



The Scottish Parliament
Pàrlamaid na h-Alba

RURAL AFFAIRS, CLIMATE CHANGE AND ENVIRONMENT COMMITTEE

AGENDA

3rd Meeting, 2016 (Session 4)

Wednesday 27 January 2016

The Committee will meet at 9.00 am in the Robert Burns Room (CR1).

1. **Subordinate legislation:** The Committee will take evidence on the Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2015 (SSI 2015/435); Inshore Fishing (Prohibited Methods of Fishing) (Luce Bay) Order 2015 (SSI 2015/436); and South Arran Marine Conservation Order 2015 (SSI 2015/437) from—

Richard Lochhead, Cabinet Secretary for Rural Affairs, Food and Environment, Michael McLeod, Head of Marine Conservation, and David Palmer, Head of Marine Planning, Scottish Government.

2. **Subordinate legislation:** Jamie McGrigor to move—

S4M-15336—That the Rural Affairs, Climate Change and Environment Committee recommends that the Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2015 (SSI 2015/435) be annulled.

3. **Subordinate legislation:** Jamie McGrigor to move—

S4M-15337—That the Rural Affairs, Climate Change and Environment Committee recommends that the South Arran Marine Conservation Order 2015 (SSI 2015/437) be annulled.

4. **Subordinate legislation:** The Committee will consider the following negative instruments—

Waste (Meaning of Recovery)(Miscellaneous Amendments) (Scotland) Order 2015 (SSI 2015/438);
Inshore Fishing (Prohibited Methods of Fishing) (Luce Bay) Order 2015 (SSI 2015/436);
Community Right to Buy (Scotland) Amendment Regulations 2016 (SSI 2016/4).

5. **Subordinate legislation:** The Committee will take evidence on the Water Environment (Amendment of Part IIA of the Environmental Protection Act 1990: Contaminated Land) (Scotland) Regulations 2016 [draft] from—

Aileen McLeod, Minister for Environment, Climate Change and Land Reform, Joyce Carr, Team Leader, Environmental Quality Division, and Neil Ritchie, Branch Head, Environmental Quality Division, Scottish Government.

6. **Subordinate legislation:** Aileen McLeod (Minister for Environment, Climate Change and Land Reform) to move—

S4M-15274—That the Rural Affairs, Climate Change and Environment Committee recommends that the Water Environment (Amendment of Part IIA of the Environmental Protection Act 1990: Contaminated Land) (Scotland) Regulations 2016 [draft] be approved.

7. **Land Reform (Scotland) Bill:** The Committee will consider the Bill at Stage 2 (Day 2).

Lynn Tullis
Clerk to the Rural Affairs, Climate Change and Environment Committee
Room T3.40
The Scottish Parliament
Edinburgh
Tel: 0131 348 5240
Email: racce.committee@scottish.parliament.uk

The papers for this meeting are as follows—

Agenda item 1

Marine Protected Areas Subordinate Legislation Cover Note RACCE/S4/16/3/1

Agenda item 4

Negative Subordinate Legislation Cover Note RACCE/S4/16/3/2

Agenda item 5

Affirmative Subordinate Legislation Cover Note RACCE/S4/16/3/3

Agenda item 7

A Marshallled list of amendments is available [here](#)
The Groupings of amendments is available [here](#)

SSI cover note for: Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2015 (SSI 2015/435); Inshore Fishing (Prohibited Methods of Fishing) (Luce Bay) Order 2015 (SSI 2015/436); and South Arran Marine Conservation Order 2015 (SSI 2015/437)

Procedure for Negative Instruments

1. Negative instruments are instruments that are “subject to annulment” by resolution of the Parliament for a period of 40 days after they are laid. All negative instruments are considered by the Delegated Powers and Law Reform Committee (on various technical grounds) and by the relevant lead committee (on policy grounds). Under Rule 10.4, any member (whether or not a member of the lead committee) may, within the 40-day period, lodge a motion for consideration by the lead committee recommending annulment of the instrument. If the motion is agreed to, the Parliamentary Bureau must then lodge a motion to annul the instrument for consideration by the Parliament.

2. If that is also agreed to, Scottish Ministers must revoke the instrument. Each negative instrument appears on a committee agenda at the first opportunity after the Delegated Powers and Law Reform Committee has reported on it. This means that, if questions are asked or concerns raised, consideration of the instrument can usually be continued to a later meeting to allow correspondence to be entered into or a Minister or officials invited to give evidence. In other cases, the Committee may be content simply to note the instrument and agree to make no recommendation on it.

Recommendation

3. The Committee is invited to consider any issues which it wishes to raise on these instruments.

Delegated Powers and Law Reform Committee

4. At its meeting on 12 January 2016, the Committee considered the following instruments and determined that it did not need to draw the attention of the Parliament to any of the instruments on any grounds within its remit.

5. A copy of the Explanatory Notes, Policy Notes and Business and Regulatory Impact Assessments are included with the papers.

SSI 2015/435

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|--|---|
| Title of Instrument: | Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2015 (SSI 2015/435) |
| Type of Instrument: | Negative |
| Laid Date: | 18 December 2015 |
| Circulated to Members: | 22 January 2016 |
| Meeting Date: | 27 January 2016 |
| Minister to attend meeting: | Yes |
| Motion for annulment lodged: | Yes – S4M-15336 |
| Drawn to the Parliament's attention by the Delegated Powers and Law Reform Committee? | No |
| Reporting deadline: | 8 February 2016 |

Purpose

Article 11(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy (OJ L 354, 28.12.2013, p.22) empowers EU member States to adopt conservation measures which are necessary for compliance with obligations under EU environmental legislation. This Order prohibits, subject to certain exceptions where applicable, specified methods of fishing within specified areas which have been designated as a Special Area of Conservation or as a Marine Protected Area.

EXPLANATORY NOTE

As per purpose above and including:

Article 11(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy (OJ L 354, 28.12.2013, p.22) empowers EU member States to adopt conservation measures which are necessary for compliance with obligations under EU environmental legislation. This Order prohibits, subject to certain exceptions where applicable, specified methods of fishing within specified areas which have been designated as a Special Area of Conservation or as a Marine Protected Area.

Article 3 and Schedule 1 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in East Mingulay. Fishing with any fishing gear except a pelagic trawl is also prohibited in a smaller inner area within the larger protected area.

Article 4 and Schedule 2 prohibit fishing for sea fish with any fishing gear in an area of Scottish inshore waters in Loch Creran. Fishing for horse mussels is also

prohibited in the same protected area. An exception to the prohibition applies throughout the protected area so as to permit fishing for sea fish with a rod and line or a handline. Exceptions also apply so as to permit fishing for sea fish with a creel or parlour creel in two excepted fishing areas within the larger protected area.

Article 5 and Schedule 3 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in Loch Laxford.

Article 6 and Schedule 4 prohibit fishing for sea fish by hand or with specified fishing gear in an area of Scottish inshore waters in Loch Sween. An exception to the prohibition applies so as to permit fishing by specified methods within an excepted area within the larger protected area. However, part of the exception permits fishing only between certain hours of specified days of the week.

Article 7 and Schedule 5 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in Loch Sunart. Fishing for horse mussels is also prohibited in the same protected area. An exception applies so as to permit fishing for sea fish with a creel or parlour creel in a designated fishing area within the larger protected area.

Article 8 and Schedule 6 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in the Southern Inner Sound. A seasonal exception applies so as to permit fishing with specified types of fishing gear within the protected area. However, the exception does not apply to fishing by specified methods, or to fishing in two smaller areas within the larger protected area. Fishing for horse mussels is also prohibited in the two smaller areas.

Article 9 and Schedule 7 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in Noss Head and Sinclair Bay. Fishing for horse mussels is also prohibited in the same protected area.

Article 10 and Schedule 8 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in Sanday.

Article 11 and Schedule 9 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in St Kilda.

Article 12 and Schedule 10 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in the Treshnish Isles.

Article 13 and Schedule 11 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in Upper Loch Fyne. Fishing for horse mussels is also prohibited in the same protected area. An exception to the prohibition applies so as to permit fishing from boats with a gross tonnage of no more than 75 tonnes, using a demersal trawl, in a designated area within the larger protected area. Fishing with a creel, parlour creel, set net or long line is also prohibited in an additional smaller protected area within the larger protected area.

Article 14 and Schedule 12 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in Loch Goil. Fishing for horse mussels is also

prohibited in the same protected area. An exception to the prohibition applies so as to permit fishing from boats with a gross tonnage of no more than 75 tonnes, using a demersal trawl, in a designated area within the larger protected area.

Article 15 and Schedule 13 prohibit fishing for sea fish with specified fishing gear in an area of Scottish inshore waters in the Wyre and Rousay Sounds.

Article 16 revokes entries in the Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004 relating to Loch Sween; the Southern Inner Sound including Lochs Carron, Kishorn, Duich, Alsh and Hourn; Loch Laxford; and Sinclair Bay. It also revokes the Inshore Fishing (Prohibited Methods of Fishing) (Loch Creran) Order 2007.

Any person who contravenes a provision contained in this Order commits an offence under section 4 of the Inshore Fishing (Scotland) Act 1984.

A business and regulatory impact assessment has been prepared in relation to this Order and placed in the Scottish Parliament Information Centre. A copy of this can be obtained from Marine Scotland, the Scottish Government, Victoria Quay, Edinburgh EH6 6QQ.

POLICY NOTE

The above instrument was made in exercise of the powers conferred by sections 1 and 2A of the Inshore Fishing (Scotland) Act 1984. The instrument is subject to negative procedure.

Policy Objectives

Section 3 of the Marine (Scotland) Act 2010 provides that Scottish Ministers and public authorities must act in a way best calculated to further the achievement of sustainable development, including the protection and enhancement of the health of the Scottish marine area. Scottish Ministers consider this instrument is necessary to protect a number of environmentally sensitive locations in the marine environment.

Scottish Ministers are empowered by Article 11(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy¹ to adopt conservation measures which are necessary for compliance with obligations under EU environmental legislation. This instrument will make a contribution towards compliance with the EU Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora), the EU Marine Strategy Framework Directive (Directive 2008/56/EC of the European Parliament and of the Council establishing a framework for community action in the field of marine environmental policy), and the EU Wild Birds Directive (Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds).

¹ (OJ L 354, 28.12.2013, p.22)

The instrument applies to 13 separate geographic locations which have been designated as protected areas under one or more of the following pieces of legislation.

- EU Habitats Directive
- EU Wild Birds Directive
- Marine (Scotland) Act 2010

The instrument regulates fishing in three different ways which are applied in variable combinations across the 13 geographic locations to ensure that environmental objectives are achieved.

- By prohibiting the use of certain fishing methods
- By restricting the use of certain fishing methods
- By prohibiting fishing for named species

Consultation

A consultation on potential management approaches took place between November 2014 and February 2015. Having taken account of all the responses to that consultation, Scottish Ministers published notice of their intention to make this Order in June 2015.

Impact Assessments

An equality impact assessment screening has been completed on this instrument. This concluded that there were no equality issues requiring full assessment.

Financial Effects

A Business and Regulatory Impact Assessment (BRIA) has been prepared and is available on the Scottish Government website.

BUSINESS AND REGULATORY IMPACT ASSESSMENT

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|---|
| <p>Title of Proposal</p> <p>Introduction of new fisheries management measures for Marine Protected Areas (MPAs) and Special Areas of Conservation (SAC), Socio-Economic Analysis.</p> |
| <p>Purpose and intended effect</p> <ul style="list-style-type: none"> • Background <p>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.</p> |

Marine Protected Areas (MPAs) are designated under the [Marine \(Scotland\) Act 2010](#). Special Areas of Conservation (SACs) are designated under the EU Habitats Directive. Under the respective legislation sites have to be managed in a way that ensures that the protected features are conserved or recovered.

- **Objective**

SACs

SACs are designed to protect internationally important habitats and species. They are designated under the EU Habitats Directive, which is transposed into Scottish law through the Habitats Regulations. SACs form part of the European network of Natura 2000 sites². The Scottish suite of inshore marine SACs currently incorporate the full range of habitats and species listed in Annexes I and II of the EU Habitats Directive.

All EU member states are obligated to designate SACs for a range of habitats and species as listed in the EU Habitats Directive (the Directive). The Directive requires that the sites are managed to ensure that the conservation objectives of the qualifying features are achieved.

Article 6 of the Directive defines how SACs should be managed and protected. The designation of these sites requires the implementation of conservation measures which correspond to the ecological requirements of Annex I 'habitats' and Annex II 'species' present on the site. (Article 6(1)).

Appropriate steps should also be taken to avoid, within the SACs, the deterioration of natural habitats and habitats of species, as well as significant disturbance to species for which the site is designated. (Article 6(2)).

In addition, any plan or project (e.g. new policy or development) should be assessed to ensure that it does not have any negative implications for an SAC. Where there is a likely significant effect (or it cannot be ruled out) the proposal must undergo an appropriate assessment to determine the implications for the site. Subject to article 6(4), authority must only be given where it can be established that site integrity will not be adversely affected. (Article 6(3)).

A plan or project may be authorised even if such assessment shows negative implications for an SAC only where there are no alternative solutions and where the plan or project must be carried out for imperative reasons of overriding public interest. Where this is the case all compensatory measures necessary must be taken to ensure that the Natura 2000 network is protected. More stringent controls are in place where the SAC hosts a priority habitat type and/or a priority species. (Article 6(4)).

Historically the Scottish Government has generally relied upon article 6(2), as read with Article 6(1), to ensure that fisheries were managed appropriately within SACs. However, a review of the requirements of the Directive has concluded that Article 6(3) should also apply to changes in fisheries policy, and other fisheries management plans. This means that every change in fisheries policy or fisheries management plan (or the development of new management arrangements) would require to be tested against the provisions in Article 6(3).

² Natura is a collective term used for Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Without having requisite fisheries management measures in place for each SAC it would be virtually impossible to rule out a likely significant effect beyond reasonable scientific doubt. This means that even beneficial changes in policy or management plans could be prevented from occurring. However by putting the necessary fisheries management measures in place such assessment under article 6(3) is unlikely to be required because there could be no significant effect. This also applies to SACs where little fishing activity takes place.

MPAs

The purpose of Nature Conservation MPAs is to safeguard nationally important species, habitats and geology across Scotland's marine environment. MPAs have been designed to complement existing site-based measures. The intention is to manage MPAs under the principle of sustainable use.

An MPA network will support greater national and international ecological coherence as stipulated by:

- the Marine (Scotland) Act 2010
- the Marine and Coastal Access Act 2009
- the Convention on Biological Diversity
- the World Summit on Sustainable Development
- the OSPAR¹ convention
- the European Union Marine Strategy Framework Directive

Designation of MPAs are based primarily on scientific evidence, and MPA search features have been used to underpin the selection of MPA locations.

Evidence in this BRIA is drawn from the work of statutory nature conservation body SNH² and consultants ABPmer and eftec³. This has been updated as required.

It brings together the science-led arguments for management and the projected potential social and economic consequences of such action. The sites have been identified for designation as an MPA due to the confirmed presence of biodiversity and geodiversity features detailed above.

Marine Protected Areas (MPAs) that are designated under the Marine (Scotland) Act 2010 and the Marine & Coastal Access Act 2009 have a range of protective provisions. Both Acts place duties on all Public Authorities and Regulators. They must ensure that their own functions, or consenting/licensing decisions, do not cause a significant risk to the conservation objectives of the MPAs being achieved.

It is also an offence to intentionally or recklessly kill, remove, damage, or destroy any protected feature of an MPA. The management options papers set out the advice of SNH and JNCC regarding activities that take place in or near to MPAs. These conclude that for licensed activities, existing operations can continue as at present. However, any new or extended operation requiring consent will have to be assessed against the conservation objectives.

