

**Scottish MPA Project  
Management options**

**ROSEMARY BANK SEAMOUNT POSSIBLE MPA**

This is a working draft which has been produced to support early discussions with stakeholders about management.

Following a decision by Scottish Ministers this site may be subject to formal consultation, at which point it will become a possible MPA. This document is largely aimed at supporting discussions during the formal consultation process and therefore we have used the term 'possible MPA' throughout.

**Document version control**

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Reason / Comments</b>
Version 0.1	05/03/2013	Beth Henshall	First draft
Version 0.2	08/03/2013	I Marengo	Instalment of first maps
Version 0.3	19/03/2013	D Tobin	Fisheries input
Version 0.4	25/03/2013	Beth Henshall	Addition of sensitivity and management option text
Version 0.5	09/04/2013	Beth Henshall	Changes to text to reflect new template
Version 0.6	10/04/2013	Pete Chaniotis	Comments and track changes
Version 0.7	15/04/2013	Beth Henshall	Changes to reflect MS comments
Version 1.0	16/04/2015	Beth Henshall	Version for MPA Sub Group information
Version 1.1	13/05/2013	Beth Henshall	Inclusion of Sub Group comments and template update
Version 1.2	14/05/2013	Pete Chaniotis	Review of document
Version 1.3	15/05/2013	Beth Henshall	Incorporation of comments
Version 1.4	23/05/2013	Tom Blasdale	Review of fisheries options
Version 1.5	24/05/2013	Beth Henshall	Incorporation of comments
Version 1.6	13/06/2013	Beth Henshall	Template update
Version 1.7	14/06/2013	Megan Linwood	Review of document
Version 1.8	18/06/2013	Beth Henshall	Incorporation of comments

**Distribution list**

<b>Format</b>	<b>Version</b>	<b>Issue date</b>	<b>Issued to</b>
Electronic	1.0	16/04/2013	MPA Sub Group
Electronic	1.8	18/06/2013	Michael McLeod

## DEVELOPMENT OF MANAGEMENT OPTIONS FOR THE ROSEMARY BANK SEAMOUNT POSSIBLE MPA

### Management Options Summary

The following table summarises the management options considered for the Rosemary Bank Seamount possible MPA. The options are being considered in order to eliminate or manage the risk of not meeting the conservation objectives for the proposed protected features. For more detail on these options, please read the full Management Options Paper. It is recommended that discussions take place between sea users, scientists and managers to determine which of these management options is the most appropriate.

Activity	Management options
<b>Fishing activity: Bottom contacting mobile and static gear</b> (e.g. otter trawling, set netting, line fishing, creeling and potting)	<b>No additional management and reduce/limit pressures:</b> There is a significant risk of not achieving the conservation objectives for <b>seamount communities</b> and <b>deep sea sponge aggregations</b> and it is recommended that neither of these options are applied.  <b>Remove/avoid pressures:</b> This is the only option that would allow the conservation objectives to be achieved for <b>deep sea sponge aggregations</b> and <b>seamount communities</b> and it is recommended that this option should be applied.

## **Introduction**

The Rosemary Bank Seamount possible Marine Protected Area (MPA) is located to the north-east of the Rockall Trough, in the deep waters off western Scotland. An extinct volcano, the seamount is a hotspot for sea life and significant to the overall health of Scotland's seas because of the way it influences underwater currents that bring valuable nutrients to the region. The area of the Rosemary Bank Seamount is 7,413 km<sup>2</sup>.

