Consultation on proposals to designate four Marine Protected Areas in Scottish waters

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Scottish Government
Riaghaltas na h-Alba
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Introduction

The Scottish Government's vision is for a marine environment that is clean, healthy, safe, productive and diverse seas; managed to meet the long term needs of nature and people.

Thank you for taking the time to consider this consultation paper. We would welcome your views on the addition of four possible Marine Protected Areas (MPA) to the Scottish MPA network. The sites under consultation are;

- North-east Lewis
- Sea of the Hebrides
- Shiant East Bank
- Southern Trench

This consultation seeks your views on the following questions:

1. Do you support the designation of these possible Marine Protected Areas?
2. Do you agree that the scientific evidence presented justifies the case for the designation of each site?
3. Do you have any comments on the Conservation and Management Advice for each site?
4. Do you have any comments on the Business and Regulatory Impact Assessments for each site?
5. Do you have any comments on the Sustainability Appraisal, including the Environmental Report and the Socio-Economic Impact Assessment?

What documents should I read to answer these questions?

For each site, the following documents are available:

- Data confidence assessment of the scientific evidence;
- MPA Selection Guidelines assessment;
- Conservation and management advice; and
- Business and Regulatory Impact Assessments (BRIAs).

In addition, the following documents provide evidence on all of the possible sites:

- A Strategic Environmental Assessment (SEA);
- A Socio-Economic Impact Assessment (SEIA); and
- A Sustainability Appraisal, combining environmental, social and economic effects.

For additional information please refer to:

- The Marine Protected Areas Network – 2018 Report to the Scottish Parliament[1]
- SNH's[2] and JNCC's[3] MPA network web pages
- SNH's 2014 further advice to the Scottish Government on the development of the Scottish MPA network[4]
- Marine Scotland's MPA network web pages[5]

To see how the four possible sites interact with current protected areas please visit Marine Scotland Maps[6]. The downloadable GIS data on MPAs is available on Natural Spaces[7] under Open Government Licence.

How do I respond to the consultation?

You are invited to respond to this consultation by **30 August 2019**. Please respond to the consultation using the Scottish Government's consultation hub, Citizen Space (https://consult.gov.scot/). You can access and respond to this consultation online at https://consult.gov.scot/marine-scotland/four-new-marine-protected-areas.

Further details on how to respond can be found in Appendix A & B

[1] https://www.gov.scot/publications/marine-protected-area-network-2018-report-scottish-parliament/

[2] https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-areas/national-designations/marine-protected-areas-mpas

[3] https://jncc.gov.uk/advice/marine-protected-areas/

[4] https://www.nature.scot/snh-commissioned-report-780-further-advice-scottish-government-selection-nature-conservation-marine

[5] https://www2.gov.scot/Topics/marine/marine-environment/mpanetwork

[6] http://maps.marine.gov.scot

[7] https://gateway.snh.gov.uk/natural-spaces/index.jsp

Scotland’s Marine Protected Area (MPA) network

The seas around Scotland and the spectacular wildlife they support are one of our best kept secrets, one that only a very few have had the privilege to explore first hand, but upon which we all depend for our quality of life.

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 renewable energy, as well as recreation activities and eco-tourism.

Scotland’s MPA network is being developed to help safeguard our most important natural and cultural heritage features on the principle of sustainable use. By doing so we are protecting the natural goods and services they provide for current and future generations to enjoy.

The MPA network, as shown in Figure 1, consists of sites designated for nature conservation. In addition to MPAs the network includes areas that: provide nature conservation benefits (called Other Area Based Measures), protect the historic environment (Historic MPAs), and areas for demonstrating or researching marine management. The network currently consists of 231 sites which protect 22% of our seas.

Scottish Ministers have national and international commitments to create a network of MPAs which:

- Contributes to conservation or improvement of the marine environment;
- Represents a range of features present in Scottish waters; and
- Reflects that the conservation of a feature may require the designation of more than one MPA.