As fishing is licensed in a general spatial manner, the above approach does not fit that model. Therefore a programme of development and implementation of management measures has been developed to ensure that fishing activity does not hinder the achievement of the conservation objectives.

Reason for BRIA

This BRIA examines the socio-economic impact of introducing new fisheries management measures to further the conservation objectives for the all the protected areas detailed in this documents. 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 measures, the findings should be considered as estimates.

Rationale for Government intervention

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. An ecologically coherent network of well-managed protected areas is vital to conserve and regenerate our seas, in turn protecting the many goods and services they provide now, and for generations to come.

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 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. An ecologically coherent network of well-managed MPAs is vital to conserve and regenerate our seas, in turn protecting the many goods and services they provide now, and for generations to come. Furthermore it is likely that a network of Nature Conservation MPAs will demonstrate beneficial network effects, i.e. the benefit from the network as a whole may be greater than the sum of the benefits from the individual MPAs. These effects are potentially of great importance in marine protected areas because of the lack of barriers and mobility of species.

Consultation

A public consultation ran from 11 November 2015 to 02 February 2015. Feedback from the formal consultation responses helped finalise the management measures which this assessment is based on.

Introduction of fisheries management measures

The formal introduction of fisheries management measures at all of these sites would provide recognition and protection to the natural features of the site while also contributing to the wider Scottish and UK marine conservation network.

Sectors and groups affected

The following sectors have been identified as present (or possibly present in the future) within the sites and are potentially affected by the management measures:

- Commercial Fisheries
- Public Sector

Benefits of introducing fisheries management measures

Fisheries management measures will help to conserve the range of biodiversity in Scottish waters. Such measures will complement (not duplicate) other types of designation and provide an essential contribution to establishing an ecologically coherent network of marine protected areas. In the absence of such measures, there would be areas of Scotland's marine environment that would continue to be unprotected.

Appropriate fisheries management measures will reduce the risk that the extent, population, structure, natural environmental quality and processes of features protected will decrease or degrade over time. The risk that the features will be adversely affected by human activities is greater if not protected by management measures. In addition, beyond a certain point of degradation, changes to ecosystems may be large and irreversible, resulting in a significant societal cost. Avoiding such a reduction in ecosystem services is thus a key benefit of introducing fisheries management measures. However doing nothing is expected to result in environmental decline, with a corresponding declining benefit stream. These measures will contribute towards maintaining these benefits.

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.

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 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. Due to the scientific uncertainty involved it is challenging to put a true value on this, but the high quality experience and increasing knowledge of Scotland's seas can be better preserved through measures such as MPAs. It is expected that non-use value will be attained as a result of designation both from the knowledge that the features are receiving adequate protection along with the wider conservation objectives that designation supports.

Whilst ecosystem services benefits at an individual site level cannot be easily calculated, the non-use value to Scottish households of marine conservation in Scottish waters generated by a well-functioning MPA network as a whole is estimated to be within the range of £239–583 million⁴ over the 20 year assessment period.

The ecosystem services provided by effective management of the MPA contributes to the wider benefits that the MPA network can deliver:

Benefits of MPAs

| Benefit | Habitat(s) |
|---|---|
| <p>Supporting fish and shellfish fisheries.</p> <p>Habitats within the MPA network can be important to various different aspects of fish/shellfish life history – such as for feeding, for spawning or for recruitment/ juveniles (e.g. providing shelter from predation).</p> | <ul style="list-style-type: none"> • Kelp – including lobster, crab and wrasse (the latter used in aquaculture industry). • Maerl beds – Research showing that scallop spat preferentially settle on maerl. Also provide feeding areas for juvenile cod. • Burrowed mud – main habitat for Nephrops / langoustine. This is the most lucrative shellfishery in Scotland's seas. Worth £64.6 million in 2013 and accounting for 15% of the total value of all Scottish landings. • Seagrass beds – potential cod nursery habitat. • Rocky/boulder and cobble reefs – providing habitat used for European spiny lobster, velvet crabs, lobster and edible crab. Some overlap with kelp (see above). |
| <p>Carbon capture and storage(blue carbon)</p> <p>MPAs with particular features play a role in storing blue carbon.</p> | <ul style="list-style-type: none"> • Kelp • Maerl beds • Seagrass beds • Bivalve beds e.g. horse mussels and blue mussels, flame shell beds • Burrowed mud • Cold water corals |
| <p>Coastal defence</p> | <ul style="list-style-type: none"> • Kelp and rocky reefs – reduce the wave energy reaching the shore, thus reducing coastal erosion. |
| <p>Ensuring a supply of sediment – including to beaches and machair/dune systems</p> | <ul style="list-style-type: none"> • Maerl beds • Shallow tide-swept coarse sands with burrowing bivalves • Horse mussel beds • Flame shell beds |

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| Improving water clarity/quality | <ul style="list-style-type: none"> • Horse mussels and blue mussels – through filtering material out of the water. • Seagrass beds – directly through attracting sediment onto the plants' surface and indirectly through the filter feeders that live amongst the seagrass. |
| Stabilising coastal sediment | <ul style="list-style-type: none"> • Seagrass beds – through holding sediments with their roots and establishing beds. • Blue mussel beds – through binding sediments together through byssus threads and establishing beds. |
| Providing wildlife experiences (recreation and tourism) | <ul style="list-style-type: none"> • This is more often applied to species – seabirds, whales, dolphins etc, that are the focus of most wildlife tourism in Scotland. But also applies to species that are the focus of recreational angling e.g. common skate. • Rockpools – particularly inspiring for children. • Sea caves and reefs – providing underwater adventures for divers and snorkellers. • Blue mussel and horse mussel beds, maerl beds |

Costs of introducing fisheries management measures

Assessment of over 15m data

This dataset is an amalgamation of logbook and landings data with Vessel Monitoring System (VMS) data. Logbook and landings data for ICES rectangles where there are protected areas is identified. The VMS data for each corresponding date and vessel in the logbook data is identified. It is filtered by speed (between 0 and 5 knots) to limit it to reports that are indicative of fishing activity. The two data sets are then merged giving each VMS report a notional value. Each VMS report is considered to be worth 2 hours of effort unless it is clear that the reporting frequency is much greater. In that circumstance adjustments have been made.

There are some potential sources of error in this estimate. If the wrong rectangle has been recorded in the logbook then data will be omitted. The total catch value for the trip is divided in proportion with the daily logged amount for a species. Therefore it is impossible to account for possible variations in catch quality which in turn influences the actual daily value.

In some cases a vessel may have a reported position outside an area in consecutive reports. If the intervening time was spent inside an area then this is missed by the analysis. By the same token a vessel may have just entered the area before a VMS report meaning it is included in the analysis.

This resulting dataset is then plotted using a Geographic Information System (GIS) and VMS reports that would be affected by a particular management approach identified. These are then

summarised into the tables in this document for each site detailing the percentage of activity affected.

Assessment of under 15m data

For vessels in the range of 10 to 15m there is a requirement to keep a logbook detailing catches at ICES rectangle level. VMS is presently being rolled out to vessels in this size range but there is no industry wide dataset available yet. Following the requirement for over 12m boats to have VMS there is also one year's worth of VMS data for some 12m-15m vessels . This has been utilised as a validation test.

Marine Scotland undertook the Scotmap project to get a better understanding of the distribution of activities by under 15m vessels. It provides an improved spatial resolution of where under 15m activity occurs within a ICES rectangle data. Fishing areas were identified by fishermen during the interviews and recorded in GIS format, and the opportunity to provide an estimate value given.

All of the fishing areas were processed into an amalgamated raster layer with 800 cells per ICES statistical rectangle with an average area of ca. 4.20 km². This results in each of the 800 cells having a share of the overall value of the ICES rectangle. However not all vessels participated in Scotmap meaning that the values are an under estimate of total fleet activity, but can be used on a proportional basis. For under 15m vessels, where VMS data is not available, it provides a better spatial resolution of data than looking at values at an ICES rectangle level. However given that it provides an aggregated average value it does not present data at an individual vessel level there will be limits to its accuracy.

In order to analyse data to finer spatial scales to assess the value of MPAs and the potential impact of management measures each Scotmap grid has been divided further into 25 equally sized smaller grids (this assumes that value is uniformly distributed across the Scotmap grid cell). From the Scotmap data the total value of each ICES rectangle for a particular gear type was calculated. In the same manner the value of each MPA was calculated using each smaller grid, and then the value of the management measures. This allows the percentage of an ICES rectangle catch that is within an MPA and/or management zone to be calculated. These percentages are then multiplied against all under 15m recorded landings for that ICES rectangle to ascertain the estimated value of the MPA, and the impact of the management measures. This provides a more robust estimate than the previously adopted approach of estimating the proportion of activity affected using the same percentage identified from over 15m vessel data.

There are potential sources of error within this estimate. As mentioned it assumes that vessels which did not participate in Scotmap have the same distribution of activity in an ICES rectangle. It also assumes that the proportion of fishing effort in the same as the proportion of value. This may not always be the case due to variations in catch quality. Finally all data is apportioned to the ICES rectangle recorded in the logbook, meaning any errata at this point cannot be accounted for.

Fisheries management measures

Costs have been evaluated based on the implementation of 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 present consumption is preferred to future consumption. All costs are presented in 2015 prices.

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. 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 reduced loss of income. GVA estimates include both direct and indirect impacts, which accounts for upstream supply chain impacts. Initial landings values, used to derive the final costs, are averaged over a period from 2010 - 2014 in order to smooth year-on-year fluctuations.

Commercial Fisheries

The following section sets out details of potential costs at a site level over a 20 year time frame. At the end of the section a cumulative assessment to assess the total effect of the measures

East Mingulay SAC

| Summary of Features and Conservation Objectives | |
|---|------------------------|
| Feature | Conservation Objective |
| Reefs (Biogenic, bedrock, and stony) | Maintain |

| Management Measures | |
|---|-----------------------------|
| Gear Type | Measure |
| Demersal trawl / seine net / mechanical dredging / beam trawling / suction dredging | Prohibit across whole SAC |
| Creel Fishing / long lining / set nets | Prohibited on a zonal basis |

| Costs, Scottish vessels (£) | | |
|---|--|-----------------------------------|
| | >15m vessels | <15m vessels |
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Whitefish Trawls 83 Nephrops Trawls 5,443 | Nephrops Trawls 381 Pots 4,447 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 147,155 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 87,255 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£87,255**. By comparison, for all UK vessels the total is £94,244.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|---|-----------|
| Average annual revenue site total | 14,811 |
| Average annual revenue impact of measures | 10,354 |
| Estimated annual revenue of the 36 vessels affected | 8,498,260 |
| Total combined revenue impact | 0.12% |

Total revenue for all gear types within the MPA site is £14,811. The impact on revenue as a result of management measures within the MPA is £10,354 (69.91% of the total site revenue). For this MPA, the overall revenue impact on the 36 affected vessels is just 0.12% (based on their total combined revenue of £8,498,260).

Employment (direct and indirect reduction)

0.2 jobs

Loch Creran MPA / SAC

Summary of Features and Conservation Objectives

| Feature | Conservation Objective |
|-------------------------------|------------------------|
| Flame shell beds | Conserve |
| Reefs (Bedrock, and biogenic) | Maintain |

Management Measures

| Gear Type | Measure |
|---|---------------------------------------|
| Demersal trawl / seine net / Mechanical dredging / beam trawling / suction dredging / set nets / long lines | Prohibited throughout whole MPA / SAC |
| Creel fishing | Zonal management arrangement |
| Prohibit the removal of horse mussels by any means | |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|---|--------------|--------------|
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | | |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 2 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 1 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is £1. By comparison, for all UK vessels the total is £1.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|--|---------|
| Average annual revenue site total | 709 |
| Average annual revenue impact of measures | 0.12 |
| Estimated annual revenue of the 2 vessels affected | 187,240 |
| Total combined revenue impact | 0.00% |

Total revenue for all gear types within the MPA site is £709. The impact on revenue as a result of management measures within the MPA is £0.12 (0.02% of the total site revenue). For this MPA, the overall revenue impact on the 2 affected vessels is 0.00% (based on their total combined revenue of £187,240).

Employment (direct and indirect reduction)

0.0 jobs

Loch Laxford SAC

Summary of Features and Conservation Objectives

| Feature | Conservation Objective |
|-----------------------------|------------------------|
| Large shallow inlet and bay | Maintain |
| Reefs (Bedrock and stony) | Conserve |

Management Measures

| Gear Type | Measure |
|---|------------------------------------|
| Demersal trawl / seine net / mechanical dredging / beam trawling / Suction dredging | Prohibit across the whole area |
| Creel fishing / long lining / set nets | No change to existing arrangements |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|--|--------------|---------------------------------|
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Dredge 579 | Nephrops Trawls 1 Dredge 125 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 10,016 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 6,183 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is £6,183. By comparison, for all UK vessels the total is £6,183.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|---|-----------|
| Average annual revenue site total | 1,652 |
| Average annual revenue impact of measures | 705 |
| Estimated annual revenue of the 10 vessels affected | 2,551,887 |
| Total combined revenue impact | 0.03% |

Total revenue for all gear types within the MPA site is £1,652. The impact on revenue as a result of management measures within the MPA is £705 (42.66% of the total site revenue). For this MPA, the overall revenue impact on the 10 affected vessels is just 0.03% (based on their total combined revenue of £2,551,887).