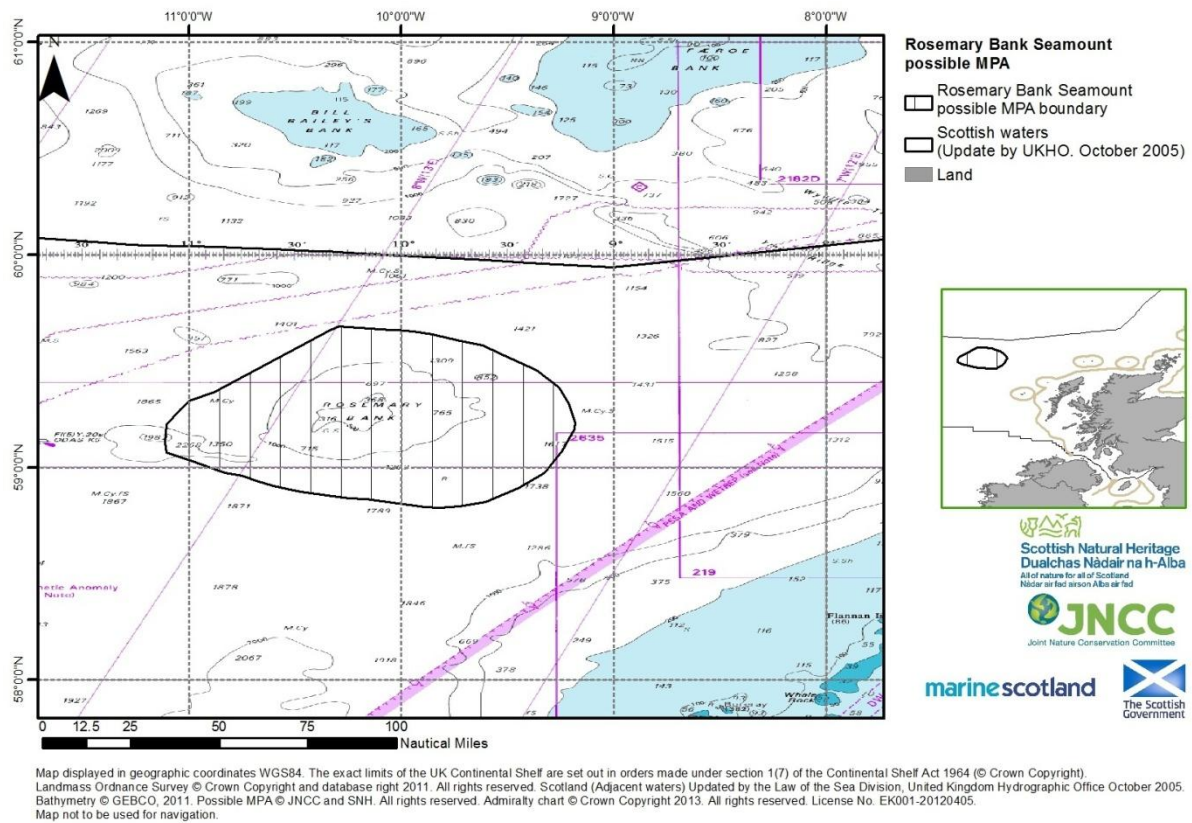
Further details of the possible MPA can be found in the Rosemary Bank Seamount site summary document.

Historically, the main fishing activity overlapping the Rosemary Bank Seamount was trawling for deep sea species, however, the fishery appears to have stopped in 2009 when the Total Allowable Catch for orange roughy was reduced to zero. A deepwater netting and potting fishery for red crab has occurred in the past on the seamount and along the 700-110m contour, however, there has is no evidence of landings continuing after 2008.

This document has been produced to provide background information on the development of management for the Rosemary Bank Seamount possible MPA. It will be used during discussions as part of the formal consultation. The aim of these discussions is to explore current and likely future activities and the potential interactions that these may have with the proposed protected features.

The document describes the known location and extent of proposed protected features and the current knowledge of where activities take place. It also presents the management options for each of those activities that are considered capable of having an effect on the proposed protected features. The document provides those with an interest in the area a chance to input into the early stages of developing appropriate management of activities to ensure that the Rosemary Bank Seamount possible MPA makes a genuine and long-lasting contribution to the protection of Scotland's marine environment.

**Map 1** Location of the Rosemary Bank Seamount possible MPA



## Roles

The role of JNCC is to advise Scottish Government on management options for the Rosemary Bank Seamount possible MPA. In doing this, we aim to ensure that the conservation objectives for the proposed protected features are met.

Marine Scotland will lead the discussions on management with stakeholders. They will consider JNCC's advice and will lead on the development of specific management measures. They will be responsible for making recommendations to Scottish Ministers on these measures. Scottish Ministers will decide whether to implement these measures.

Stakeholders can provide additional evidence to support the development of management options including local knowledge of the environment and of activities. Discussions with stakeholders will be one way of highlighting the implications of any management options to both JNCC and Scottish Government. This will contribute to the development of well-designed and effective management measures.