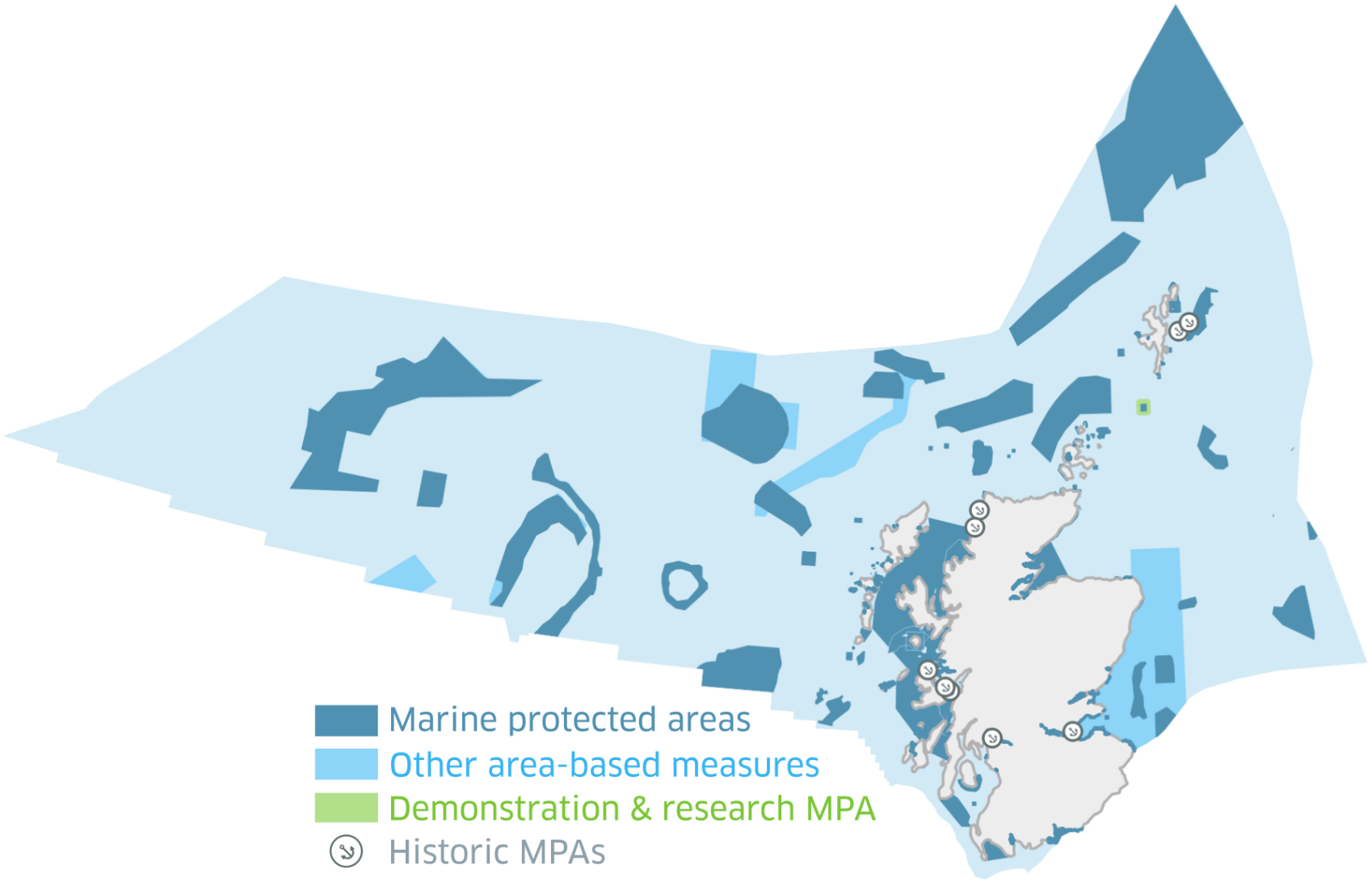

Figure 1: The existing MPA network in Scottish waters. Contains information from the Scottish Government (Marine Scotland), Scottish Natural Heritage, and Historic Environment Scotland licensed under the Open Government Licence v3.0.

Selection of the proposals

Scotland's seas are internationally recognised as being important for whales and dolphins, which are collectively known as cetaceans, and also for basking sharks. Cetaceans and basking sharks are protected under national and international legislation wherever they occur throughout Scottish waters. Cetaceans are European Protected Species (EPS) meaning they are protected by the Conservation (Natural Habitats, &c.) Regulations 1994 and basking sharks are protected by the Wildlife and Countryside Act 1981.

The identification of MPAs is based on the best available evidence, as set out in the MPA Selection Guidelines[8]. Each of the four sites was assessed for the presence and quality of MPA search features, whether management of those features could be effective, and what contribution the area would make to the wider MPA network.

The MPA Selection Guidelines state that the role of MPAs for highly mobile species focuses on 'essential areas for key life cycle stages e.g. breeding, feeding, courtship or nursery areas' and 'significant aggregations of mobile species'.

The four MPA proposals were originally identified in 2012. However, additional assessment work was needed to improve the evidence base. A range of activities have been undertaken:

- Habitat modelling;
- Basking shark tagging;
- Risso's dolphin photo-identification; and
- Seabed survey.

As a result of this additional work, Scottish Natural Heritage (SNH) has provided formal advice on the four possible MPAs. They have advised that these sites meet the MPA selection guidelines and that they are necessary to progress towards completion of the Scottish MPA network. Details of the SNH advice are provided in the relevant site specific documents. A summary is provided in the site specific section below.

The four possible MPAs would offer additional levels of protection to locations important for the various life stages of these species. They will also provide a mechanism for raising awareness of the value of Scottish waters to these iconic animals and people's enjoyment of them. Including these species also ensures the MPA network is fully representative of features in Scotland and can provide a focus for developing best practice approaches to management.