Employment (direct and indirect reduction)

0.0 jobs

Loch Sunart MPA / SAC

Summary of Features and Conservation Objectives

| Feature | Conservation Objective |
|--|------------------------|
| Common skate, flammeshell beds, northern featherstars, serpulid aggregations | Conserve |
| Reefs (bedrock and stony) | Maintain |

Management Measures

| Gear Type | Measure |
|--|--------------------------------|
| Demersal trawl / seine net / mechanical dredging / beam trawling / Suction dredging / long lining / set nets | Prohibit across the whole area |
| Creels | Zonal management arrangement |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|---|-----------------------------------|--------------|
| Average Annual Revenue Affected (2010 – 2014, | Nephrops Trawls 140 Dredge 190 | |

| | | |
|---|--|--|
| 2015 prices) | | |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 4,688 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 2,828 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£2,828**. By comparison, for all UK vessels the total is £2,828.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|--|-----------|
| Average annual revenue site total | 13,098 |
| Average annual revenue impact of measures | 330 |
| Estimated annual revenue of the 7 vessels affected | 1,862,253 |
| Total combined revenue impact | 0.02% |

Total revenue for all gear types within the MPA site is £13,098. The impact on revenue as a result of management measures within the MPA is £330 (XX.XX% of the total site revenue). For this MPA, the overall revenue impact on the 7 affected vessels is just 0.02% (based on their total combined revenue of £1,862,253).

| |
|---|
| Employment (direct and indirect reduction) |
| 0.0 jobs |

Loch Sween MPA

| Summary of Features and Conservation Objectives | |
|---|------------------------|
| Feature | Conservation Objective |
| Native oyster, maerl beds, burrowed mud, sublittoral mud and mixed sediment communities | Conserve |

| Management Measures | |
|---|--------------------------------------|
| Gear Type | Measure |
| Demersal trawl / mechanical dredging / hand gathering | Prohibit on a zonal management basis |
| Suction dredging / beam trawling | Prohibit across whole site |
| Creel fishing / long lining / set nets | No change to existing arrangements |

| Costs, Scottish vessels (£) | | |
|---|--------------------------------------|---------------------------------------|
| | >15m vessels | <15m vessels |
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Nephrops Trawls 519 Dredge 10,022 | Nephrops Trawls 7 Hand Fishing 343 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 154,793 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 96,706 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is £96,706. By comparison, for all UK vessels the total is £99,717.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|---|-----------|
| Average annual revenue site total | 56,215 |
| Average annual revenue impact of measures | 10,891 |
| Estimated annual revenue of the 28 vessels affected | 3,965,842 |
| Total combined revenue impact | 0.27% |

Total revenue for all gear types within the MPA site is £56,215. The impact on revenue as a result of management measures within the MPA is £10,891 (19.37% of the total site revenue). For this MPA, the overall revenue impact on the 28 affected vessels is just 0.27% (based on their total combined revenue of £3,965,842).

| Employment (direct and indirect reduction) |
|---|
| 0.2 jobs |

Lochs Duich Long & Aish MPA / SAC

| Summary of Features and Conservation Objectives | |
|--|-------------------------------|
| Feature | Conservation Objective |
| Reefs (biogenic, bedrock, and stony) | Maintain |
| Burrowed mud and flame shell beds | Conserve |

| Management Measures |
|----------------------------|
|----------------------------|

| Gear Type | Measure |
|---|------------------------------------|
| Demersal trawl / seine net / mechanical dredging / suction dredging / beam trawling | Prohibit across the whole area |
| Creel fishing / long lining / set nets | No change to existing arrangements |
| Prohibit the removal of horse mussels by any means | |

| Costs, Scottish vessels (£) | | |
|---|--------------------------------------|-----------------------|
| | >15m vessels | <15m vessels |
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Nephrops Trawls 296 Dredge 16,998 | Nephrops Trawls 1,232 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 263,294 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 163,317 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£163,317**. By comparison, for all UK vessels the total is £185,374.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|---|-----------|
| Average annual revenue site total | 82,508 |
| Average annual revenue impact of measures | 18,526 |
| Estimated annual revenue of the 38 vessels affected | 6,979,960 |
| Total combined revenue impact | 0.27% |

Total revenue for all gear types within the MPA site is £82,508. The impact on revenue as a result of management measures within the MPA is £18,526 (22.45% of the total site revenue). For this MPA, the overall revenue impact on the 38 affected vessels is just 0.27% (based on their total combined revenue of £6,979,960).

| Employment (direct and indirect reduction) |
|--|
| 0.4 jobs |

Noss Head MPA

| Summary of Features and Conservation Objectives | |
|---|------------------------|
| Feature | Conservation Objective |

| | |
|-------------------|----------|
| Horse mussel beds | Conserve |
|-------------------|----------|

Management Measures

| Gear Type | Measure |
|---|------------------------------------|
| Demersal trawl / seine net / mechanical dredging / suction dredging / beam trawling | Prohibit across the whole area |
| Creel fishing / long lining / set nets | No change to existing arrangements |
| Prohibit the removal of horse mussels by any means | |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|--|--------------|---------------------------------|
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Dredge 1,127 | Nephrops Trawls 4 Dredge 189 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 18,765 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 11,626 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£11,626**. By comparison, for all UK vessels the total is £20,314.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|---|-----------|
| Average annual revenue site total | 8,312 |
| Average annual revenue impact of measures | 1,320 |
| Estimated annual revenue of the 16 vessels affected | 4,796,787 |
| Total combined revenue impact | 0.03% |

Total revenue for all gear types within the MPA site is £8,312. The impact on revenue as a result of management measures within the MPA is £1,320 (15.88% of the total site revenue). For this MPA, the overall revenue impact on the 16 affected vessels is just 0.03% (based on their total combined revenue of £4,796,787).

Employment (direct and indirect reduction)

0.0 jobs

Sanday SAC

Summary of Features and Conservation Objectives

| Feature | Conservation Objective |
|---|------------------------|
| Reefs (bedrock and stony) | Maintain |
| Sandbanks slightly covered by seawater all the time | Maintain |

Management Measures

| Gear Type | Measure |
|--|------------------------------------|
| Demersal trawl / seine net / mechanical dredging / suction dredging / beam trawling / set nets | Prohibit across the whole area |
| Creel fishing / long lining | No change to existing arrangements |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|--|--------------|--------------|
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Dredge 61 | Dredge 4,584 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 66,013 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 37,362 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£37,362**. By comparison, for all UK vessels the total is £37,632.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|--|-----------|
| Average annual revenue site total | 139,075 |
| Average annual revenue impact of measures | 4,645 |
| Estimated annual revenue of the 9 vessels affected | 1,563,413 |
| Total combined revenue impact | 0.30% |

Total revenue for all gear types within the MPA site is £139,075. The impact on revenue as a result of management measures within the MPA is £4,645 (3.34% of the total site revenue). For this MPA, the overall revenue impact on the 9 affected vessels is just 0.30% (based on their total combined revenue of £1,563,413).

Employment (direct and indirect reduction)

| |
|----------|
| 0.1 jobs |
|----------|

St Kilda SAC

Summary of Features and Conservation Objectives

| Feature | Conservation Objective |
|---------------------------|------------------------|
| Reefs (Bedrock and stony) | Conserve |

Management Measures

| Gear Type | Measure |
|--|------------------------------------|
| Demersal trawl / seine net / mechanical dredging / suction dredging / beam trawling / set nets | Prohibit across the whole area |
| Creel fishing / long lining | No change to existing arrangements |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|--|------------------------|--------------|
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Whitefish Trawls 1,661 | |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 23,603 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 10,640 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£10,640**. By comparison, for all UK vessels the total is £10,640.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|--|-----------|
| Average annual revenue site total | 2,946 |
| Average annual revenue impact of measures | 1,661 |
| Estimated annual revenue of the 5 vessels affected | 7,607,110 |
| Total combined revenue impact | 0.02% |

Total revenue for all gear types within the MPA site is £2,946. The impact on revenue as a result of management measures within the MPA is £1,661 (56.38% of the total site revenue). For this

MPA, the overall revenue impact on the 5 affected vessels is just 0.02% (based on their total combined revenue of £7,607,110).

Employment (direct and indirect reduction)

0.0 jobs

Treshnish Isles SAC

Summary of Features and Conservation Objectives

| Feature | Conservation Objective |
|---------------------------|------------------------|
| Reefs (bedrock and stony) | Maintain |

Management Measures

| Gear Type | Measure |
|--|--|
| Demersal trawl / seine net / mechanical dredging / suction dredging / beam trawling / set nets | Prohibit across almost all of the area |
| Creel fishing / long lining | No change to existing arrangements |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|---|-------------------------------------|------------------------------------|
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Nephrops Trawls 853 Dredge 7,799 | Nephrops Trawls 14 Dredge 5,178 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 196,754 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 118,025 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£118,025**. By comparison, for all UK vessels the total is £126,968.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|---|-----------|
| Average annual revenue site total | 21,043 |
| Average annual revenue impact of measures | 13,844 |
| Estimated annual revenue of the 36 vessels affected | 7,563,726 |
| Total combined revenue impact | 0.18% |

Total revenue for all gear types within the MPA site is £XX. The impact on revenue as a result of

management measures within the MPA is £13,844 (65.79% of the total site revenue). For this MPA, the overall revenue impact on the 36 affected vessels is just 0.18% (based on their total combined revenue of £7,563,726).

Employment (direct and indirect reduction)

0.3 jobs

Upper Loch Fyne and Loch Goil MPA

Summary of Features and Conservation Objectives

| Feature | Conservation Objective |
|--|------------------------|
| Flame shells bed | Recover |
| Horse mussel beds, ocean quahog aggregations, burrowed mud, sublittoral mud and mixed sediment communities | Conserve |

Management Measures

| Gear Type | Measure |
|---|------------------------------------|
| Mechanical dredging / suction dredging / beam trawling | Prohibit across the whole area |
| Demersal trawl / seine net / creel fishing / long lining / set nets | No change to existing arrangements |

Costs, Scottish vessels (£)

| | >15m vessels | <15m vessels |
|--|---------------------------------------|---|
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Nephrops Trawls 1,457 Dredge 1,406 | Nephrops Trawls 34 Dredge 79 Pots 873 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 54,700 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 32,743 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is £32,743. By comparison, for all UK vessels the total is £32,743.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|---|--------|
| Average annual revenue site total | 45,496 |
| Average annual revenue impact of measures | 3,849 |

| | |
|---|-----------|
| Estimated annual revenue of the 17 vessels affected | 2,515,370 |
| Total combined revenue impact | 0.15% |

Total revenue for all gear types within the MPA site is £45,496. The impact on revenue as a result of management measures within the MPA is £3,849 (8.46% of the total site revenue). For this MPA, the overall revenue impact on the 17 affected vessels is just 0.15% (based on their total combined revenue of £2,515,370).

| |
|---|
| Employment (direct and indirect reduction) |
| 0.1 jobs |

Wyre and Rousay Sounds MPA

| Summary of Features and Conservation Objectives | |
|--|------------------------|
| Feature | Conservation Objective |
| Maerl beds, kelp and seaweed communities on sublittoral sediment | Conserve |

| Management Measures | |
|--|------------------------------------|
| Gear Type | Measure |
| Demersal trawl / seine net / suction dredging / beam trawling / mechanical dredging / set nets | Prohibit across the whole area |
| Creel fishing / long lining | No change to existing arrangements |

| Costs, Scottish vessels (£) | | |
|--|--------------|--------------|
| | >15m vessels | <15m vessels |
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | | |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) | | |
| 0 | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) | | |
| 0 | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is £0. By comparison, for all UK vessels the total is £0.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|-----------------------------------|--------|
| Average annual revenue site total | 62,836 |
|-----------------------------------|--------|

| | |
|--|-------|
| Average annual revenue impact of measures | 0 |
| Estimated annual revenue of the 0 vessels affected | 0 |
| Total combined revenue impact | 0.00% |

Total revenue for all gear types within the MPA site is £62,836. The impact on revenue as a result of management measures within the MPA is £0.0 (0.0% of the total site revenue). For this MPA, the overall revenue impact on the 0 affected vessels is just 0% (based on their total combined revenue of £0).

| |
|---|
| Employment (direct and indirect reduction) |
| 0.0 jobs |

It should be borne in mind that these costs are based on the affected vessels stopping fishing. Within the dataset used for these calculations there were more than 100 vessels. This means a relatively small impact on many individuals. Therefore it is anticipated that these vessels will make adjustments to their fishing practices to comply with the measures. In other words they will still have the ability to take the same economic value from relatively nearby fishing grounds.

Employment impacts³ presented assume a linear relationship between output and employment. In reality such a relationship may not hold. 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.

Public Sector:

The decision to introduce fisheries management measures would result in costs being incurred by the public sector in the following areas:

- Preparation of Statutory Instruments
- Compliance and enforcement

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 has been estimated at the site level.

| | |
|--|-------|
| Public Sector Costs (£m) | |
| Preparation of Statutory Instruments (present value, 2015-2034, 2015 prices) | 0.005 |

Total Costs:

Total quantified costs are presented in present value terms at 2015 prices. Commercial fisheries costs are presented in terms of GVA.

³Employment impacts are derived from the Scottish Government's Input-Output tables - <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output>

| Total Costs (£m) | |
|----------------------|--------------|
| Sector | Cost |
| Commercial Fisheries | 0.567 |
| Public Sector | 0.06 |
| Total Costs | 0.627 |

| Employment (direct and indirect reduction) |
|--|
| 1.4 jobs |

Scottish Firms Impact Test

This section will be informed by evidence gathered from our discussions with individual businesses during the consultation phase, and completed in the final BRIA.

Many of the businesses affected may include some small and micro-sized firms. For the commercial fisheries sector the average number of fishermen per Scottish vessel in 2013 was 2.5. Additional costs imposed by the introduction of fisheries management measures at the Mousa to Boddam site have the potential to fall on small businesses.

Competition Assessment

The introduction of fisheries management measures at the Mousa to Boddam site may impact commercial fisheries activity operating within a given spatial area.

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 the introduction of fisheries management measures 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. The introduction of fisheries management measures 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.

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. The introduction of fisheries management measures 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. The introduction of fisheries management measures is not expected to reduce suppliers' incentives to compete vigorously.

Test run of business forms

It is not envisaged that the introduction of fisheries management measures 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 management measures 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 management measures will largely affect businesses rather than individuals.

Discussions with Scottish Government Legal colleagues are on-going but at this stage it is not envisaged that the introduction of fisheries management measures will have any legal aid impacts.

Enforcement, sanctions and monitoring

Responsibility for compliance, monitoring and enforcement of the measures will be carried out by Marine Scotland.

Implementation and delivery plan

The management measures will be delivered by Statutory Instrument by 1st February 2015

Post-implementation review

There is a 6 yearly marine protected area network review cycle and this includes all MPAs and SACs. The need for these measures will normally be reviewed as part of that wider review in 2024 and every 6 years thereafter

Summary

These MPAs were designated under the Marine (Scotland) Act 2010 in August 2014. The SACs were designated between 2005 and 2011. These measures are proposed to ensure that these protected areas are well-managed and that the conservation objectives for each protected features are furthered.

SSI 2015/436

Title of Instrument: Inshore Fishing (Prohibited Methods of Fishing)
(Luce Bay) Order 2015 (SSI 2015/436)

Type of Instrument: Negative

Laid Date: 18 December 2015

Circulated to Members: 22 January 2016

Meeting Date: 27 January 2016

Minister to attend meeting: Yes

Motion for annulment lodged: No

Drawn to the Parliament's attention by the Delegated Powers and Law Reform Committee? No

Reporting deadline: 8 February 2016

Purpose

Article 11(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy (OJ L 354, 28.12.2013, p.22) empowers EU member States to adopt conservation measures which are necessary for compliance with obligations under EU environmental legislation. This Order prohibits, subject to certain exceptions, specified methods of fishing within an area in Luce Bay which has been designated as a Special Area of Conservation.

