all seines (0.9). ▪ Loss of <15m fishing income (annual values, £ k): <ul style="list-style-type: none"> ▪ nephrops trawls (51.4); ▪ other trawls (23.8); ▪ dredges (2.7); and ▪ whitefish trawls (0.6). 	<ul style="list-style-type: none"> ▪ Loss of >15m fishing income (annual values, £ k): <ul style="list-style-type: none"> ▪ other trawls (151.0); ▪ nephrops trawls (40.1); ▪ dredges (34.4); ▪ whitefish trawls (3.3); and ▪ all seines (2.7). ▪ Loss of <15m fishing income (annual values, £ k): <ul style="list-style-type: none"> ▪ nephrops trawls (154.1); ▪ other trawls (71.5); ▪ dredges (8.1); and ▪ whitefish trawls (1.7).
Description of non-quantified costs	<ul style="list-style-type: none"> ▪ None. 	<ul style="list-style-type: none"> ▪ Loss of value of catches from non-UK vessels using mobile bottom contact gears in the SPA (possibly 	<ul style="list-style-type: none"> ▪ Loss of value of catches from non-UK vessels using mobile bottom contact gears in the SPA (possibly

		Denmark (1 vessel)); and <ul style="list-style-type: none"> ▪ 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). 	Denmark (1 vessel)); and <ul style="list-style-type: none"> ▪ 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).
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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.

Quantified Costs on the Activity of Classification of the Site as a SPA (£Million)			
Total change in GVA (2015–2034)	0.000	1.181	3.542
Average annual change to GVA	0.000	0.059	0.177
Present value of total change in GVA (2015–2034)	0.000	0.868	2.605
Direct and Indirect reduction in Employment	0.0 jobs	2.4 jobs	7.1 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 Marine

Scotland study on fisheries displacement in relation to the 2014 Nature Conservation MPA classifications⁸ 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.

Military

4 military practice areas (Fort George (D702), Binhill (X5702), Tain (D703) and Moray Firth (Radar Buoy No 2) (D807); All firing danger areas) overlap with the Moray Firth SPA.

The features which overlap with military activities have not been described as vulnerable to MoD activities in this SPA. It is assumed that management relating to MoD activity will be coordinated through the MoD's Maritime Environmental Sustainability Appraisal Tool (MESAT) which the MoD uses to assist in meeting its environmental obligations. This process will include operational guidance to reduce significant impacts of military activities on SPAs. It is assumed that the MoD will incur additional costs in adjusting MESAT and other MoD environmental assessment tools in order to consider whether its activities will impact on the conservation objectives of SPAs and also incur additional costs in adjusting electronic charts to consider SPAs. However, these costs will be incurred at national level and hence no site-specific cost assessments have been made.

Ports and Harbours

There are two major ports/harbours (Cromarty and Inverness) located within the Moray Firth 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).

There are 18 minor ports/harbours (Avoch, Balintore, Brora, Buckie, Burghead, Cullen, Findochty, Fortrose, Golspie, Helmsdale, Hopeman, Lossiemouth, Nairn, Portgordon, Portmahomack, Portnockie, Rosemarkie and Sandend) located within the Moray Firth 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).

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

There are five open disposal sites (Inverness, Helmsdale, Burghead, Buckie, Sutors) within the Moray Firth SPA boundary (or 5/1km 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).

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"> ▪ Additional assessment of new port/harbour developments in or adjacent to SPA to support licence applications; and ▪ Additional assessment of maintenance dredging disposal licence application affecting the SPA. 	<ul style="list-style-type: none"> ▪ Additional assessment of new port/harbour developments in or adjacent to SPA to support licence applications; and ▪ Additional assessment of maintenance dredging disposal licence application affecting the SPA. 	<ul style="list-style-type: none"> ▪ Additional assessment of new port/harbour developments in or adjacent to SPA to support licence applications ▪ Additional monitoring of development project (major ports/harbours only); and ▪ Additional assessment of maintenance dredging disposal licence application affecting the SPA.
Description of one-off costs	<ul style="list-style-type: none"> ▪ Additional assessment of new port/harbour developments – £7.1k per application. Assessment estimated for two major ports (Cromarty, Inverness) to be submitted in 2018, 2023, 2028 and 2033 and 18 minor ports (Avoch, Balintore, Brora, Buckie, Burghead, 	<ul style="list-style-type: none"> ▪ Additional assessment of new port/harbour developments – £7.1k per application. Assessment estimated for two major ports (Cromarty, Inverness) to be submitted in 2018, 2023, 2028 and 2033 and 18 minor ports (Avoch, Balintore, Brora, Buckie, Burghead, 	<ul style="list-style-type: none"> ▪ Additional assessment of new port/harbour developments – £7.1k per application. Assessment estimated for two major ports (Cromarty, Inverness) to be submitted in 2018, 2023, 2028 and 2033 and 18 minor ports (Avoch, Balintore, Brora, Buckie, Burghead,