[8] https://www2.gov.scot/Topics/marine/marine-environment/mpanetwork/mpaguidelines

Site Management

Conservation Objectives

Conservation objectives describe the current and desired ecological or geological state (or quality) of each proposed protected feature. The objectives are either to 'conserve' or 'recover' a feature. Where evidence exists that the feature is in an unfavourable condition within the site, the objective will be to 'recover', otherwise it will be to 'conserve'.

Management Advice

SNH has produced a Conservation and Management Advice document for each site to outline the conservation objectives and their management advice. They have used a risk-based approach by considering each of the protected features, the conservation objectives, and the activities which could affect their condition.

Management Measures

The responsibility for site management generally sits with Public Authorities who regulate activities. The Marine (Scotland) Act 2010 places duties on Public Authorities in relation to their own functions and any decisions they make to allow regulated activities to take place. In some cases specific measures may be required. The Marine (Scotland) Act 2010 provides the power to Scottish Ministers to implement Marine Conservation Orders, where necessary, to further site conservation objectives. Any such Order is subject to both public consultation and Parliamentary Processes. This consultation does not include the implementation of any Marine Conservation Orders.

Monitoring

Every six years there is a requirement for Scottish Ministers to report on the extent to which, in their opinion, the conservation objectives have been achieved. The last of these reports was published in 2018[9]. Appropriate monitoring is important for the report, which informs the opinion of Scottish Ministers. The monitoring of the MPA network is covered in the Scottish MPA Monitoring Strategy[10] which sets out how monitoring of the network should be prioritised and carried out. The results of monitoring are also used to inform future decisions on management of MPAs.

[9] https://www.gov.scot/publications/marine-protected-area-network-2018-report-scottish-parliament/

[10] https://www2.gov.scot/Topics/marine/marine-environment/mpanetwork/MPAmonitoring

Sustainability Appraisal

Scottish Ministers may have regard “to any social or economic consequences of designation” when considering whether it is desirable to designate an area as an MPA.

The Sustainability Appraisal is informed by a Strategic Environmental Assessment (SEA) and a Socio-Economic Impact Assessment (SEIA).The purpose of the Sustainability Appraisal is to inform the scientific recommendations with the social, economic and wider environmental considerations, without losing sight of the overall benefits of the Scottish MPA network. The Sustainability Appraisal also considers questions of displacement.

For the assessments, three management scenarios were developed based on management advice from SNH. These scenarios represent a range of potential management measures that could be adopted at the four possible sites following designation. If it were decided that management measures were required, these would be subject to separate assessment and further public consultation. Further information on the management scenarios is outlined in Section 3.4 of the SEA report.

Strategic Environmental Assessment (SEA)

The SEA identifies the likely significant environmental impacts of the four possible sites and considers reasonable alternatives to them. The SEA also identifies mitigation measures that are required to avoid or minimise any significant adverse effects and highlights opportunities for enhancements of beneficial effects.

The SEA has considered the potential effects of the four possible sites on the environment. Overall, they will have benefits for biodiversity (for both flora and fauna) and geodiversity. There may also be spill over benefits outside the sites, where the size of the population within the site exceeds the maximum that can be sustained. There is also potential for adverse environmental effects from the displacement of fishing activity from the possible sites to other areas.

The combination of the four possible MPAs has the potential to provide beneficial environmental effects. They could also act in-combination with the existing MPA network, increasing the beneficial environmental effects. There are potential cumulative adverse effects from the displacement of fishing activity.

Socio-economic Impact Assessment (SEIA)

The SEIA aims to identify and assess the potential economic and social effects of the four possible sites on the lives and circumstances of people, their families and communities. The assessment investigates the potential cumulative economic benefits and costs, and associated potential social impacts, of implementing the proposed management scenarios at each individual site. It also considers the potential economic benefits and costs, and associated social impacts, of implementing the suite of measures overall. The assessment provides the Scottish Government with evidence on economic and social effects to inform the BRIA for each possible MPA.

Potential quantified and non-quantified costs have been identified for different activities and sectors. Table 1 below shows the assessment of national impacts of the four possible sites on each sector, and shows the possible variation in cost impact depending on three management scenarios. The figures are not annual cost impacts, but are discounted costs spread over 20 years.

The most significant potential costs may be incurred by the oil and gas sector, power interconnectors and transmission lines, and the commercial fisheries sector (note costs are expressed in terms of impacts to direct Gross Value Added (GVA), based on the estimated value of landings affected). The estimates do not take account of mitigation or adaptation that could be put in place.