EXPLANATORY NOTE

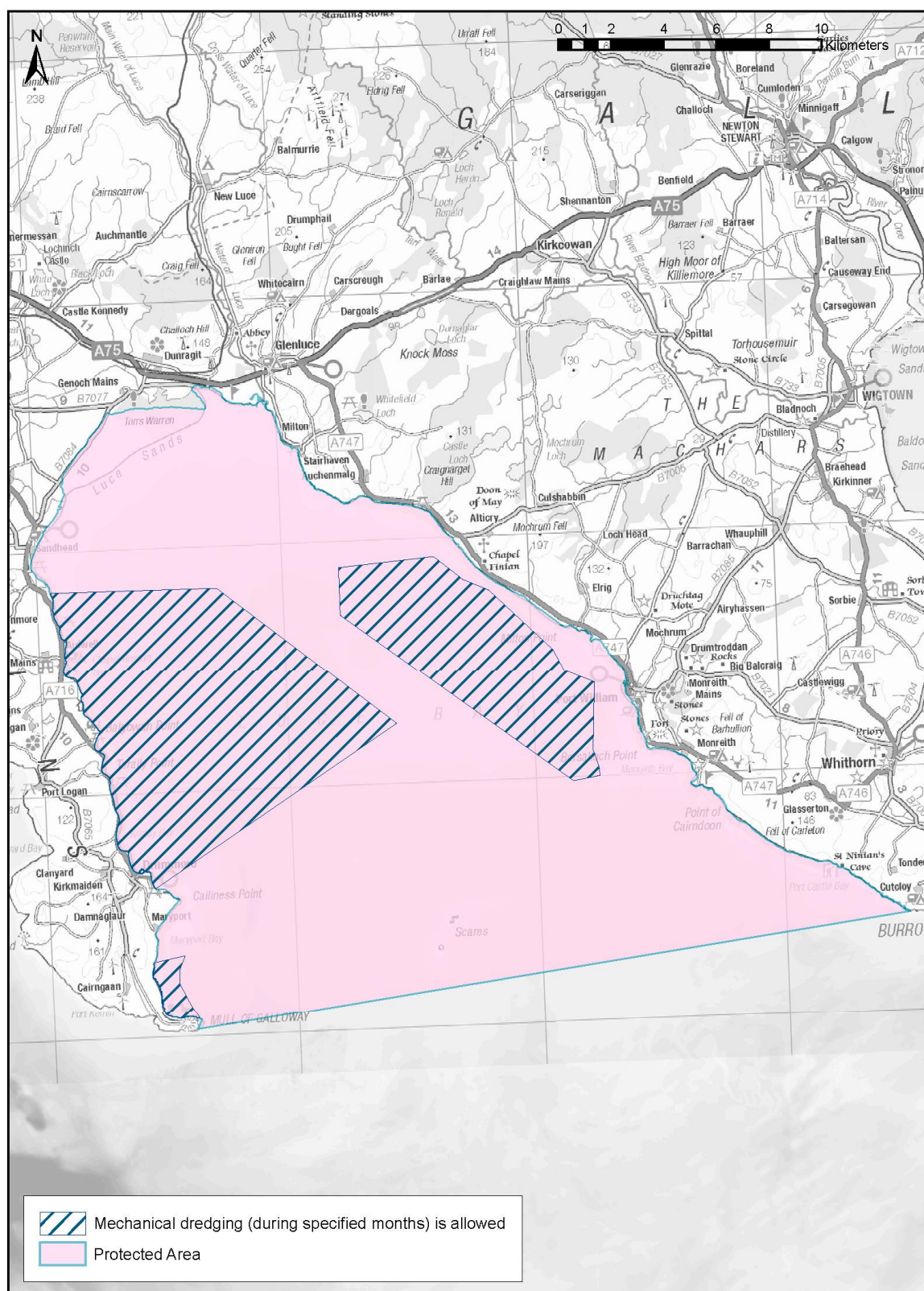
As per purpose above and including:

Article 3 and the Schedule prohibit fishing for sea fish with specified fishing gear – a dredge, beam trawl, demersal seine net or demersal trawl – throughout the whole year in the protected area. However, this prohibition is subject to an exception, the effect of which is to allow fishing for sea fish using a mechanical dredge in three excepted areas within the larger protected area, during the months of January, February, November and December in each year.

Article 4 revokes an entry in Schedule 1 to the Inshore Fishing (Prohibition of Fishing and Fishing Methods) (Scotland) Order 2004 (“the 2004 Order”) which imposed a seasonal prohibition on fishing for sea fish with specified fishing gear. That seasonal prohibition is being replaced by the prohibition and exception specified in this Order. Separate restrictions also apply in the protected area in relation to fishing for sea fish with creels (under Schedule 2 to the 2004 Order) and in relation to fishing for scallops during specified times of the year (under the Scallops (Irish Sea)

(Prohibition of Fishing) (Variation) Order 1986 – S.I. 1986/988). Any person who contravenes a provision contained in this Order commits an offence under section 4 of the Inshore Fishing (Scotland) Act 1984. An illustrative map showing the Luce Bay protected area and the three excepted areas is appended to this Note.

A business and regulatory impact assessment has been prepared in relation to this Order and placed in the Scottish Parliament Information Centre. A copy of this can be obtained from Marine Scotland, the Scottish Government, Victoria Quay, Edinburgh EH6 6QQ.



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POLICY NOTE

The Inshore Fishing (Prohibited Methods of Fishing) (Luce Bay) Order 2015

The above instrument was made in exercise of the powers conferred by sections 1 and 2A of the Inshore Fishing (Scotland) Act 1984. The instrument is subject to negative procedure.

Policy Objectives

Section 3 of the Marine (Scotland) Act 2010 provides that Scottish Ministers and public authorities must act in a way best calculated to further the achievement of sustainable development, including the protection and enhancement of the health of the Scottish marine area. Scottish Ministers consider this instrument is necessary to protect some environmentally sensitive locations within Luce Bay.

Scottish Ministers are empowered by Article 11(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy⁴ to adopt conservation measures which are necessary for compliance with obligations under EU environmental legislation. This instrument will make a contribution towards compliance with the EU Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora).

The Order applies to the Luce Bay and Sands Special Area of Conservation (SAC) which was designated in 2005 under the EU Habitats Directive. It is designated for a feature known as a “large shallow inlet and bay” which means that all the habitats are protected. These habitats have varying sensitivity to anthropogenic pressure.

The instrument regulates fishing by prohibiting a number of fishing methods. It restricts mechanical dredging (used to catch scallops) to three specific zones within the SAC. These zones can only be used during the months of January, February, November, and December each year. Creel fishing is unaffected by the measures. The Scottish Government has concluded that this management proposal would have no adverse effect on the integrity of the SAC.

Consultation

A consultation on potential management approaches took place between November 2014 and February 2015. Having taken account of all the responses to that consultation, Scottish Ministers published notice of their intention to have further dialogue with stakeholders in June 2015.

A workshop took place at the end of June 2015 where possible zonal management approaches were discussed. Stakeholders were given a further opportunity to comment on the conclusion after the workshop. The fishing industry were supportive of the proposal provided for in this instrument, whilst the environmental NGOs had some residual concerns.

⁴ (OJ L 354, 28.12.2013, p.22)

Impact Assessments

An equality impact assessment screening has been completed on this instrument. This concluded that there were no equality issues requiring full assessment.

Financial Effects

A Business and Regulatory Impact Assessment (BRIA) has been prepared and is available on the Scottish Government website.

BUSINESS AND REGULATORY IMPACT ASSESSMENT

Title of Proposal

Luce Bay and Sands, Special Area of Conservation (SAC), Introduction of Fisheries Management Measures, Socio-Economic Analysis

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.

Special Areas of Conservation (SACs) are designated under the EU Habitats Directive⁵. Luce Bay and Sands was designated as an SAC in 2005. A change in thinking on how the protective provisions of the EU Habitats Directive apply to fishing led to a review of existing management arrangements.

The Luce Bay and Sands SAC lies within the Scottish county of Dumfries and Galloway, to the south of Stranraer. Luce Bay is a broad, shallow, embayment approximately 10.5 km wide at its head. Lying between The Machars and the Rhinns of Galloway the bay reaches its greatest width (31 km) between the two outer headlands. It covers an area of approximately 48,000 ha. The head of Luce Bay is characterised by extensive intertidal sandy sediments, backed by sand dunes. The headlands are composed of steep rock and boulders. The eastern and western coastlines are composed of mixed boulder shores. The fauna and flora present reflect a range of wave exposures and habitat stability. A collection of offshore rocks, known as The Scares, lies centrally at the mouth of the bay. The inner bay has a seabed characterised by fine sands, mixed with small amounts of mud, shell gravel and empty shells. The outer part of Luce Bay has extensive areas of hard substrate seabed, which generally consist of a mixture of bedrock, boulders, cobbles and pebbles. There are some areas of sediment including mobile sands and gravels. There are areas of

⁵ http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

bedrock on the seabed close to the headlands at the mouth of Luce Bay and at The Scares. There are also maerl beds and sabellaria reefs which add conservation value to the SAC.

| Summary of Features and Conservation Objective - Luce Bay and Sands | |
|---|------------------------|
| Feature | Conservation Objective |
| Large shallow inlets and bays | Conserve |
| Reefs (bedrock and stony) | Conserve |
| Mudflats and sandflats | Conserve |
| Sandbanks | Conserve |

• Objective

SACs are designed to protect internationally important habitats and species. They are designated under the EU Habitats Directive, which is transposed into Scottish law through the Habitats Regulations. SACs form part of the European network of Natura 2000 sites⁶. SACs are selected for a number of habitats and species which are listed in the Habitats Directive. The Scottish suite of marine SACs currently incorporate the following features:

Habitats

- Coastal lagoons
- Estuaries
- Large shallow inlets and bays
- Mudflats and sandflats not covered by seawaters at low tide
- Reefs
- Sandbanks which are slightly covered by seawater all the time
- Submerged or partially submerged sea caves

Species

- Bottlenose dolphin
- Common (Harbour) seal
- Grey seal

All EU member states are obligated to designate SACs for a range of habitats and species as listed in the EU Habitats Directive (the Directive). The Directive requires that the sites are managed to ensure that the conservation objectives of the qualifying features are achieved.

Article 6 of the Directive defines how SACs should be managed and protected. The designation of these sites requires the implementation of conservation measures which correspond to the ecological requirements of Annex I 'habitats' and Annex II 'species' present on the site. (Article 6(1)).

Appropriate steps should also be taken to avoid, within the SACs, the deterioration of

⁶ Natura sites represent the very best of Scotland's nature. Natura is the term given to Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

natural habitats and habitats of species, as well as significant disturbance to species for which the site is designated. (Article 6(2)).

In addition, any plan or project (e.g. new policy or development) should be assessed to ensure that it does not have any negative implications for an SAC. Where there is a likely significant effect (or it cannot be ruled out) the proposal must undergo an appropriate assessment to determine the implications for the site. Subject to article 6(4), authority must only be given where it can be established that site integrity will not be adversely affected. (Article 6(3)).

A plan or project may be authorised even if such assessment shows negative implications for an SAC only where there are no alternative solutions and where the plan or project must be carried out for imperative reasons of overriding public interest. Where this is the case all compensatory measures necessary must be taken to ensure that the Natura 2000 network is protected. More stringent controls are in place where the SAC hosts a priority habitat type and/or a priority species. (Article 6(4)).

Historically the Scottish Government has generally relied upon article 6(2), as read with Article 6(1), to ensure that fisheries were managed appropriately within SACs. However, a review of the requirements of the Directive has concluded that Article 6(3) should also apply to changes in fisheries policy, and other fisheries management plans. This means that every change in fisheries policy or fisheries management plan (or the development of new management arrangements) would require to be tested against the provisions in Article 6(3).

Without having requisite fisheries management measures in place for each SAC it would be virtually impossible to rule out a likely significant effect beyond reasonable scientific doubt. This means that even beneficial changes in policy or management plans could be prevented from occurring. However by putting the necessary fisheries management measures in place such assessment under article 6(3) is unlikely to be required because there could be no significant effect. This also applies to SACs where little fishing activity takes place.

This BRIA examines the socio-economic impact of introducing fisheries management measures at the Luce Bay and Sands SAC site. 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 measures, the findings should be considered as estimates. The analysis within this BRIA will be revisited after the consultation phase.

- **Rationale for Government intervention**

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. An ecologically coherent network of well-managed protected areas is vital to conserve and regenerate our seas, in turn protecting the many goods and services they provide now, and for generations to come.

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 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. An ecologically coherent network of well-managed MPAs that includes SACS is vital to conserve and regenerate our seas, in turn protecting the many goods and services they provide now, and for generations to come. Furthermore it is likely that a network of MPAs will demonstrate beneficial network effects, i.e. the benefit from the network as a whole may be greater than the sum of the benefits from the individual designations. These effects are potentially of great importance in marine protected areas because of the lack of barriers and mobility of species.

Consultation

A public consultation ran from 11 November 2014 to 02 February 2015 and included 14 local level drop-in events. Feedback from the events and formal consultation responses, along with a further stakeholder event on 26 June 2015 helped finalise the management measures which this assessment is based on.

Introduction of fisheries management measures

The formal introduction of fisheries management measures at the Luce Bay site would provide recognition and protection to the natural features of the site while also contributing to the wider Scottish and UK marine conservation network.

• Sectors and groups affected

The following sectors have been identified as present (or possibly present in the future) within the proposed Luce Bay and Sands site and are potentially affected by the proposed management measures:

- Commercial Fisheries
- Public Sector

Benefits

Introduce fisheries management measures

Fisheries management measures will help to conserve the range of biodiversity in Scottish waters. Such measures will complement (not duplicate) other types of designation and provide an essential contribution to establishing an ecologically

coherent network of marine protected areas. In the absence of such measures, there would be areas of Scotland's marine environment that would continue to be unprotected.

Appropriate fisheries management measures will reduce the risk that the extent, population, structure, natural environmental quality and processes of features protected will decrease or degrade over time. The risk that the features will be adversely affected by human activities is greater if not protected by management measures. In addition, beyond a certain point of degradation, changes to ecosystems may be large and irreversible, resulting in a significant societal cost. Avoiding such a reduction in ecosystem services is thus a key benefit of introducing fisheries management measures.

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.

Contribution to an Ecologically Coherent network

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Benefits of introducing fisheries management measures

Fisheries management measures will help to conserve the range of biodiversity in Scottish waters. Such measures will complement (not duplicate) other types of designation and provide an essential contribution to establishing an ecologically coherent network of marine protected areas. In the absence of such measures, there would be areas of Scotland's marine environment that would continue to be unprotected.

Appropriate fisheries management measures will reduce the risk that the extent, population, structure, natural environmental quality and processes of features protected will decrease or degrade over time. The risk that the features will be adversely affected by human activities is greater if not protected by management measures. In addition, beyond a certain point of degradation, changes to ecosystems may be large and irreversible, resulting in a significant societal cost. Avoiding such a reduction in ecosystem services is thus a key benefit of introducing fisheries management measures. However doing nothing is expected to result in environmental decline, with a

corresponding declining benefit stream. These measures will contribute towards maintaining these benefits.

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.

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 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. Due to the scientific uncertainty involved it is challenging to put a true value on this, but the high quality experience and increasing knowledge of Scotland's seas can be better preserved through measures such as MPAs. It is expected that non-use value will be attained as a result of designation both from the knowledge that the features are receiving adequate protection along with the wider conservation objectives that designation supports.

Whilst ecosystem services benefits at an individual site level cannot be easily calculated, the non-use value to Scottish households of marine conservation in Scottish waters generated by a well-functioning MPA network as a whole is estimated to be within the range of £239–583 million⁴ over the 20 year assessment period.

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. This would see the expansion of recreational activities such as diving, sea-angling, and other tourism alongside sustainable methods of fishing.

The Assessing the Options for Change⁷ report modelled a number of scenarios to illustrate potential impacts from the exclusion of mobile fishing gear within 1nm or 3nm of the coast. In both cases the assumptions in the least favourable scenario produce results which suggest a net benefit to the economy over a 20 year period due to restrictions allowing fish populations to recover such that recreational angling and other forms of marine recreation could increase substantially. The quantified results of their analysis are not directly applicable to the proposed sites, due to the different spatial areas considered for restrictions. However, their conclusions support the interpretation

⁷ <http://www.gov.scot/Publications/2015/01/4022>

that increases in recreational activity could offset, or exceed, losses in the fisheries sector as a result of management measures.

At the very least, more sustainable fishing activities can replace those excluded. There would be no impediment to methods such as hand diving and creel fishing for crabs, lobsters, and nephrops being able to produce the same value to the economy over the assessment period.