	<p>Cullen, Findochty, Fortrose, Golspie, Helmsdale, Hopeman, Lossiemouth, Nairn, Portgordon, Portmahomack, Portnockie, Rosemarkie and Sandend) to be submitted in 2025; and</p> <ul style="list-style-type: none"> ▪ Additional assessment of maintenance dredging disposal licence application – £7.1k per application. Assessment estimated for five disposal sites (Inverness, Helmsdale, Burghead, Buckie, Sutors) to be submitted in 2017, 2020, 2023, 2026, 2029 and 2032. 	<p>Cullen, Findochty, Fortrose, Golspie, Helmsdale, Hopeman, Lossiemouth, Nairn, Portgordon, Portmahomack, Portnockie, Rosemarkie and Sandend) to be submitted in 2025; and</p> <ul style="list-style-type: none"> ▪ Additional assessment of maintenance dredging disposal licence application – £7.1k per application. Assessment estimated for five disposal sites (Inverness, Helmsdale, Burghead, Buckie, Sutors) to be submitted in 2017, 2020, 2023, 2026, 2029 and 2032. 	<p>Cullen, Findochty, Fortrose, Golspie, Helmsdale, Hopeman, Lossiemouth, Nairn, Portgordon, Portmahomack, Portnockie, Rosemarkie and Sandend) to be submitted in 2025; and</p> <ul style="list-style-type: none"> ▪ Additional monitoring of major port development – £30k per development. Monitoring estimated for two major ports (Cromarty, Inverness) to be conducted in 2019, 2024, 2029 and 2034; and ▪ Additional assessment of maintenance dredging disposal licence application – £7.1k per application. Assessment estimated for five disposal sites (Inverness, Helmsdale, Burghead, Buckie, Sutors) to be submitted in 2017, 2020, 2023, 2026, 2029 and 2032.
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Description of recurring costs	▪ None.	▪ None.	▪ None.
Description of non-quantified costs	▪ 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.

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

Total costs (2015–2034)	0.398	0.401	0.641
Average annual costs	0.020	0.020	0.032
Present value of total costs (2015–2034)	0.287	0.290	0.454

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.

Recreational Boating

Four light and eight medium traffic cruising routes for recreational boating intersects with the Moray Firth SPA boundary. Fourteen marinas are also located in the Moray Firth SPA (and associated 1km buffer zone).

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

	Lower Estimate	Intermediate Estimate	Upper Estimate
Assumptions for cost impacts	▪ None.	▪ None.	▪ Zoning of recreational activities to avoid important bird foraging areas
Description of one-off costs	▪ None.	▪ None.	▪ It has been assumed that RYA (Scotland)/Scottish Boating Alliance is required to contribute to the development of each zoning plan at a cost of £1,000 per site (at 2015 prices) and that this

			cost is incurred in 2016.
Description of recurring costs	▪ None.	▪ None.	▪ None.
Description of non-quantified costs	▪ None.	▪ None.	▪ None.

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

Total costs (2015–2034)	0.000	0.000	0.001
Average annual costs	0.000	0.000	<0.001
Present value of total costs (2015–2034)	0.000	0.000	0.001

Water Sports

There are seven dive sites located within the Moray Firth SPA boundary, one is a submarine dive site (HMS Tantivy), five are other wreck dive sites and two are scenic boat dives (Queen st reef, Capel Rock). The Moray Firth SPA also overlaps with three surf spots (Spey Bay, Sandend Bay and Lossiemouth). Sea angling is carried out along most of the Scottish coastline within 6nm (SSACN). The Moray Firth SPA boundary overlaps with several sections of coastline and these areas out to 6nm are areas of potential recreational sea angling.