Table 1: Present value (PV) in £'000 for quantified national cost impacts to human activities (costs discounted over assessment period (2019-2038), 2019 prices)

Sector	Lower Estimate	Intermediate Estimate	Upper Estimate
Finfish aquaculture	39	269	407
Shellfish aquaculture	76	76	76
Carbon capture and storage	5	5	554
Coastal protection	49	49	49
Commercial fisheries (direct GVA)	0	1,481	2,892
Energy generation	0	0	548
Military activities	195	195	195
Oil and gas	0	0	7,502
Ports and harbours	179	179	182
Power interconnectors	6	6	1,066
Recreational boating	0	0	1
Shipping	0	0	1
Telecom cables	16	16	331
Tourism	0	0	0
Water Sports	0	0	0

The cost impacts shown here are national and there is significant variation in costs by site. The site-specific sections later in this document describe cost estimates for individual sectors by site, which is also discussed in Section 4 of the SEIA.

It is not considered likely that consequential social impacts, such as on culture, heritage, crime, health, education, access to services, or changes in the local environment, will occur in the local communities affected.

The sites support a range of ecosystem services which provide benefits to people and the environment. However, it is difficult to assess the value and changes to these services with a high degree of certainty. It is, therefore, not possible to estimate the site-level value of benefits. However, based on studies of non-use values (i.e. the benefit people get simply from being aware of a diverse and sustainable marine environment even if they do not themselves 'use it'), the SEIA suggests the benefits of designation of all four possible sites to be over £25 million, much greater than the total potential costs.

Summary of Island Communities Impact Assessment (ICIA) screening

The Islands (Scotland) Act 2018 provides for a new duty on Scottish Ministers and other relevant public bodies where they must have regard to island communities in exercising their functions. The process for carrying out Island Communities Impact Assessments (ICIA) is not wholly developed at this early stage, following the recent passing of the Act. The draft screening under the Islands (Scotland) Act 2018 found that no ICIA assessment was required, but this outcome will be reviewed after the consultation.

The Possible Marine Protected Areas (pMPAs)

This section summarises information from the various documents which underpin this consultation. Table 2 provides the name, size, and proposed protected features of each site. The locations are shown on Figure 2.

Table 2: The four possible MPAs

Site Name	Size (km^2)	Proposed Protected Features	
		Biodiversity	**Geodiversity**
North-east Lewis	907	Risso's dolphins, sandeels	Marine geomorphology of the Scottish shelf bed, Quaternary of Scotland
Sea of the Hebrides	10,039	Basking sharks, minke whales, fronts	Marine geomorphology of the Scottish shelf seabed
Shiant East Bank	308	Circalittoral sands and mixed sediment communities, Northern sea fan and sponge communities, shelf banks and mounds	Quaternary of Scotland
Southern Trench	2,536	Burrowed mud, minke whales, fronts, shelf deeps	Quaternary of Scotland, Submarine Mass Movement