Anticipated Benefits to Ecosystem Services, Luce Bay

| Summary of Ecosystem Services Benefits arising from Designation of the Site as an MPA | | | | | | | | |
|---|--|--|--|--|---|---|---|---|
| Services | Relevance to Site | Baseline Level | Estimated Impacts of Designation | | | Value Weighting | Scale of Benefits | Confidence |
| | | | Lower | Intermediate | Upper | | | |
| Fish for human consumption | High. Site fishing grounds are valuable, and contain nursery habitats. | Stocks not at MSY ⁸ , some vulnerable habitats | Nil | Moderate, protection of shellfish beds can contribute to maintenance and recovery of stocks – benefits are higher under stronger protection measures, but ecosystem response is uncertain. | | High, significant commercial landings from site. Commercially valuable species supported. | Nil - Moderate, extent of ecosystem service and response to management are both unpredictable | Low, uncertainty in extent of habitats and their response to management measures. |
| Fish for non-human consumption | | Stocks reduced from potential maximum | | | | | | |
| Gas and climate regulation | Nil - Low | Nil - Low | Nil | Low | Low | Moderate | Nil - Minimal | High |
| Natural hazard protection | Low | Low | Nil, would not affect stability of coastline | | | Low | Nil | High |
| Regulation of pollution | Moderate, benthic communities regulate pollution | Low, major water quality issues to be dealt with through WFD | Nil | Nil | Nil - Low, maintained by protecting seabed features | Low - Moderate, for recreational use of waters | Nil - Minimal | High |
| Non-use value of natural environment | Moderate - High, variety of protected features, and contribution of the site to MPA network, have non-use value. | Non-use value of the site may decline | Nil | Low - Moderate. Protection of features of site from minor decline | Moderate – protection of features of site from decline, and allowing recovery | Moderate – range of features means strong contribution to halting decline of marine biodiversity. | Nil - Moderate | Low - Moderate, extent of features recovery in response to management measures, and value to society, are uncertain |
| Recreation | Moderate | Active dive sites, boating | Nil | Minimal | Low, slightly higher biodiversity | Moderate, important contribution to | Nil - Low | Moderate |

⁸ Maximum Sustainable Yield

| | | | | | | | | |
|--|----------|--|---|---------|---|-----------------------------|-----------|-----|
| | | anchorage, sea angling | | | ty encountered by divers and boating | halting loss of one species | | |
| Research and Education | Moderate | Biological feature has research value, and has few substitutes | Nil, no change in characteristics of site | Minimal | Low - Moderate, protection of key characteristics of site from decline, improving future research opportunities | Low | Nil - Low | Low |
| Total value of changes in ecosystem services | | | Nil for lower scenario, Minimal for intermediate scenario Low - Moderate for upper scenario | | | | Nil - Low | Low |

These ecosystem services provided by effective management of the MPA contributes to the wider benefits that the MPA network can deliver:

Benefits of MPAs

| Benefit | Habitat(s) |
|---|---|
| <p>Supporting fish and shellfish fisheries.</p> <p>Habitats within the MPA network can be important to various different aspects of fish/shellfish life history – such as for feeding, for spawning or for recruitment/ juveniles (e.g. providing shelter from predation).</p> | <ul style="list-style-type: none"> • Kelp – including lobster, crab and wrasse (the latter used in aquaculture industry). • Maerl beds – Research showing that scallop spat preferentially settle on maerl. Also provide feeding areas for juvenile cod. • Burrowed mud – main habitat for Nephrops / langoustine. This is the most lucrative shellfishery in Scotland's seas. Worth £64.6 million in 2013 and accounting for 15% of the total value of all Scottish landings. • Seagrass beds – potential cod nursery habitat. • Rocky/boulder and cobble reefs – providing habitat used for European spiny lobster, velvet crabs, lobster and edible crab. Some overlap with kelp (see above). |
| <p>Carbon capture and storage(blue carbon)</p> <p>MPAs with particular features play a role in storing blue carbon.</p> | <ul style="list-style-type: none"> • Kelp • Maerl beds • Seagrass beds • Bivalve beds e.g. horse mussels and blue mussels, flame shell beds • Burrowed mud • Cold water corals |
| Coastal defence | <ul style="list-style-type: none"> • Kelp and rocky reefs – reduce the wave energy reaching the shore, thus reducing coastal erosion. |

| | |
|--|--|
| Ensuring a supply of sediment – including to beaches and machair/dune systems | <ul style="list-style-type: none"> • Maerl beds • Shallow tide-swept coarse sands with burrowing bivalves • Horse mussel beds • Flame shell beds |
| Improving water clarity/quality | <ul style="list-style-type: none"> • Horse mussels and blue mussels – through filtering material out of the water. • Seagrass beds – directly through attracting sediment onto the plants' surface and indirectly through the filter feeders that live amongst the seagrass. |
| Stabilising coastal sediment | <ul style="list-style-type: none"> • Seagrass beds – through holding sediments with their roots and establishing beds. • Blue mussel beds – through binding sediments together through byssus threads and establishing beds. |
| Providing wildlife experiences (recreation and tourism) | <ul style="list-style-type: none"> • This is more often applied to species – seabirds, whales, dolphins etc, that are the focus of most wildlife tourism in Scotland. But also applies to species that are the focus of recreational angling e.g. common skate. • Rockpools – particularly inspiring for children. • Sea caves and reefs – providing underwater adventures for divers and snorkellers. • Blue mussel and horse mussel beds, maerl beds |

Costs

Costs of introducing fisheries management measures

Fisheries management measures

Costs have been evaluated based on the implementation of 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 simple actuality that present consumption is preferred to future consumption. All costs are presented in 2015 prices.

Commercial Fisheries

The management measures will further the conservation objectives of the SAC. The measures will apply across the whole footprint of the SAC.

Management Measures

| Gear Type | Measure |
|--|--|
| Demersal trawl and seine net Suction dredging (boat, tractor, and diver operated) | Prohibit across whole SAC site |
| Mechanical dredging (boat and tractor operated) | Permitted zonally during the months of January, February, November and December. |

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. 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 reduced loss of income. GVA estimates include both direct and indirect impacts, which accounts for upstream supply chain impacts. Initial landings values, used to derive the final costs, are averaged over a period from 2010 - 2014 in order to smooth year-on-year fluctuations.

Assessment of over 15m data

This dataset is an amalgamation of logbook and landings data with Vessel Monitoring System (VMS) data. Logbook and landings data for ICES rectangles where there are protected areas is identified. The VMS data for each corresponding date and vessel in the logbook data is identified. It is filtered by speed (between 0 and 5 knots) to limit it to reports that are indicative of fishing activity. The two data sets are then merged giving each VMS report a notional value. Each VMS report is considered to be worth 2 hours of effort unless it is clear that the reporting frequency is much greater. In that circumstance adjustments have been made.

There are some potential sources of error in this estimate. If the wrong rectangle has been recorded in the logbook then data will be omitted. The total catch value for the trip is divided in proportion with the daily logged amount for a species. Therefore it is impossible to account for possible variations in catch quality which in turn influences the actual daily value.

In some cases a vessel may have a reported position outside an area in consecutive reports. If the intervening time was spent inside an area then this is missed by the analysis. By the same token a vessel may have just entered the area before a VMS report meaning it is included in the analysis.

This resulting dataset is then plotted using a Geographic Information System (GIS) and VMS reports that would be affected by a particular management approach identified. These are then summarised into the tables in this document for each site detailing the percentage of activity affected.

Assessment of under 15m data

For vessels in the range of 10 to 15m there is a requirement to keep a logbook detailing catches at ICES rectangle level. VMS is presently being rolled out to vessels

in this size range but there is no industry wide dataset available yet. Following the requirement for over 12m boats to have VMS there is also one year's worth of VMS data for some 12m-15m vessels. This has been utilised as a validation test.

Marine Scotland undertook the Scotmap project to get a better understanding of the distribution of activities by under 15m vessels. It provides an improved spatial resolution of where under 15m activity occurs within a ICES rectangle data. Fishing areas were identified by fishermen during the interviews and recorded in GIS format, and the opportunity to provide an estimate value given.

All of the fishing areas were processed into an amalgamated raster layer with 800 cells per ICES statistical rectangle with an average area of ca. 4.20 km². This results in each of the 800 cells having a share of the overall value of the ICES rectangle. However not all vessels participated in Scotmap meaning that the values are an under estimate of total fleet activity, but can be used on a proportional basis. For under 15m vessels, where VMS data is not available, it provides a better spatial resolution of data than looking at values at an ICES rectangle level. However given that it provides an aggregated average value it does not present data at an individual vessel level there will be limits to its accuracy.

In order to analyse data to finer spatial scales to assess the value of MPAs and the potential impact of management measures each Scotmap grid has been divided further into 25 equally sized smaller grids (this assumes that value is uniformly distributed across the Scotmap grid cell). From the Scotmap data the total value of each ICES rectangle for a particular gear type was calculated. In the same manner the value of each MPA was calculated using each smaller grid, and then the value of the management measures. This allows the percentage of an ICES rectangle catch that is within an MPA and/or management zone to be calculated. These percentages are then multiplied against all under 15m recorded landings for that ICES rectangle to ascertain the estimated value of the MPA, and the impact of the management measures. This provides a more robust estimate than the previously adopted approach of estimating the proportion of activity affected using the same percentage identified from over 15m vessel data.

There are potential sources of error within this estimate. As mentioned it assumes that vessels which did not participate in Scotmap have the same distribution of activity in an ICES rectangle. It also assumes that the proportion of fishing effort in the same as the proportion of value. This may not always be the case due to variations in catch quality. Finally all data is apportioned to the ICES rectangle recorded in the logbook, meaning any errata at this point cannot be accounted for.

| Costs, Scottish vessels (£) | | | |
|--|---|--|---|
| | >15m vessels | | <15m vessels |
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | <ul style="list-style-type: none"> ▪ Dredge 45,086 ▪ Other Trawl 13 | | <ul style="list-style-type: none"> ▪ Dredge 14,8 |

| | | | | | | | | | |
|---|------------|-----------------------------------|---------|---|--------|---|------------|-------------------------------|-------|
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 851,791 | | | | | | | | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 522,194 | | | | | | | | | |
| <p>The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is £522,194. By comparison, for all UK vessels the total is £669,166.</p> <p>For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).</p> <p>Combined impact in relation to site, Scottish vessels (£)</p> <table> <tr> <td>Average annual revenue site total</td><td>421,348</td></tr> <tr> <td>Average annual revenue impact of measures</td><td>59,933</td></tr> <tr> <td>Estimated annual revenue of the 33 vessels affected</td><td>11,144,710</td></tr> <tr> <td>Total combined revenue impact</td><td>0.54%</td></tr> </table> <p>Total revenue for all gear types within the MPA site is £421,348. The impact on revenue as a result of management measures within the MPA is £59,933 (14.22% of the total site revenue). For this MPA, the overall revenue impact on the 33 affected vessels is just 0.54% (based on their total combined revenue of £11,144,710).</p> | | Average annual revenue site total | 421,348 | Average annual revenue impact of measures | 59,933 | Estimated annual revenue of the 33 vessels affected | 11,144,710 | Total combined revenue impact | 0.54% |
| Average annual revenue site total | 421,348 | | | | | | | | |
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| Estimated annual revenue of the 33 vessels affected | 11,144,710 | | | | | | | | |
| Total combined revenue impact | 0.54% | | | | | | | | |
| Employment (direct and indirect reduction) | | | | | | | | | |
| 1.3 jobs | | | | | | | | | |
| <p>It should be borne in mind that these costs are based on the affected vessels stopping fishing. Within the dataset used for these calculations there were more than 100 vessels. This means a relatively small impact on many individuals. Therefore it is anticipated that these vessels will make adjustments to their fishing practices to comply with the measures. In other words they will still have the ability to take the same economic value from relatively nearby fishing grounds.</p> <p>Employment impacts⁹ presented assume a linear relationship between output and employment. In reality such a relationship may not hold. 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.</p> | | | | | | | | | |

⁹Employment impacts are derived from the Scottish Government's Input-Output tables - <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output>

Public Sector:

The decision to introduce fisheries management measures would result in costs being incurred by the public sector in the following areas:

- Preparation of Statutory Instruments
- Compliance and enforcement

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 has been estimated at the site level.

| Site-specific Public Sector Costs (£m) | |
|---|-------|
| Preparation of Statutory Instruments (present value, 2015-2034, 2015 prices) | 0.005 |

Total Costs:

Total quantified costs are presented in present value terms at 2015 prices. Commercial fisheries costs to Scottish vessels are presented in terms of GVA.

| Total Costs (£m) - Approach 1 | |
|-------------------------------|--------------|
| Sector | Cost |
| Commercial Fisheries | 0.522 |
| Public Sector | 0.005 |
| Total Costs | 0.527 |

Scottish Firms Impact Test

This section will be informed by evidence gathered from our discussions with individual businesses during the consultation phase, and completed in the final BRIA.

Many of the businesses affected may include some small and micro-sized firms. For the commercial fisheries sector the average number of fishermen per Scottish vessel in 2013 was 2.5. Additional costs imposed by the introduction of fisheries management measures at the Luce Bay and Sands site have the potential to fall on small businesses.

Competition Assessment

The introduction of fisheries management measures at the Luce Bay and Sands site may impact commercial fisheries activity operating within a given spatial area.

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 the introduction of fisheries management measures 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. The introduction of fisheries management measures 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.

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. The introduction of fisheries management measures 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. The introduction of fisheries management measures is not expected to reduce suppliers' incentives to compete vigorously.

Test run of business forms

It is not envisaged that the introduction of fisheries management measures 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 proposed management measures 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 proposed management measures will largely affect businesses rather than individuals.

Discussions with Scottish Government Legal colleagues are on-going but at this stage it is not envisaged that the introduction of fisheries management measures will have any legal aid impacts.

Enforcement, sanctions and monitoring

Responsibility for compliance, monitoring and enforcement of the provisions will be carried out by Marine Scotland. Reserved issues will continue to be addressed by the respective departments within the UK government. The Plan will be delivered through the existing marine licensing system, nature conservation measures, in addition to

Scottish Planning Policy and other licensing/consenting frameworks. Enforcement and authorisation decisions within these frameworks carried out by public authorities must have regards to new management measures, these include: local authorities, The Crown Estate, port and harbour authorities and terrestrial planning authorities.

Implementation and delivery plan

The proposed management measures would be delivered by Statutory Instrument on 08 February 2016.

Post-implementation review

There is a 6 yearly marine protected area network review cycle and this includes SACs like Luce Bay and Sands. The need for these measures will be reviewed as part of that wider review in 2024 and every 6 years thereafter. However an interim review will take place if it is considered necessary.

Summary

The Luce Bay SAC was designated under EU Habitats Directive in 2005. These measures are proposed to ensure that the SAC is well-managed and that the conservation objectives for each protected feature are furthered.

SSI 2015/437

| | |
|--|---|
| Title of Instrument: | South Arran Marine Conservation Order 2015 (SSI 2015/437) |
| Type of Instrument: | Negative |
| Laid Date: | 18 December 2015 |
| Circulated to Members: | 22 January 2016 |
| Meeting Date: | 27 January 2016 |
| Minister to attend meeting: | Yes |
| Motion for annulment lodged: | Yes – S4M-15337 |
| Drawn to the Parliament’s attention by the Delegated Powers and Law Reform Committee? | No |
| Reporting deadline: | 8 February 2016 |

Purpose

Article 11(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy (OJ L 354, 28.12.2013, p.22) empowers EU member States to adopt conservation measures which are necessary for compliance with obligations under EU environmental legislation.

The South Arran Nature Conservation Marine Protected Area Order 2014 (“the 2014 Order”) designated that part of the Scottish marine area which is adjacent to South Arran as a nature conservation marine protected area (“South Arran MPA”). The 2014 Order provides that a range of marine habitats and one low or limited mobility species are protected features.

EXPLANATORY NOTE

As per purpose above and including:

This Order furthers the stated conservation objectives for the South Arran MPA.

Article 3 describes the area protected by this Order (“the protected area”). It is the area which is designated under the 2014 Order as the South Arran MPA.

Article 4 prohibits and regulates activities within the protected area.

Article 4(2) provides that a person must not deploy or use any fishing gear within the protected area. The term “fishing gear” is defined in article 4(11) of the Order.