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

	Lower Estimate	Intermediate Estimate	Upper Estimate
Assumptions for cost impacts	▪ None.	▪ None.	▪ Zoning of water sports activities to avoid important bird foraging areas.
Description of one-off costs	▪ None.	▪ None.	▪ Discussions on zoning will be undertaken as part of the development of a Scheme of Management for individual SPAs. It has been assumed that the British Marine

			Federation is required to contribute to the development of each zoning plan – £1k per site (at 2015 prices) and that this cost is incurred in 2016.
Description of recurring costs	▪ None.	▪ None.	▪ None.
Description of non-quantified costs	▪ None.	▪ None.	▪ None.

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

Total costs (2014–2033)	0.000	0.000	0.001
Average annual costs	0.000	0.000	<0.001
Present value of total costs (2014–2033)	0.000	0.000	0.001

Public Sector:

The decision to classify the Moray Firth 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

The majority of these costs will accrue at the national level and as such have not been disaggregated to site level. Only the preparation of Statutory Instruments and regulatory and advisory costs associated with licensing decisions have been estimated at the site level.

Site-specific Public Sector Costs (£Million, 2015-2034)			
	Lower Estimate	Intermediate Estimate	Upper Estimate
Preparation of Marine Management Schemes	0.025	0.025	0.025
Preparation of Statutory Instruments	0.000	0.004	0.007
Development of voluntary measures	0.000	0.000	0.004
Site monitoring	0.088	0.088	0.088
Regulatory and advisory costs associated with licensing decisions	0.030	0.030	0.030
Total Quantified Public Sector Costs	0.143	0.147	0.154

Total Costs

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

Total Present Value of Quantified Costs (£Million, 2015-2034)			
Sector	Lower Estimate	Intermediate Estimate	Upper Estimate
Coastal defence and flood protection	0.015	0.015	0.015
Military	<i>See National Costs</i>	<i>See National Costs</i>	<i>See National Costs</i>
Ports and harbours	0.287	0.290	0.454
Recreational Boating	0.000	0.000	0.001
Water Sports	0.000	0.000	0.001
Public Sector	0.143	0.147	0.154
Total Present Value of Costs	0.445	0.452	0.625

GVA Impacts (£million 2015-2034)			
Commercial Fisheries	0.000	0.868	2.605
Total Non-Quantified Costs			
Scenario	Low	Intermediate	Upper
Sector/Group			
Coastal defence and flood protection	<ul style="list-style-type: none"> Seasonal controls applied to construction activity. 	<ul style="list-style-type: none"> Seasonal controls applied to construction activity. 	<ul style="list-style-type: none"> Seasonal controls applied to construction activity.
Commercial fisheries	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Loss of value of catches from non-UK vessels and Displacement impacts 	<ul style="list-style-type: none"> Loss of value of catches from non-UK vessels and Displacement impacts
Ports and harbours	<ul style="list-style-type: none"> Costs of project delays during consenting; potential impact on investment opportunities. 	<ul style="list-style-type: none"> Costs of project delays during consenting; potential impact on investment opportunities. 	<ul style="list-style-type: none"> Costs of project delays during consenting; potential impact on investment opportunities.
Scottish Firms Impact Test			
<p>This section is informed by evidence gathered during the consultation phase.</p> <p>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.</p> <p>Competition Assessment</p> <p>Classification of the 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.</p> <p>Competition Filter Questions</p> <p><i>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?</i></p> <p>No. It is unlikely that classification of the site as a SPA will directly limit the number or range of suppliers.</p>			

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 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:



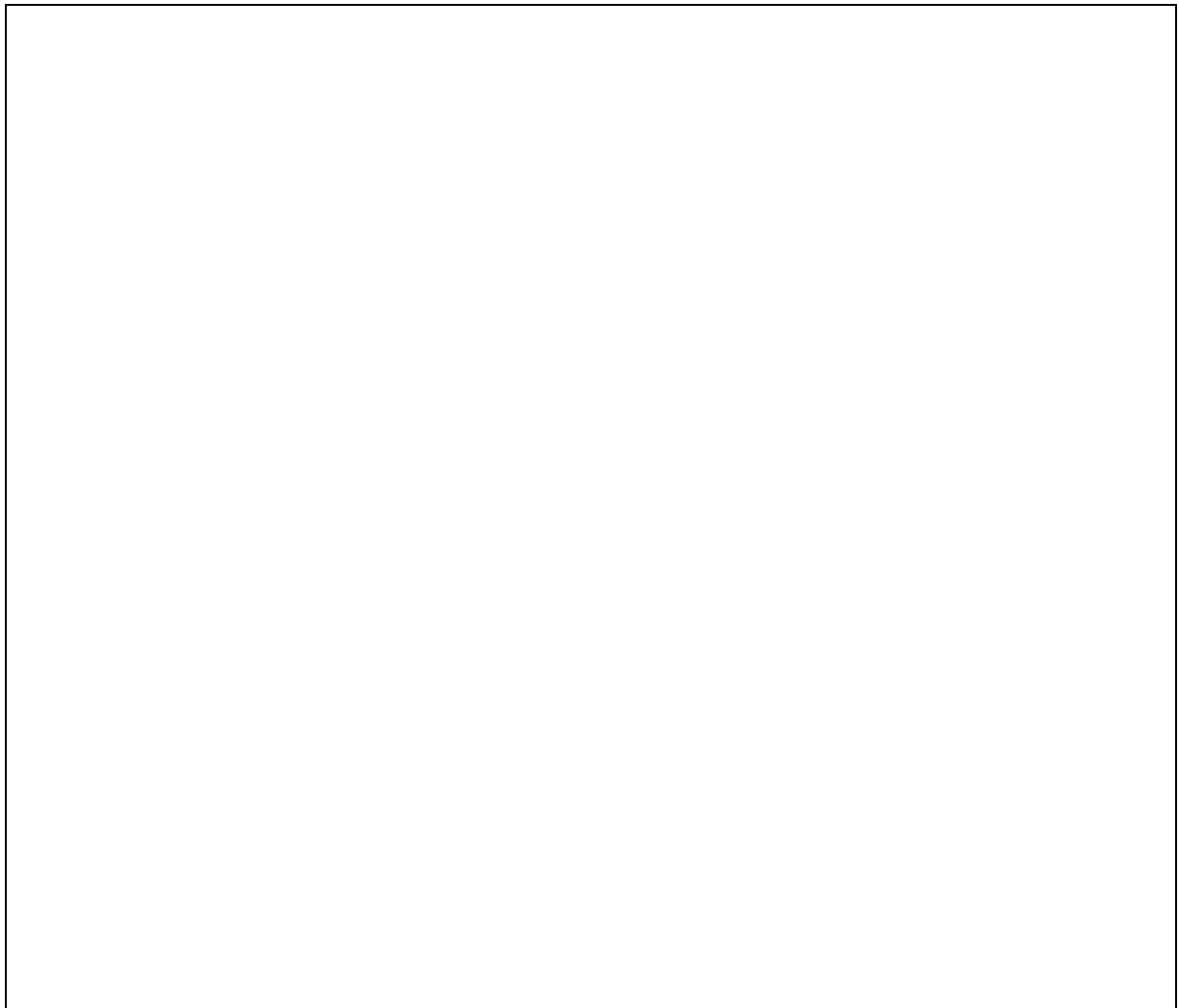
Date:

3 December 2020

Mairi Gougeon, Minister for Rural Affairs and the Natural Environment

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Appendix A - Ecosystem Services Benefits

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, benthic habitats 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	Moderate, recovery of fish stocks possible in medium to long term due to extent of protection of benthic features	Low	Minimal - Low	Moderate
Fish for non-human consumption		Stocks reduced from potential maximum						
Gas and climate regulation	Minimal	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, protection of features of site	Low, maintain features of site	Low - Moderate, protection of features of site from decline, and/or allowing some recovery, but main habitats within site already protected	Moderate, range of features contributes to maintaining biodiversity, and have non-use value similar to Ythan Estuary (Jacobs <i>et al.</i> 2004).	Low - Moderate	Moderate, response of feature to management measures, and value to society, uncertain
Recreation	Moderate - High, wildlife tourism and	Recreation value of the	Minimal	Low, protection of features of	Moderate, protection of features of site	Moderate, recreation and tourism	Low - Moderate.	Moderate, extent of change from

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			
	recreation at site	site may decline		site that contribute to recreation	from decline that contribute to recreation, and/or allowing some recovery	support jobs, but substitutes are available.		management measures uncertain.

Research and Education	Moderate, features have research value, but there are substitutes	Value of site may decline	Minimal	Low, protection maintains future research opportunities. Classification may play role in communicating management needs.	Low, for individual features. Moderate for opportunity to understand response of range of features to management.	Low	Low – Moderate, extent to which research uses site in future uncertain.
Total value of changes in ecosystem services			Minimal for lower scenario, Low - moderate for intermediate and upper scenarios. Based on recreational and non-use value of site.			Low - Moderate	Moderate



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