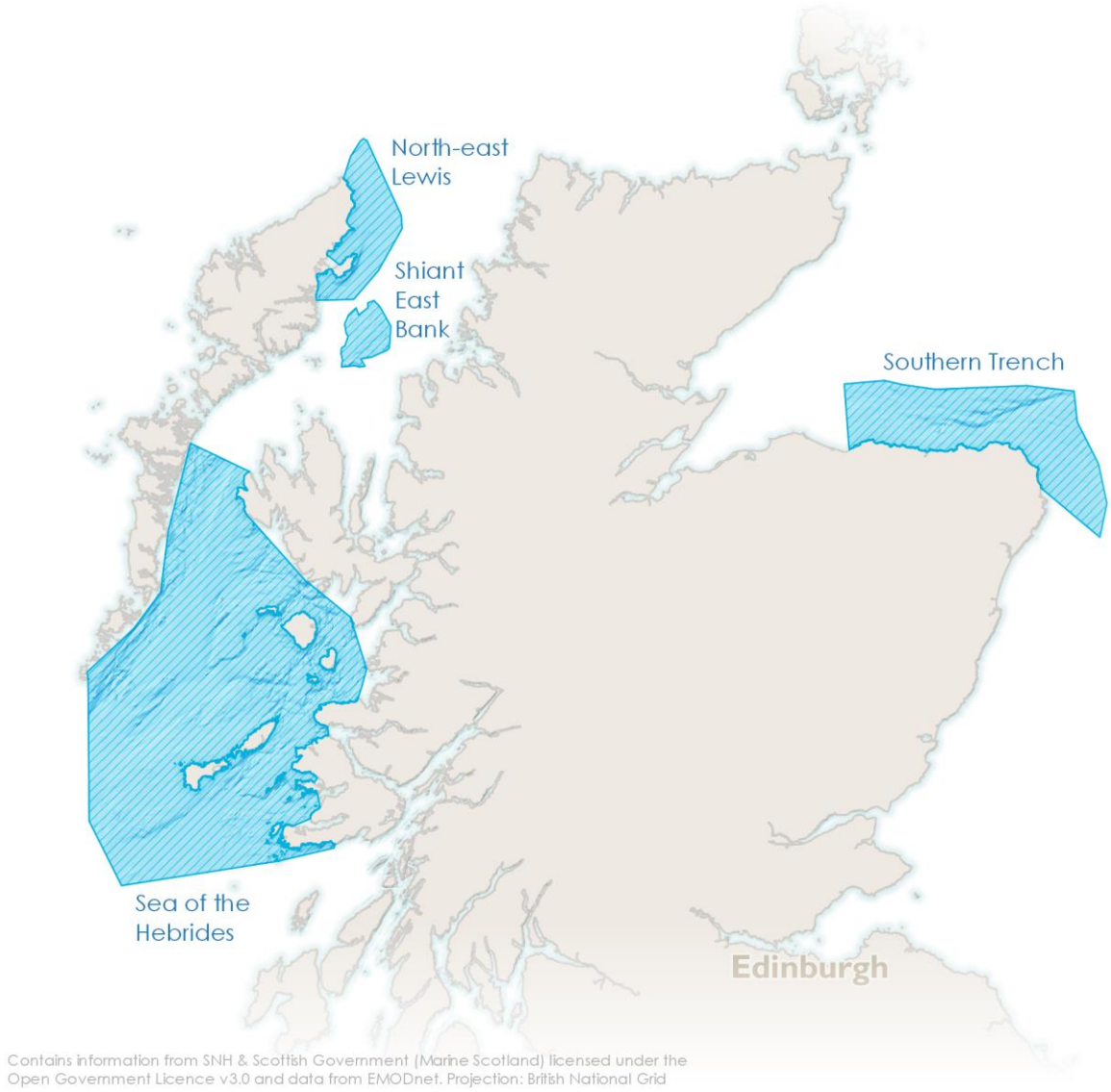

Figure 2: The four possible MPAs

North-east Lewis pMPA

Site description

North-east Lewis pMPA is the most northerly of the four sites. The proposed protected features are Risso's dolphins, sandeels, and geodiversity features. The site is at the north of the Risso's dolphin range and represents an area where they are recorded in high numbers year-round. The site supports important sandeel habitats, which are a key prey of many fish, seabird, whale and dolphin species.

Conservation Objectives and Management Advice

The conservation objectives of this site are to *conserve* the features, meaning to keep the status of the features in favourable condition. This does not include where there is alteration of the feature through natural processes.

Risso's dolphin are considered to be sensitive to underwater noise, collision with vessels, and entanglement in fishing gear. SNH advises that in order to conserve Risso's dolphin, risk of injury and death should be minimised, access to resources within the site should be maintained, and supporting features should also be conserved.

The management advice to reduce these pressures includes:

- Use of best practice to reduce risk of boat collision;
- Reduce disturbance from noisy activities through best practice mitigation;
- Exclusion of drift and set net fishing gear; and
- Use of best practice to reduce fishing bycatch.

Sandeels are sensitive to pressures from targeted fishing and activities which affect their habitat. In order to conserve this species access to resources within the site should be maintained, and supporting features should also be conserved.

The management advice to reduce these pressures includes:

- Minimising impacts to sandeel habitat through appropriate siting of new developments;
- Exclusion of hydraulic fishing methods from sandeel habitat; and
- Exclusion of targeted fishing for sandeels.

The geodiversity features are Quaternary of Scotland and marine geomorphology of the Scottish shelf seabed. The former is not sensitive to human activities and the latter may be sensitive to changes to water flow and physical changes.

Sustainability Appraisal

The SEA concluded that, under the intermediate management scenario, designation of the North-east Lewis pMPA could have a *negligible to very minor* beneficial impact on the environment and provide potential for future benefits. There will be small negative impacts from fishing displacement, but these will be outweighed by the environmental benefits of reducing fishing pressures and replacement of some Acoustic Deterrent Devices (ADDs).

The SEIA found that the total potential cost impacts from the North-east Lewis pMPA could be £134,000 over 20 years, under the intermediate management scenario. Table 3 shows the cost impacts for relevant sectors. The sectors with the greatest economic impacts would be finfish aquaculture, ports and harbours, and coastal protection. The principal costs to finfish aquaculture under this scenario would be the cost of replacement of ADDs with 'cetacean-friendly' models and the increased assessment costs. The latter is also the source of costs to ports and harbour, and coastal protection. The costs for commercial fisheries cannot be disclosed for data protection reasons because the data represents five or fewer individuals. There are also high costs to power interconnectors under the upper scenario which is due to increased survey costs of the planned Western Isles HVDC (High-Voltage Direct Current) cable if a restriction on sub-sea surveys in the summer months was imposed.