Article 4(3) regulates the storage of fishing gear, and other gear which is not covered by the general definition of fishing gear, on fishing vessels within the protected area.

Article 4(4) provides that demersal trawling (other than beam trawling) by certain specified fishing vessels is permitted within specified parts of the protected area which are described in Schedule 1.

Article 4(5) provides that a person must not deploy (by any means) or use passive gear within those parts of the protected area which are described in Schedule 2.

Article 4(7) provides that a person must not deploy (by any means) or use any pelagic trawl, rod and line, or a handline, within that part of the protected area which is described in Schedule 3.

Article 4(6) and (8) provide that article 4(3) applies with regard to the types of fishing provided for in article 4(5) and (7) only in those parts of the protected area where those types of fishing is not allowed.

Article 4(9) provides that certain specified provisions do not apply to activities carried out in the protected area for the purpose of saving life or for the purpose of securing the safety of a vessel, aircraft or marine structure.

Article 4(10) provides that a person may not fish other than by the deployment or use of fishing gear within the part of the protected area described in Schedule 3.

The effect of article 4(2), (3), (4), (5), (6), (7), (8) and (10) is that no fishing by any method may take place within the area in respect of which the Inshore Fishing (Prohibition on Fishing) (Lamlash Bay) (Scotland) Order 2008 ("the 2008 Order") previously made provision.

Article 5 provides that the Scottish Ministers may issue permits authorising activity which would otherwise be unlawful under the Order within the protected area for the purpose of scientific research. The article makes provision regarding the procedure which applies to the making of applications for permits and the determination of such applications.

Article 6 provides that paragraph (b) of section 97(1) of the Marine (Scotland) Act 2010 does not apply in relation to an offence under section 94 of that Act of contravening this Order or an offence under section 95 of that Act committed in relation to the protected area.

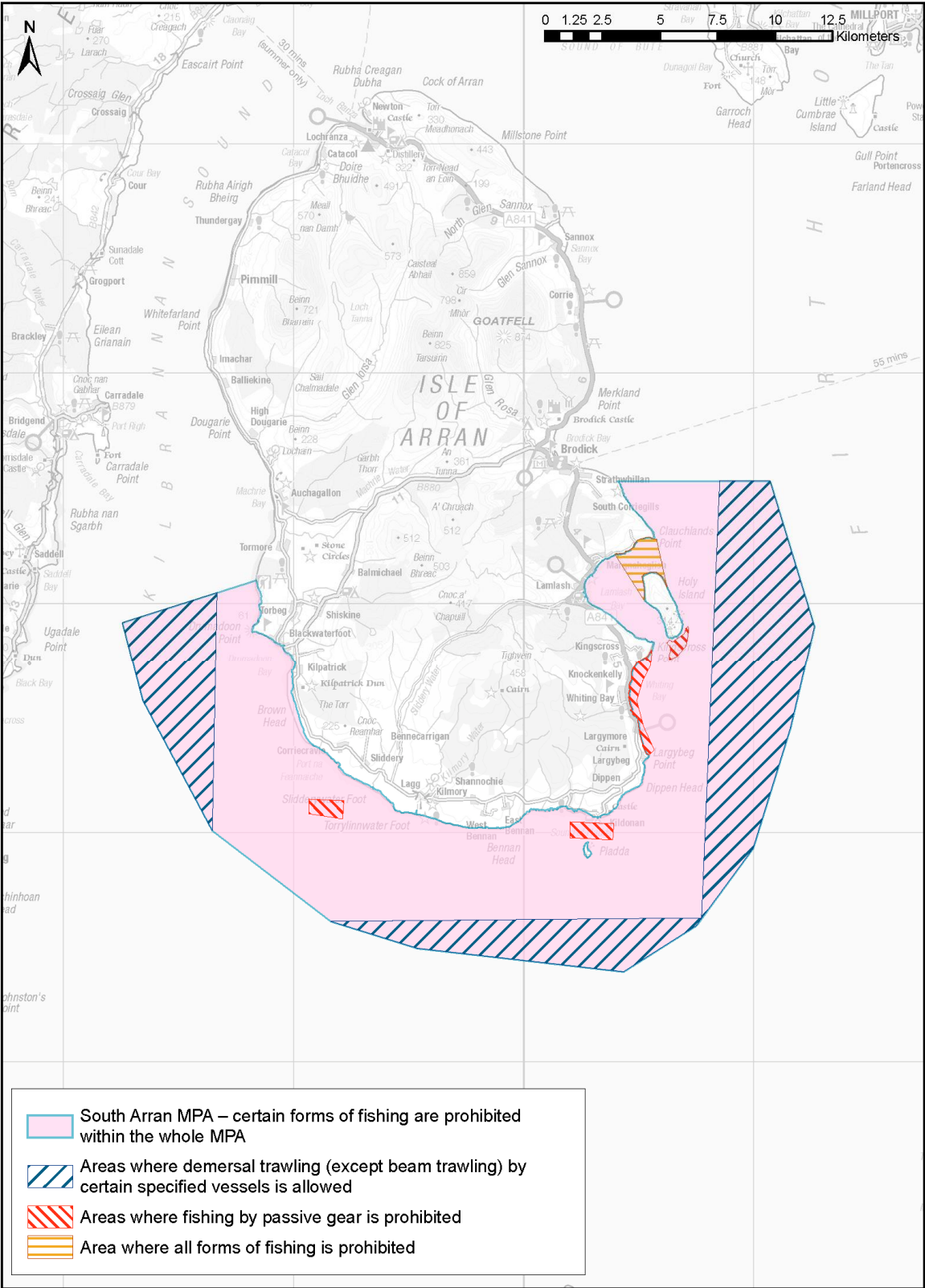
Article 7 and Schedule 4 provide that the 2008 Order, the South Arran Marine Conservation Order 2014, the South Arran Marine Conservation (Amendment) Order 2014 and the South Arran Marine Conservation Order 2014 (Urgent Continuation) Order 2015 are revoked. The provision made by the 2008 Order and by the other Orders above is broadly re-made by this Order.

A person who contravenes this Order commits an offence and is liable on summary conviction to a fine of up to £50,000, and on conviction on indictment to an unlimited

fine. The penalty on summary conviction under this Order is greater than that which is provided by the 2008 Order.

A business and regulatory impact assessment has been prepared in relation to this Order and placed in the Scottish Parliament Information Centre. A copy of this can be obtained from Marine Scotland, the Scottish Government, Victoria Quay, Edinburgh EH6 6QQ.

An illustrative map showing the South Arran MPA, and those parts of the MPA in respect of which the Order makes provision, is attached to this note.



ILLUSTRATIVE PURPOSES ONLY. NOT FOR NAVIGATION. Created by Scottish Government (Marine Scotland) 2015. gj0885. © Crown Copyright, All rights reserved. Ordnance Survey Licence No. 100024655. CRS: British National Grid. Datum: OSGB 1936. Standard Parallel: 0°0'0.00"

POLICY NOTE

The South Arran Marine Conservation Order 2015 SSI 2015/437

The above instrument was made in exercise of the powers conferred by sections 85(1)(a), (2) and (4), 86(1) and (3), 88(1), (2) and (6) and 92(1) and (5) of the Marine (Scotland) Act 2010. The instrument is subject to negative procedure.

Policy Objectives

The purpose of this instrument is to further the conservation objectives of the of the South Arran Nature Conservation Marine Protected Area ("South Arran MPA"), including the recovery of maerl beds, one of the protected features. The designation of the South Arran MPA took effect on 07 August 2014.

Section 3 of the Marine (Scotland) Act 2010 provides that Scottish Ministers and public authorities must act in a way best calculated to further the achievement of sustainable development, including the protection and enhancement of the health of the Scottish marine area. Scottish Ministers consider this Marine Conservation Order necessary to further the conservation objectives of the South Arran MPA.

Scottish Ministers are empowered by Article 11(1) of Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy¹⁰ to adopt conservation measures which are necessary for compliance with obligations under EU environmental legislation. This instrument will make a contribution towards compliance with the EU Marine Strategy Framework Directive (Directive 2008/56/EC of the European Parliament and of the Council establishing a framework for community action in the field of marine environmental policy).

The instrument prevents certain fishing methods from taking place in the South Arran MPA. It also regulates the use of the South Arran MPA by certain other fishing methods.

Consultation

A consultation on potential management approaches took place between November 2014 and February 2015. In response to that consultation Scottish Ministers published notice of their intention to make this instrument in June 2015.

Section 87 of the Marine (Scotland) Act 2010 sets out the consultation procedure which applies before a Marine Conservation Order may be made. Representations were invited from stakeholders between June and August 2015. Stakeholders generally responded in 2 ways. To say they supported the proposal but that the measures could be stronger, or to say that they felt the measures were too stringent.

Having taken into account all the representations received, the Scottish Government concluded that the proposal should remain unchanged.

¹⁰ (OJ L 354, 28.12.2013, p.22)

Impact Assessments

An equality impact assessment screening has been completed on the South Arran Marine Conservation Order 2015. This concluded that there were no equality issues requiring full assessment.

Financial Effects

A Business and Regulatory Impact Assessment (BRIA) has been prepared and is available on the Scottish Government website.

BUSINESS AND REGULATORY IMPACT ASSESSMENT

Title of Proposal

South Arran, Marine Protected Area (MPA).
Introduction of Fisheries Management Measures, Socio-Economic Analysis

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.

Marine Protected Areas (MPAs) are designated under the [Marine \(Scotland\) Act 2010](#). The South Arran MPA¹¹ was designated in in 2014. These management measures are designed to further the conservation objectives of the MPA.

The waters around the southern end of Arran are home to a patchwork of benthic habitats and species characteristic of the more exposed areas of the Clyde Sea. The MPA encompasses the waters from just north of Drumadoon Point on the west coast, to Corriegills Point on the east and includes the Lamlash Bay No Take Zone.

The maerl beds, which are made up of a free-living calcified red seaweed that looks like pink branched twiglets, support an amazing array of other seaweeds as well as various sea anemones, starfish and juvenile fish and shellfish. The maerl is interspersed with coarse gravel sea cucumbers which bury their bodies in the maerl and gravel extending only their white or orange feathery tentacles up into the water column to feed. The seagrass beds that provide shelter and protection to a range of associated species also help to stabilise sediments, furthermore these areas trap and store carbon dioxide.

¹¹ <http://www.gov.scot/Resource/0045/00456829.pdf>

Burrowed mud is widely distributed around the outer regions of the MPA and supports a range of animals including Norway lobster, squat lobster, crabs, worms, ocean quahogs and the slender seapen.

Summary of Features and Conservation Objectives - South Arran MPA

| | |
|---|----------|
| Maerl beds | Recover |
| Kelp and seaweed beds on sublittoral communities | Conserve |
| Seagrass beds | Conserve |
| Burrowed mud | Conserve |
| Maerl or coarse shell gravel with burrowing sea cucumbers | Conserve |
| Ocean quahog aggregations | Conserve |
| Shallow tide-swept coarse sands with burrowing bivalves | Conserve |

• Objective

The purpose of Nature Conservation MPAs is to safeguard nationally important species, habitats and geology across Scotland's marine environment. MPAs have been designed to complement existing site-based measures. The intention is to manage MPAs under the sustainable use principle.

An MPA network will support greater national and international ecological coherence as stipulated by:

- the Marine (Scotland) Act 2010
- the Marine and Coastal Access Act 2009
- the Convention on Biological Diversity
- the World Summit on Sustainable Development
- the OSPAR¹² convention
- the European Marine Strategy Framework Directive

Designation of MPAs are based primarily on scientific evidence, and MPA search features have been used to underpin the selection of MPA locations.

Evidence in this BRIA is drawn from the work of statutory nature conservation body SNH¹³ and consultants ABPmer and eftec¹⁴. This has been updated as required.

It brings together the science-led arguments for management and the projected potential social and economic consequences of such action. The site has been identified for designation as an MPA due to the confirmed presence of biodiversity and geodiversity features detailed above.

This BRIA examines the socio-economic impact of introducing fisheries management measures at the South Arran MPA site. The assessment period covers the 20 year period from 2015 to 2034 - reflecting the time horizon within which the majority of

¹² <http://www.ospar.org/>

¹³ <http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/mpas/mpa-arr/>

¹⁴ <http://www.scotland.gov.uk/Publications/2013/08/9645>

impacts are expected to occur. As with any socio-economic assessment related to environmental measures, the findings should be considered as estimates.

- **Rationale for Government intervention**

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. An ecologically coherent network of well-managed protected areas is vital to conserve and regenerate our seas, in turn protecting the many goods and services they provide now, and for generations to come.

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 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. An ecologically coherent network of well-managed MPAs is vital to conserve and regenerate our seas, in turn protecting the many goods and services they provide now, and for generations to come. Furthermore it is likely that a network of Nature Conservation MPAs will demonstrate beneficial network effects, i.e. the benefit from the network as a whole may be greater than the sum of the benefits from the individual MPAs. These effects are potentially of great importance in marine protected areas because of the lack of barriers and mobility of species.

Consultation

A public consultation ran from 11 November 2014 to 02 February 2015 and included 14 local level drop-in events. Feedback from the events and formal consultation responses helped finalise the management measures which this assessment is based on. In addition a further period of 8 weeks was provided for representations from 11th June to 9th August on the draft MCO.

Introduction of fisheries management measures

The formal introduction of fisheries management measures at the South Arran site would provide recognition and protection to the natural features of the site while also contributing to the wider Scottish and UK marine conservation network.

- **Sectors and groups affected**

The following sectors have been identified as present (or possibly present in the future) within the South Arran site and are potentially affected by the management measures:

- Commercial Fisheries
- Public Sector

Benefits of introducing fisheries management measures

Fisheries management measures will help to conserve the range of biodiversity in Scottish waters. Such measures will complement (not duplicate) other types of designation and provide an essential contribution to establishing an ecologically coherent network of marine protected areas. In the absence of such measures, there would be areas of Scotland's marine environment that would continue to be unprotected.

Appropriate fisheries management measures will reduce the risk that the extent, population, structure, natural environmental quality and processes of features protected will decrease or degrade over time. The risk that the features will be adversely affected by human activities is greater if not protected by management measures. In addition, beyond a certain point of degradation, changes to ecosystems may be large and irreversible, resulting in a significant societal cost. Avoiding such a reduction in ecosystem services is thus a key benefit of introducing fisheries management measures. However doing nothing is expected to result in environmental decline, with a corresponding declining benefit stream. These measures will contribute towards maintaining these benefits.

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.

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 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. Due to the scientific uncertainty involved it is challenging to put a true value on this,

but the high quality experience and increasing knowledge of Scotland's seas can be better preserved through measures such as MPAs.

Whilst ecosystem services benefits at an individual site level cannot be easily calculated, the non-use value to Scottish households of marine conservation in Scottish waters generated by a well-functioning MPA network as a whole is estimated to be within the range of £239–583 million¹⁵ over the 20 year assessment period.

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. This would see the expansion of recreational activities such as diving, sea-angling, and other tourism alongside sustainable methods of fishing.

The Assessing the Options for Change¹⁶ report modelled a number of scenarios to illustrate potential impacts from the exclusion of mobile fishing gear within 1nm or 3nm of the coast. In both cases the assumptions in the least favourable scenario produce results which suggest a net benefit to the economy over a 20 year period due to restrictions allowing fish populations to recover such that recreational angling and other forms of marine recreation could increase substantially. The quantified results of their analysis are not directly applicable to the proposed sites, due to the different spatial areas considered for restrictions. However, their conclusions support the interpretation that increases in recreational activity could offset, or exceed, losses in the fisheries sector as a result of management measures.