Table 3: Quantified Economic Costs for the North-east Lewis pMPA (£'000) costs discounted over assessment period (2019-2038), 2019 prices

Sector	Lower Estimate	Intermediate Estimate	Upper Estimate
Finfish Aquaculture	9	71	107
Shellfish Aquaculture	9	9	9
Coastal Protection	16	16	16
Commercial Fisheries (direct GVA)	0	Cannot be disclosed	Cannot be disclosed
Ports and Harbours	27	27	27
Power Interconnectors	6	6	478
Telecommunication Cables	4	4	4

Sea of the Hebrides pMPA

Site description

Sea of the Hebrides pMPA is the largest of the four sites, and is proposed to protect basking sharks, minke whales, fronts and geodiversity features. Fronts are created by cool nutrient-rich water mixing with shallow warmer water. They are areas of high productivity and create feeding grounds for predators of all shapes and sizes. Minke whales are the smallest member of the baleen whales, which feed by engulfing large mouthfuls of fish such as sandeels and sieving out water through their baleen plates. Basking sharks are the second largest species of fish in the world and feed solely on zooplankton.

Conservation Objectives and Management Advice

The conservation objectives of this site are to *conserve* the features, meaning to keep the status of the features in favourable condition. This does not include where there is alteration of the feature through natural processes.

Basking sharks are considered to be most sensitive to collision with vessels, and somewhat sensitive to entanglement in fishing gear and disturbance from underwater noise. Minke whales are sensitive to underwater noise (leading to disturbance and possibly injury), entanglement in fishing gear and collision with vessels. SNH also note the importance of sandeels as prey species of minke whales within the site.

SNH advises that, in order to conserve basking sharks and minke whales, risk of injury and death should be minimised, access to resources within the site should be maintained, and supporting features should also be conserved.

The management advice to reduce these pressures includes:

- Use of best practice to reduce risk of boat collision;
- Reduce disturbance from noisy activities through best practice mitigation;
- Exclusion of drift and set net fishing gear;
- Further development and adoption of best practice to avoid entanglement in creel ropes;
- Management of fishing activities for key prey species e.g. herring and sprat;
- Exclusion of targeted fishing for sandeels;
- Use of best practice to reduce fishing bycatch;
- Consideration of new or altered ferry routes to reduce collision risk; and
- Minimising impacts to sandeel habitat through appropriate siting of new developments.

Fronts could be sensitive to changes to tidal flow and seabed topography. SNH advises that, in order to conserve fronts, the extent and distribution of the feature, functions of fronts and supporting processes should be maintained. There is no management advice for fronts.

The geodiversity feature, marine geomorphology of the Scottish shelf seabed, is sensitive to physical change through sediment removal and temperature changes. SNH advises that, in order to conserve this feature, the extent and integrity of the feature should be maintained, functions of the feature should be maintained and the surface of the feature should be unobstructed. The management advice to reduce these pressures recommends avoiding impacts on the most sensitive, carbonate-producing habitats (such as maerl beds and horse mussel beds) by considering siting of new developments and reducing intensity of static gear within the feature.

Sustainability Appraisal

The SEA concluded that, under the intermediate management scenario, designation of the Sea of the Hebrides pMPA could have a *minor* beneficial impact on the environment and provide potential for future benefits. The negative impacts from fishing displacement would be negligible and these would be outweighed by the environmental benefits of reducing fishing pressures and replacement of some ADDs.

The SEIA found that the total economic cost from the Sea of the Hebrides pMPA, under the intermediate management scenario, could be £16,000 in GVA impacts (related to commercial fishing impacts) and £344,000 to all other sectors. The sectors with the greatest economic impacts would be finfish and shellfish aquaculture, and ports and harbours. Table 4 shows the cost impacts from the Sea of the Hebrides pMPA for relevant sectors. The principal costs to finish aquaculture under this scenario would be the cost of replacement of ADDs with 'cetacean-friendly' models and the increased assessment costs. The latter is also the source of costs to ports and harbours, and shellfish aquaculture.

Table 4: Quantified Economic Costs for the Sea of the Hebrides pMPA (£'000) costs discounted over assessment period (2019-2038), 2019 prices

Sector	Lower Estimate	Intermediate Estimate	Upper Estimate
Finfish Aquaculture	29	198	300
Shellfish Aquaculture	66	66	66
Coastal Protection	16	16	16
Commercial Fishing (direct GVA)	0	16	25
Ports and Harbours	59	59	62
Recreational Boating	0	0	1
Commercial Shipping	0	0	1
Telecommunication Cables	4	4	4

Shiant East Bank pMPA

Site description

Shiant East Bank pMPA is in the middle of the Minch, the sea which separates the Outer Hebrides from the Scottish mainland. The proposed protected features are circalittoral sands and mixed sediment communities, northern sea fan and sponge communities, and shelf banks and mounds. The site is made up of mosaics of sand and mixed sediment which support species such as worms, clams, brittlestars, crabs and starfish. Outcrops of volcanic rock provide habitat for filter feeders such as northern sea fans and sponges.