At the very least, more sustainable fishing activities can replace those excluded. There would be no impediment to methods such as hand diving and creel fishing for crabs, lobsters, and nephrops being able to produce the same value to the economy over the assessment period.

Anticipated Benefits to Ecosystem Services, South Arran

| Summary of Ecosystem Services Benefits arising from Designation of the Site as an MPA | | | | | | | | |
|---|---|--|---|--------------|----------|---|-------------------|--|
| Services | Relevance to Site | Baseline Level | Estimated Impacts of Designation | | | Value Weighting | Scale of Benefits | Confidence |
| | | | Lower | Intermediate | Upper | | | |
| Fish for human consumption | High. Site fishing grounds are valuable and contain | Stocks not at MSY ¹⁷ , maerl beds need to recover | Low | Moderate | Moderate | High, significant commercial landings from site. Commercially valuable species supported. | Moderate | Moderate, uncertainty mainly in response of habitats to management measures. |
| Fish for non-human consumption | herring spawning grounds and nursery habitats. | Stocks reduced from potential maximum | Protection of herring spawning grounds and shellfish beds can contribute to maintenance and recovery of stocks – benefits are higher under stronger protection measures but ecosystem response is uncertain. Protecting | | | | | |

¹⁵ <http://www.scotland.gov.uk/Publications/2013/08/9645>

¹⁶ <http://www.gov.scot/Publications/2015/01/4022>

¹⁷ Maximum Sustainable Yield

| | | | | | | | | |
|--------------------------------------|--|---|---|--|---|--|---|--|
| | | | habitats with primary productivity (e.g. seagrass beds) also supports food webs and marine fish stocks. | | | | | |
| Gas and climate regulation | Moderate, extent of relevant benthic communities uncertain | Low - Moderate. Extent of benthic plant communities uncertain | Low - Moderate, protection of seagrass beds under all scenarios. | | | Moderate, social cost of carbon | Low | Low, due to uncertain extent of seagrass beds and other benthic communities |
| Natural hazard protection | Low | Low | Nil | | | Low | Nil | High |
| Regulation of pollution | Moderate, benthic communities regulate pollution | Low, major water quality issues to be dealt with through WFD ¹⁸ | Nil | Low, if protection allows recovery of habitats, service could increase | | Low, water quality in this area not affecting human welfare | Minimal, increase in this service unlikely to substitute existing water treatment | High |
| Non-use value of natural environment | Moderate - High, variety of protected features, and contribution of the site to MPA network, have non-use value. | Non-use value of the site may decline | Low, maintenance in features of site | Low - Moderate, Protection of features of site from minor decline | Moderate – protection of features of site from decline, and/or allowing some recovery | Moderate – range of features means strong contribution to halting decline of marine biodiversity. | Moderate | Low - Moderate, extent of features, responses to management measures, and value to society all uncertain |
| Recreation | Moderate - High, active dive sites, angling and recreational boating routes | Moderate - High, including tourism activities. Angling may be reduced by damage to features | Low - Moderate, Angling benefits and biodiversity encountered by divers and recreational boaters are protected from possible decline, and could recover under upper scenario. Designation could enhance tourism activity. | | | Moderate, extensive activities, but substitutes are available. | Low - Moderate, enhancement of activities through improved angling and visitor experiences. | Low - Moderate, extent of change from management measures uncertain |
| Research and Education | Moderate | Low, small number of biological features have research value and there are substitutes | Minimal, no change in most of the characteristics of site | Low, protection of key characteristics of site from decline, improving future research opportunities | | Low for individual features. Moderate for opportunity to understand response of wide range of features to management | Low | Low - Moderate, extent to which research uses site in future uncertain |
| Total value of changes in ecosystem | | | Low for lower scenario, moderate for upper | | | Moderate | | Low |

¹⁸ Water Framework Directive

| services | scenarios | | |
|---|---|--|--|
| <p>These ecosystem services provided by effective management of the MPA contributes to the wider benefits that the MPA network can deliver:</p> <p>Benefits of MPAs</p> | | | |
| Benefit | Habitat(s) | | |
| <p>Supporting fish and shellfish fisheries.</p> <p>Habitats within the MPA network can be important to various different aspects of fish/shellfish life history – such as for feeding, for spawning or for recruitment/ juveniles (e.g. providing shelter from predation).</p> | <ul style="list-style-type: none"> • Kelp – including lobster, crab and wrasse (the latter used in aquaculture industry). • Maerl beds – Research showing that scallop spat preferentially settle on maerl. Also provide feeding areas for juvenile cod. • Burrowed mud – main habitat for Nephrops / langoustine. This is the most lucrative shellfishery in Scotland's seas. Worth £64.6 million in 2013 and accounting for 15% of the total value of all Scottish landings. • Seagrass beds – potential cod nursery habitat. • Rocky/boulder and cobble reefs – providing habitat used for European spiny lobster, velvet crabs, lobster and edible crab. Some overlap with kelp (see above). | | |
| <p>Carbon capture and storage(blue carbon)</p> <p>MPAs with particular features play a role in storing blue carbon.</p> | <ul style="list-style-type: none"> • Kelp • Maerl beds • Seagrass beds • Bivalve beds e.g. horse mussels and blue mussels, flame shell beds • Burrowed mud • Cold water corals | | |
| <p>Coastal defence</p> | <ul style="list-style-type: none"> • Kelp and rocky reefs – reduce the wave energy reaching the shore, thus reducing coastal erosion. | | |
| <p>Ensuring a supply of sediment – including to beaches and machair/dune systems</p> | <ul style="list-style-type: none"> • Maerl beds • Shallow tide-swept coarse sands with burrowing bivalves • Horse mussel beds • Flame shell beds | | |
| <p>Improving water clarity/quality</p> | <ul style="list-style-type: none"> • Horse mussels and blue mussels – through filtering material out of the water. • Seagrass beds – directly through attracting sediment onto the plants' surface and indirectly through the filter feeders that live amongst the seagrass. | | |

| | |
|--|--|
| Stabilising coastal sediment | <ul style="list-style-type: none"> • Seagrass beds – through holding sediments with their roots and establishing beds. • Blue mussel beds – through binding sediments together through byssus threads and establishing beds. |
| Providing wildlife experiences (recreation and tourism) | <ul style="list-style-type: none"> • This is more often applied to species – seabirds, whales, dolphins etc, that are the focus of most wildlife tourism in Scotland. But also applies to species that are the focus of recreational angling e.g. common skate. • Rockpools – particularly inspiring for children. • Sea caves and reefs – providing underwater adventures for divers and snorkellers. • Blue mussel and horse mussel beds, maerl beds |

Costs of introducing fisheries management measures

Fisheries management measures

Costs have been evaluated based on the implementation of 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 simple actuality that present consumption is preferred to future consumption. All costs are presented in 2015 prices.

Commercial Fisheries:

The management measures will further the conservation objectives of the MPA. The measures will apply across the whole footprint of the MPA.

| Management Measures | |
|--|--|
| Gear Type | Measure |
| Demersal trawl | Prohibited across the whole MPA. By way of derogation trawls may be deployed in specific zones by vessels of <120 gross tonnage. |
| Creel fishing, long lines, and set nets | Prohibited in 4 specific zones (and also in the existing Lamlash Bay No Take Zone) |
| Suction dredging, mechanical dredging, and beam trawling | Prohibited across the whole MPA |

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. 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 reduced loss of income. GVA estimates include both direct and indirect impacts, which accounts for upstream supply chain impacts. Initial landings values, used to derive the final costs, are averaged over a period from 2010 - 2014 in order to smooth year-on-year fluctuations.

Assessment of over 15m data

This dataset is an amalgamation of logbook and landings data with Vessel Monitoring System (VMS) data. Logbook and landings data for ICES rectangles where there are protected areas is identified. The VMS data for each corresponding date and vessel in the logbook data is identified. It is filtered by speed (between 0 and 5 knots) to limit it to reports that are indicative of fishing activity. The two data sets are then merged giving each VMS report a notional value. Each VMS report is considered to be worth 2 hours of effort unless it is clear that the reporting frequency is much greater. In that circumstance adjustments have been made.

There are some potential sources of error in this estimate. If the wrong rectangle has been recorded in the logbook then data will be omitted. The total catch value for the trip is divided in proportion with the daily logged amount for a species. Therefore it is impossible to account for possible variations in catch quality which in turn influences the actual daily value.

In some cases a vessel may have a reported position outside an area in consecutive reports. If the intervening time was spent inside an area then this is missed by the analysis. By the same token a vessel may have just entered the area before a VMS report meaning it is included in the analysis.

This resulting dataset is then plotted using a Geographic Information System (GIS) and VMS reports that would be affected by a particular management approach identified. These are then summarised into the tables in this document for each site detailing the percentage of activity affected.

Assessment of under 15m data

For vessels in the range of 10 to 15m there is a requirement to keep a logbook detailing catches at ICES rectangle level. VMS is presently being rolled out to vessels in this size range but there is no industry wide dataset available yet. Following the requirement for over 12m boats to have VMS there is also one year's worth of VMS data for some 12m-15m vessels. This has been utilised as a validation test.

Marine Scotland undertook the Scotmap project to get a better understanding of the distribution of activities by under 15m vessels. It provides an improved spatial resolution of where under 15m activity occurs within a ICES rectangle data. Fishing areas were identified by fishermen during the interviews and recorded in GIS format, and the opportunity to provide an estimate value given.

All of the fishing areas were processed into an amalgamated raster layer with 800 cells per ICES statistical rectangle with an average area of ca. 4.20 km². This results in each of the 800 cells having a share of the overall value of the ICES rectangle. However not all vessels participated in Scotmap meaning that the values are an under estimate of total fleet activity, but can be used on a proportional basis. For under 15m vessels, where VMS data is not available, it provides a better spatial resolution of data than looking at values at an ICES rectangle level. However given that it provides an aggregated average value it does not present data at an individual vessel level there will be limits to its accuracy.

In order to analyse data to finer spatial scales to assess the value of MPAs and the potential impact of management measures each Scotmap grid has been divided further into 25 equally sized smaller grids (this assumes that value is uniformly distributed across the Scotmap grid cell). From the Scotmap data the total value of each ICES rectangle for a particular gear type was calculated. In the same manner the value of each MPA was calculated using each smaller grid, and then the value of the management measures. This allows the percentage of an ICES rectangle catch that is within an MPA and/or management zone to be calculated. These percentages are then multiplied against all under 15m recorded landings for that ICES rectangle to ascertain the estimated value of the MPA, and the impact of the management measures. This provides a more robust estimate than the previously adopted approach of estimating the proportion of activity affected using the same percentage identified from over 15m vessel data.

There are potential sources of error within this estimate. As mentioned it assumes that vessels which did not participate in Scotmap have the same distribution of activity in an ICES rectangle. It also assumes that the proportion of fishing effort in the same as the proportion of value. This may not always be the case due to variations in catch quality. Finally all data is apportioned to the ICES rectangle recorded in the logbook, meaning any errata at this point cannot be accounted for.

| Costs, Scottish vessels (£) | | | |
|---|------------------------|---------|-------------------------|
| | >15m vessels | | <15m vessels |
| Average Annual Revenue Affected (2010 – 2014, 2015 prices) | Nephrops Trawls | 169,324 | Whitefish trawls 401 |
| | Other Trawl | 241 | Nephrops Trawls 228,679 |
| | Dredge | 42,570 | Other Trawl 221 |
| | | | Dredge 30,276 |
| | | | Pots 420 |
| Revenue affected (present value, 2015-2034, 2015 prices, Scottish vessels) 6,710,135 | | | |
| GVA affected (present value, 2015-2034, 2015 prices, Scottish vessels) 3,971,051 | | | |

The total economic impact for Scottish vessels (measured in GVA, across the twenty year assessment period) is **£3,971,051**. By comparison, for all UK vessels the total is £4,532,185.

For under-15m vessels costs presented are likely an overestimate given the level of aggregation within the data (i.e. the data does not allow for the identification of specific gear-type attributes beyond their headline categorisation).

Combined impact in relation to site, Scottish vessels (£)

| | |
|--|------------|
| Average annual revenue site total | 930,063 |
| Average annual revenue impact of measures | 472,132 |
| Estimated annual revenue of the 137 vessels affected | 19,237,793 |
| Total combined revenue impact | 2.45% |

Total revenue for all gear types within the MPA site is £930,063. The impact on revenue as a result of management measures within the MPA is £472,132 (50.76% of the total site revenue). For this MPA, the overall revenue impact on the 137 affected vessels is just 2.45% (based on their total combined revenue of £19,237,793).

Employment (direct and indirect reduction)

9.9 jobs

It should be borne in mind that these costs are based on the affected vessels stopping fishing. Within the dataset used for these calculations there were more than 100 vessels. This means a relatively small impact on many individuals. Therefore it is anticipated that these vessels will make adjustments to their fishing practices to comply with the measures. In other words they will still have the ability to take the same economic value from relatively nearby fishing grounds.

Employment impacts¹⁹ presented assume a linear relationship between output and employment. In reality such a relationship may not hold. 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.

Public Sector:

The decision to introduce fisheries management measures would result in costs being incurred by the public sector in the following areas:

- Preparation of Statutory Instruments
- Compliance and enforcement

The majority of these costs will accrue at the national level and as such have not

¹⁹Employment impacts are derived from the Scottish Government's Input-Output tables - <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output>

been disaggregated to site level. Only the preparation of Statutory Instruments has been estimated at the site level.

| Site-specific Public Sector Costs (£m) | |
|---|-------|
| Preparation of Statutory Instruments (present value, 2015-2034, 2015 prices) | 0.005 |

Total Costs:

Total quantified costs are presented in present value terms at 2015 prices. Commercial fisheries costs to Scottish vessels are presented in terms of GVA.

| Total Costs (£m) | |
|----------------------|--------------|
| Sector | Cost |
| Commercial Fisheries | 3.971 |
| Public Sector | 0.005 |
| Total Costs | 3.976 |

Scottish Firms Impact Test

Many of the businesses affected may include some small and micro-sized firms. For the commercial fisheries sector the average number of fishermen per Scottish vessel in 2013 was 2.5. Additional costs imposed by the introduction of fisheries management measures at the South Arran site have the potential to fall on small businesses.

Competition Assessment

The introduction of fisheries management measures at the South Arran site may impact commercial fisheries activity operating within a given spatial area.

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 the introduction of fisheries management measures 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. The introduction of fisheries management measures 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.

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. The introduction of fisheries management measures 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. The introduction of fisheries management measures is not expected to reduce suppliers' incentives to compete vigorously.

Test run of business forms

It is not envisaged that the introduction of fisheries management measures 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 management measures 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 management measures will largely affect businesses rather than individuals.

Discussions with Scottish Government Legal colleagues are on-going but at this stage it is not envisaged that the introduction of fisheries management measures will have any legal aid impacts.

Enforcement, sanctions and monitoring

Responsibility for compliance, monitoring and enforcement of the measures will be carried out by Marine Scotland.

Implementation and delivery plan

The management measures will be delivered by Statutory Instrument on 01 February 2016.

Post-implementation review

There is a 6 yearly marine protected area network review cycle and this includes MPAs like South Arran. The need for these measures will be reviewed as part of that wider review in 2024 and every 6 years thereafter. However an interim review

will take place if it is considered necessary.

Summary

The South Arran MPA was designated under the Marine (Scotland) Act 2010 in August 2014. These measures are proposed to ensure that the MPA is well-managed and that the conservation objectives for each protected feature are furthered.

SSI cover note for: Waste (Meaning of Recovery) (Miscellaneous Amendments) (Scotland) Order 2015 (SSI 2015/438); Community Right to Buy (Scotland) Amendment Regulations 2016 (SSI 2016/4)

Procedure for Negative Instruments

1. Negative instruments are instruments that are “subject to annulment” by resolution of the Parliament for a period of 40 days after they are laid. All negative instruments are considered by the Delegated Powers and Law Reform Committee (on various technical grounds) and by the relevant lead committee (on policy grounds). Under Rule 10.4, any member (whether or not a member of the lead committee) may, within the 40-day period, lodge a motion for consideration by the lead committee recommending annulment of the instrument. If the motion is agreed to, the Parliamentary Bureau must then lodge a motion to annul the instrument for consideration by the Parliament.

2. If that is also agreed to, Scottish Ministers must revoke the instrument. Each negative instrument appears on a committee agenda at the first opportunity after the Delegated Powers and Law Reform Committee has reported on it. This means that, if questions are asked or concerns raised, consideration of the instrument can usually be continued to a later meeting to allow correspondence to be entered into or a Minister or officials invited to give evidence. In other cases, the Committee may be content simply to note the instrument and agree to make no recommendation on it.

Recommendation

3. The Committee is invited to consider any issues which it wishes to raise on these instruments.

SSI 2015/438

Title of Instrument: Waste (Meaning of Recovery) (Miscellaneous Amendments) (Scotland) Order 2015 (SSI 2015/438)

Type of Instrument: Negative

Laid Date: 18 December 2015

Circulated to Members: 15 January 2016

Meeting Date: 20 January 2016

Minister to attend meeting: No

Motion for annulment lodged: No

Drawn to the Parliament’s attention by the Delegated Powers and Law Reform Committee? No

Reporting deadline: 8 February 2016

Delegated Powers and Law Reform Committee

4. At its meeting on 12 January 2015, the Committee considered the following instrument and determined that it did not need to draw the attention of the Parliament to the instrument on any grounds within its remit.

5. A copy of the Explanatory Notes and the Policy Notes are included with the papers.

Purpose

This Order amends various enactments to effect changes as a consequence of the amendment of Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives (“the Waste Framework Directive”) (OJ L 312, 22.11.2008, p.3) by Commission Directive (EU) 2015/1127 (“the 2015 Directive”) (OJ L 184, 11.07.2015, p.13).

EXPLANATORY NOTE

As per purpose above and including:

This Order amends various enactments to effect changes as a consequence of the amendment of Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives (“the Waste Framework Directive”) (OJ L 312, 22.11.2008, p.3) by Commission Directive (EU) 2015/1127 (“the 2015 Directive”) (OJ L 184, 11.07.2015, p.13).

Article 3(15) of the Waste Framework Directive provides a definition of “recovery” of waste and makes reference to Annex II, which sets out a non-exhaustive list of recovery operations. The 2015 Directive amends Annex II to the Waste Framework Directive. The amendment makes provision for a climate correction factor to be applied to the energy efficiency formula used to calculate whether an incineration facility dedicated to the processing of municipal solid waste meets the energy efficiency threshold for being considered a recovery operation (operation “R1” in Annex II).

No business and regulatory impact assessment has been prepared for this Order as no significant change is foreseen to the existing impacts upon business, charities or voluntary bodies.

POLICY NOTE

THE WASTE (MEANING OF RECOVERY) (MISCELLANEOUS AMENDMENTS) (SCOTLAND) ORDER 2015 SSI 2015/438

The above instrument was made in exercise of the powers conferred by section 2(2) of the European Communities Act 1972 and section 74 of the Marine and Coastal Access Act 2009.

The instrument is subject to negative procedure.

POLICY OBJECTIVES

The European Commission has introduced an amendment to the Waste Framework Directive 2008/98/EC (WFD). The amendment contained within Commission Directive 2015/1127 (the new Directive) amends Annex II of the WFD and the definition of “recovery” which is defined in part by reference to that Annex.

The effect of the amendment is to seek to redress an imbalance that mainly affects energy from waste through incineration operations in Southern European countries which have warmer climates and will have minimal impact if any, on equivalent operations in Scotland.

The new Directive requires amendments to the following Scottish Regulations and Orders.

- The Special Waste Regulations 1996
- The End-of-Life Vehicles (Storage and Treatment) (Scotland) Regulations 2003
- The National Waste Management Plan for Scotland Regulations 2007
- The Marine Licensing (Exempted Activities) (Scottish Offshore Region) Order 2011
- The Marine Licensing (Exempted Activities) (Scottish Inshore Region) Order 2011
- The Waste Management Licensing (Scotland) Regulations 2011
- The Pollution Prevention and Control Regulations 2012

This Order, entitled “*The Waste (Meaning of Recovery) (Miscellaneous Amendments) (Scotland) Order 2015*”, amends the relevant definitions and references.

This instrument only partly transposes the requirements of the new Directive. Certain UK-wide legislation requires amending and this will be done by the UK Government to ensure full transposition.

The Order will have no or minimal impact on existing waste management procedures in Scotland. The other UK Administrations are making similar amendments to their own legislation.

CONSULTATION

The Order is being made under section 74 of the Marine and Coastal Access Act 2009 in respect of the amendment to the Marine Licensing (Exempted Activities) (Scottish Offshore Region) Order 2011, and section 2(2) of the European Communities Act 1972 (ECA) for the rest of the amendments. The 2011 Order was made under an executive devolved power and so could not be amended using section 2(2) of the 1972 Act.

The Marine and Coastal Access Act 2009 requires consultation to take place with such persons as the Scottish Ministers consider appropriate, therefore the Scottish Government Marine Division has written to stakeholders seeking their views on the amendments.

The Scottish Government has not consulted more widely since the changes are unlikely to have any impact on waste incineration operations in Scotland. The use of section 2(2) of the European Communities Act 1972 rather than domestic powers under the Pollution Prevention and Control Act 1999 or the Marine (Scotland) Act 2010 allows this instrument to be made without further statutory consultation, under the negative procedure, and without the need for a designation order to be made under the Pollution Prevention and Control Act 1999 in respect of the amended Waste Framework Directive. In light of the technical nature of the amendments and the minimal impact this Order will have on energy waste operations, this is considered the most appropriate use of resources in the circumstances.

IMPACT ASSESSMENTS

The amendments are to be made to ensure compliance with terminology used by the European Commission and will have little or no effect on the waste management industry in Scotland.

Therefore no impact assessments were considered necessary.

FINANCIAL EFFECTS

Richard Lochhead MSP, Cabinet Secretary for Rural affairs, Food and the Environment confirms that no BRIA is necessary as the instrument has no financial effects on the Scottish Government, local government or on business.

Scottish Government
Directorate for Environment and Forestry
18 December 2015

SSI 2016/4

Title of Instrument: Community Right to Buy (Scotland) Amendment Regulations 2016 (SSI 2016/4)

Type of Instrument: Negative

Laid Date: 8 January 2016

Circulated to Members: 22 January 2016

Meeting Date: 27 January 2016

Minister to attend meeting: No

Motion for annulment lodged: No

Drawn to the Parliament's attention by the Delegated Powers and Law Reform Committee? No

Reporting deadline: 22 February 2016

Delegated Powers and Law Reform Committee

6. At its meeting on 19 January 2016, the Committee considered the following instrument and determined that it did not need to draw the attention of the Parliament to the instrument on any grounds within its remit.

7. A copy of the Explanatory Notes and the Policy Notes are included with the papers.

Purpose

These Regulations make minor corrections to the Community Right to Buy (Scotland) Regulations 2015 ("the 2015 Regulations"). Regulation 2(2) substitutes the reference to the year "2015" in regulation 1(3)(d)(ii) of the 2015 Regulations with a reference to the year "2016". Regulation 2(3) adds the words "to the ballotter" into regulation 20(2) of the 2015 Regulations. Regulation 2(4)(b) amends Schedule 11 to the 2015 Regulations to add an additional entry concerning the result into the form of return that must be notified by the ballotter as required by section 52(3) of the Land Reform (Scotland) Act 2003.

EXPLANATORY NOTE

As per the Purpose above.

POLICY NOTE

The Community Right to Buy (Scotland) Amendment Regulations 2016 (SSI 2016/4)

The above instrument was made in exercise of the powers conferred by Scottish Ministers by sections 34(5), 52(3) and (7) and 98(3) of the Land Reform (Scotland) Act 2003. The instrument is subject to the negative procedure.

Policy Objectives

The Community Right to Buy (Scotland) Amendment Regulations 2016 (“the Regulations”) make minor amendments to the Community Right to Buy (Scotland) Regulations 2015 (“the 2015 Regulations”), which were laid before Parliament on 23rd November 2015. At its meeting on 8th December 2015 the Delegated Powers and Law Reform Committee considered the 2015 Regulations, taking account of correspondence from the Scottish Government undertaking to amend the 2015 Regulations before they came into force to address certain issues identified by the Committee. In its Report¹ the Committee noted the Scottish Government’s undertaking to make these amendments, and these Regulations meet that undertaking.

The Regulations substitute “2016” for “2015” to correct a typographical error in regulation 1(3)(d)(ii) of the 2015 Regulations.

The Regulations amend regulation 20(2) of the 2015 Regulations to clarify that it is the ballotter which is the party to whom Ministers must provide a copy of the community body’s memorandum, articles of association, constitution or registered rules.

The Regulations amend the title of Schedule 11 to ensure that it reflects the fact that the Schedule contains the prescribed form of return of ballot results.

The Regulations amend Schedule 11 (Form of return of ballot results) to add entry 9A which will require the ballotter to provide details of the result of the ballot, being the number of votes cast for the proposition that the community body buy the land, divided by the number of persons eligible to vote who voted in the ballot, expressed as a percentage. This amendment will provide clarity as to the result of the ballot.

Consultation

Two public consultations took place prior to the introduction of the Community Empowerment (Scotland) Bill, with the latter, open from November 2013 to January 2014, consulting on improvements to Part 2 of the 2003 Act which sets out the process for the community right to buy.

¹See the DPLRC’s 79th Report, 2015 (Session 4): Subordinate Legislation, published on 9th December 2015: http://www.scottish.parliament.uk/S4_SubordinateLegislationCommittee/Reports/DPLRS042015R79Rev.pdf

The results of these consultations and resultant conversations with stakeholders shaped and informed the content of the Community Right to Buy (Scotland) Regulations 2015 and the presentation of the forms, notices and notifications in those regulations, which are amended by this instrument.

Impact assessments

An equality impact assessment was completed on the policy in June 2014 and equally applies to this instrument. The equality impact assessment can be accessed via the following link : <http://www.gov.scot/Resource/0047/00470252.pdf>

A Privacy Impact Assessment was not required for introduction of the Community Empowerment (Scotland) Bill, and there are no matters arising within this instrument which would require a privacy impact assessment to be carried out.

A pre-screening Strategic Environmental Assessment (SEA) was carried out prior to the Community Empowerment (Scotland) Bill, and there are no matters arising within this instrument which would require a refresh of the SEA.

Financial effects

A Business and Regulatory Impact Assessment (BRIA) was completed on the policy in June 2014. The financial impacts of the regulations contained within this instrument have been considered in relation to the BRIA at the time it was drafted, and there are no further financial impacts identified in this instrument which were not contained within the BRIA.

Scottish Government
Agriculture, Food and Rural Communities Directorate
5 January 2016

SSI cover note for: Water Environment (Amendment of Part IIA of the Environmental Protection Act 1990: Contaminated Land) (Scotland) Regulations 2016 [draft]

| | |
|--|---|
| Title of Instrument: | Water Environment (Amendment of Part IIA of the Environmental Protection Act 1990: Contaminated Land) (Scotland) Regulations 2016 [draft] |
| Type of Instrument: | Affirmative |
| Laid Date: | 5 January 2016 |
| Circulated to Members: | 22 January 2016 |
| Meeting Date: | 27 January 2016 |
| Minister to attend meeting: | Yes |
| Motion to approve lodged: | Yes – S4M-15274 |
| Drawn to the Parliament’s attention by the Delegated Powers and Law Reform Committee? | No |
| Reporting deadline: | 22 February 2016 |

Delegated Powers and Law Reform Committee

1. At its meeting on 12 January 2016, the Committee considered the following instrument and determined that it did not need to draw the attention of the Parliament to the instrument on any grounds within its remit.
2. A copy of the Explanatory Notes and the Policy Notes are included with the papers.

Purpose

These Regulations amend section 78YB of the Environmental Protection Act 1990 by substituting a new subsection (1A) into that provision. This new subsection sets out the circumstances in which a remediation notice under Part IIA of that Act (contaminated land) may not be served where the Water Environment (Controlled Activities) (Scotland) Regulations 2011 apply.

Procedure

The draft Order was laid on 5 January 2016 and referred to the Rural Affairs, Climate Change and Environment Committee. The Order is subject to affirmative procedure (Rule 10.6). It is for the Rural Affairs, Climate Change and Environment Committee to recommend to the Parliament whether the Order should be approved. The Minister for Environment, Climate Change and Land Reform has, by motion S4M-15274 (set out in the agenda), proposed that the Committee recommends the

approval of the Order.

Recommendation

3. The Committee must decide whether or not to agree to the motion, and then report to Parliament accordingly, by 22 February 2016.

EXPLANATORY NOTE

As per purpose above and including:

These Regulations amend section 78YB of the Environmental Protection Act 1990 by substituting a new subsection (1A) into that provision. This new subsection sets out the circumstances in which a remediation notice under Part IIA of that Act (contaminated land) may not be served where the Water Environment (Controlled Activities) (Scotland) Regulations 2011 apply.

No business and regulatory impact assessment has been prepared for these Regulations as no impact upon business, charities or voluntary bodies is foreseen.

POLICY NOTE

The Water Environment (Amendment Of Part IIA Of The Environmental Protection Act 1990: Contaminated Land) (Scotland) Regulations 2016

The above instrument is made in exercise of the powers conferred by sections 20 and 36(2) and (3) of the Water Environment and Water Services (Scotland) Act 2003 ("the 2003 Act"). The instrument is subject to the affirmative procedure.

Policy Objectives

1. These Regulations clarify the circumstances in which a remediation notice under Part IIA (contaminated land) of the Environmental Protection Act 1990 may not be served, where it is more appropriate to take enforcement action under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 ("the CAR Regulations").

Background

2. The purpose of Part IIA is to address the legacy of historic contamination - there are other legislative regimes in place to deal with pollution or contamination that is current or recent. Where it is not appropriate to take action under those other regimes, Part IIA comes into play and the current wording of the 1990 Act is intended to convey that hierarchy. Section 78YB of the 1990 Act sets out the interactions between Part IIA and other pollution control regimes by describing the circumstances under which Part IIA cannot be used.

3. However in describing these interactions between Part IIA and the CAR Regulations, the wording of section 78YB of the 1990 Act is open to such broad interpretation that it could be construed that the CAR Regulations should be used in circumstances where the policy intent is that Part IIA is the appropriate regime. This

lack of clarity is unhelpful and may be hindering action to address historic contamination; so these amendments provide the necessary clarity.

Consultation and financial implications

4. This technical amendment is of relevance only to our regulatory bodies with responsibilities for contaminated land remediation – namely, our local authorities and the Scottish Environment Protection Agency (“SEPA”). We have therefore consulted local authorities, SEPA and, as required by section 21(1)(b) of the 2003 Act, other responsible authorities designated under section 2 of the 2003 Act. The amendment will not affect any other persons and so no consultation was carried out under section 21(1)(c) or (d) of the Act. All persons consulted are content with this proposal. No business and regulatory impact assessment has been prepared for these Regulations because no additional impacts on business, charities or voluntary bodies is foreseen.

Environmental Quality Division
December 2015