Conservation Objectives and Management Advice

The conservation objectives of this site are to *conserve* the features, meaning to keep the status of the features in favourable condition. This does not include where there is alteration of the feature through natural processes.

Circalittoral sands and mixed sediment communities are sensitive to physical disturbance. Northern sea fan and sponge communities are sensitive to physical disturbance, organic enrichment and siltation changes. The extent and distribution of these features should be conserved, along with the physical structure and function of the features. Also, the diversity, abundance and distribution of characteristic species should be maintained.

The management advice to achieve these conservation objectives includes:

- Limit impacts from new cables and pipelines by siting to avoid sensitive epifauna and minimising footprint;
- Exclusion of demersal mobile gear from northern sea fan and sponge communities and reduction of demersal mobile gear from circalittoral sands and mixed sediment communities;
- Reduction of static fishing gear from circalittoral sands and mixed sediment communities; and
- Minimising pressures from survey work through best practice.

Shelf banks and mounds may be sensitive to changes to tidal flow and physical changes to the seabed. SNH advises that the extent and distribution of the feature, functions of the feature supporting processes should be maintained. There is no management advice for shelf banks and mounds.

The geodiversity feature, Quaternary of Scotland, is highly resistant to human pressures. SNH advises that in order to conserve this feature, the extent and integrity of the feature should be maintained, functions of the feature should be maintained and the surface of the feature should be unobstructed. There is no management advice for Quaternary of Scotland.

Sustainability Appraisal

The SEA concluded that, under the intermediate management scenario, designation of the Shiant East Bank pMPA could have a *moderate* beneficial impact on the environment and provide potential for future benefits. Reduction in certain fishing gears would provide moderate environmental benefits and have the potential for minor spillover benefits outside the site. The negative impacts from fishing displacement would be negligible and these will be outweighed by the benefits of reducing fishing pressures.

Table 5 shows the cost impacts from the Shiant East Bank pMPA for relevant sectors. The SEIA found that the only sectors with economic impacts, under the intermediate scenario, would be commercial fisheries and telecommunication cables. The GVA impacts are attributed to the exclusion of mobile gear from northern sea fan and sponge communities and from 20% of circalittoral sand. The gear type most affected by this is demersal trawls for Nephrops. There are also high costs to telecommunication cables under the upper scenario due to a possible need to replace a cable which currently runs through the site, and which may need to be rerouted to avoid the sensitive habitat.

Table 5: Quantified Economic Costs for the Shiant East Bank pMPA (£'000) costs discounted over assessment period (2019-2038), 2019 prices

Sector	Lower Estimate	Intermediate Estimate	Upper Estimate
Commercial Fisheries (GVA)	0	177	296
Telecommunication Cables	4	4	319

Southern Trench pMPA

Site description

Southern Trench pMPA is located on the east coast, and is proposed to protect minke whales, burrowed mud, fronts and shelf deeps. Fronts in the Southern Trench are created by mixing of warm and cold waters, which creates an area of high productivity, attracting a number of predators to the area. Minke whales are attracted by the fish species brought to the area by the fronts, as well as the abundance of sandeels in the soft sands. The site takes its name from the trench running parallel to the Moray coast. The trench is up to 250m deep and the soft mud on the floor are home to many species of mud-loving animals including Nephrops and crabs.

Conservation Objectives and Management Advice

The conservation objectives of this site are to *conserve* the features, meaning to keep the status of the features in favourable condition. This does not include where there is alteration of the feature through natural processes.

Burrowed mud is highly sensitive to physical disturbance and can be sensitive to pollution. The extent and distribution of the habitat should be conserved, as well as the structure and functions it provides. Also, the diversity, abundance and distribution of typical species should be conserved.

The management advice to reduce these pressures includes:

- Adoption of best practice to minimise the footprint of new developments; and
- Limit demersal mobile gear from burrowed mud habitat.

Minke whales are sensitive to underwater noise and also entanglement in fishing gear and collision with vessels. SNH also note the importance of sandeel as prey species of minke whale within the site. SNH advises that, in order to conserve minke whales, risk of injury and death should be minimised, access to resources within the site should be maintained, and supporting features should also be conserved.

The management advice to reduce these pressures includes:

- Use of best practice to reduce risk of boat collision;
- Reduce disturbance from noisy activities through best practice mitigation;
- Exclusion of drift and set net fishing gear, and no targeted fishing for sandeels;
- Further development and adoption of best practice to avoid entanglement in creel ropes;
- Use of best practice to reduce fishing bycatch; and
- Minimising impacts to sandeel habitat through appropriate siting of new developments.

Fronts could be sensitive to changes to tidal flow and seabed topography. Shelf deeps are not considered to be at significant risk from human activity. The geodiversity features, Quaternary of Scotland and submarine mass movement, are highly resistant to human pressures but have no recovery potential. SNH advises that, in order to conserve these features, the extent and distribution of the feature, functions and supporting processes of the features should be maintained. There is no management advice for fronts or shelf deeps.

Sustainability Appraisal

The SEA concluded that, under the intermediate management scenario, designation of the Southern Trench pMPA could have a *minor* beneficial impact on the environment and provide potential for future benefits. The limits on harbour and port activity would provide minor benefits and reduction in fishing effort would provide moderate benefits and potential for minor spill over benefits. There will be minor negative impacts from fishing displacement, but these will be outweighed by the benefits within the site. There is potential for cumulative environmental impacts due to the number of other protected areas and developments in the Moray Firth.

Table 6 shows the cost impacts from the Southern Trench pMPA for relevant sectors. The SEIA found that the total cost impacts, under the intermediate management scenario, could be £1.288 million in GVA impacts for commercial fisheries and £117,000 to all other sectors The economic impacts to commercial fisheries are attributed to the exclusion of mobile gear from 20% of burrowed mud habitat. The gear type most affected by this is demersal trawls for Nephrops. There are also high costs to the oil and gas, power interconnectors, and energy generation sectors under the upper scenario, which are caused by seasonal restrictions to surveying pipeline infrastructure in the Southern Trench pMPA.

Table 6: Quantified Economic Costs for the Southern Trench pMPA (£'000) costs discounted over assessment period (2019-2038), 2019 prices

Sector	Lower Estimate	Intermediate Estimate	Upper Estimate
Carbon Capture and Storage	5	5	554
Coastal Protection	16	16	16
Commercial Fisheries (GVA)	0	1,288	2,570
Energy Generation	0	0	548
Oil and Gas	0	0	7,502
Ports and Harbours	92	92	92
Power Interconnectors	0	0	588
Telecommunication Cables	4	4	4

Appendix A: How to respond to the consultation

How to respond to this consultation

You are invited to respond to this consultation by 30 August 2019. Please respond to the consultation using the Scottish Government's consultation hub, Citizen Space (https://consult.gov.scot/). Access and respond to this consultation online at https://consult.gov.scot/marine-scotland/four-new-marine-protected-areas.

You can save and return to your responses while the consultation is still open. Please ensure that consultation responses are submitted before the closing date of 30 August 2019.

If you are unable to respond using our consultation hub, please complete the Respondent Information Form (as shown in Appendix B). Without this form we will not know how you would like your response processed. Please send the completed form with your response to:

marine_conservation@gov.scot
OR
Marine Conservation
Scottish Government
Area 1A South
Victoria Quay
Edinburgh
EH6 6QQ

If you have any enquiries please direct them to marine_conservation@gov.scot

Handling your response

If you respond using the consultation hub, you will be directed to the About You page before submitting your response. Please indicate how you wish your response to be handled and, in particular, whether you are content for your response to published. If you ask for your response not to be published, we will regard it as confidential, and we will treat it accordingly.

All respondents should be aware that the Scottish Government is subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

To find out how we handle your personal data, please see our privacy policy: https://www.gov.scot/privacy/.

Next steps in the process

Where respondents have given permission for their response to be made public, and after we have checked that they contain no potentially defamatory material, responses will be made available to the public at http://consult.gov.scot. If you use the consultation hub to respond, you will receive a copy of your response via email.

Following the closing date, all responses will be analysed and considered along with any other available evidence to help us. Responses will be published where we have been given permission to do so. An analysis report will also be made available.

Comments and complaints

If you have any comments about how this consultation exercise has been conducted, please send them to the contact address above or to marine_conservation@gov.scot.

The Scottish Government Consultation Process

Consultation is an essential part of the policymaking process. It gives us the opportunity to consider your opinion and expertise on a proposed area of work.

You can find all our consultations online: http://consult.gov.scot. Each consultation details the issues under consideration, as well as a way for you to give us your views, either online, by email or by post.

Responses will be analysed and used as part of the decision making process, along with a range of other available information and evidence. We will publish a report of this analysis for every consultation. Depending on the nature of the consultation exercise the responses received may:

- Indicate the need for policy development or review
- Inform the development of a particular policy
- Help decisions to be made between alternative policy proposals
- Be used to finalise legislation before it is implemented

While details of particular circumstances described in a response to a consultation exercise may usefully inform the policy process, consultation exercises cannot address individual concerns and comments, which should be directed to the relevant public body.

Appendix B

Consultation on proposals to designate four Marine Protected Areas in Scottish waters

RESPONDENT INFORMATION FORM

Please Note this form **must** be completed and returned with your response. To find out how we handle your personal data, please see our privacy policy: https://beta.gov.scot/privacy/

Are you responding as an individual or an organisation?

☐ Individual

☐ Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

☐ Publish response with name

☐ Publish response only (without name)

☐ Do not publish response

Information for organisations:

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

☐ Yes

☐ No

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