## Proposed protected features and conservation objectives

The Rosemary Bank Seamount possible MPA is being considered as part of a network of new Nature Conservation MPAs. These are being established to help conserve a range of Scotland's important marine habitats, wildlife, geology and landforms. The Rosemary Bank Seamount possible MPA is being considered for the following proposed protected features which are shown in map 2:

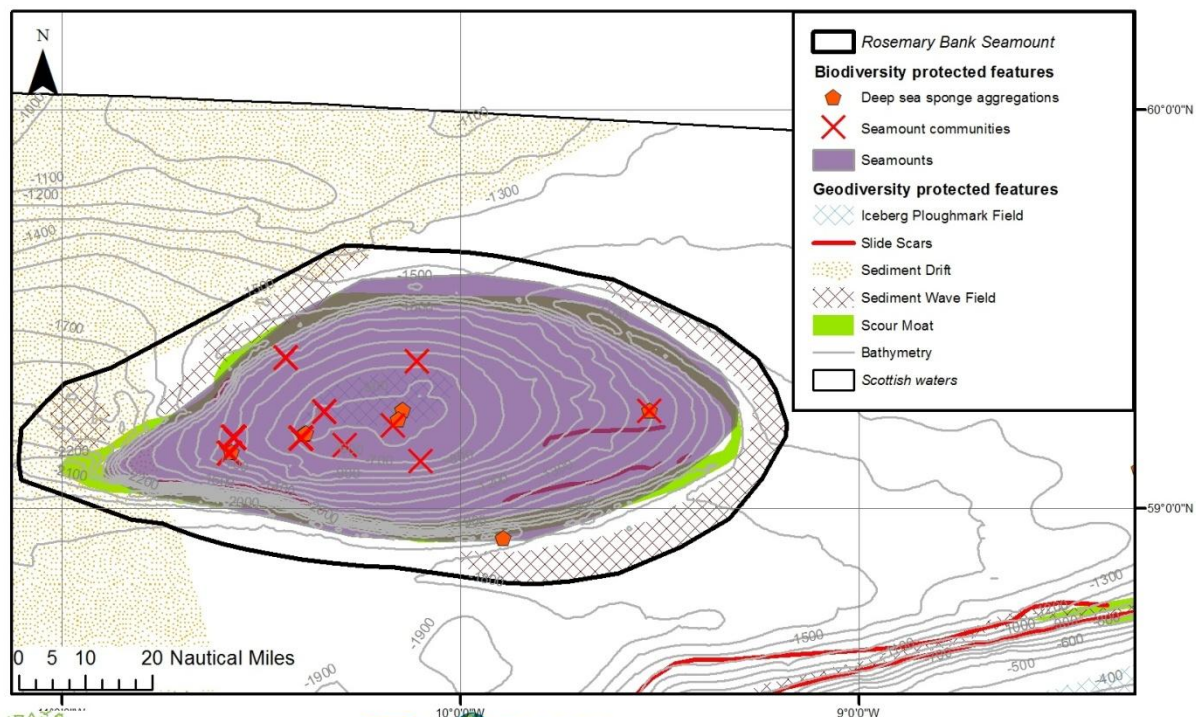
- Deep sea sponge aggregations
- Seamount communities
- Seamount\*
- Geodiversity features - Iceberg ploughmarks, Rosemary Bank Seamount, sediment drifts, sediment wave fields, scour moats, slide scars\*

\*For the majority of geodiversity interests, the low sensitivity of the features to pressures associated with marine activities in the possible MPA is not considered a significant risk to conserving the feature<sup>1</sup>. As such, there is not considered to be a significant risk to the features achieving their conservation objectives and so, with the exception of iceberg ploughmark fields, these features have not been considered further in the context of the management options presented below.

The iceberg ploughmark fields overlap with the area that would need to be managed for the seamount community and deep-sea sponge aggregation features within the possible MPA. It is considered that the management options presented for these features will be sufficient for achieving the conservation objective for iceberg ploughmark fields.

Conservation objectives set out the desired quality of the proposed protected features within each Nature Conservation MPA. They will form part of the designation order for Nature Conservation MPAs and will therefore be in place at the time that a site is formally designated. It has been recommended that the conservation objectives for the proposed protected features within the Hatton Rockall Basin possible MPA are ‘conserve’ for all features. The condition of the proposed protected features has not been verified so the conservation objectives are uncertain, in acknowledgement of the uncertainty in feature condition. Improved evidence on the condition of these features as part of the six-year reporting cycle required under the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009, or through provision of other evidence, may result in modifications to recommendations for management to support the achievement of the feature conservation objectives.

**Map 2** The distribution of proposed protected features within the Rosemary Bank Seamount possible MPA



Map displayed in geographic coordinates WGS84. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). Landmass Ordnance Survey © Crown Copyright and database right 2011. All rights reserved. Scotland (Adjacent waters) Updated by the Law of the Sea Division, United Kingdom Hydrographic Office October 2005. Bathymetry © GEBCO, 2011. Biological data from Geodatabase of Marine features in Scotland (GeMS v2 i10) © Crown copyright. Possible MPA and geodiversity features © JNCC and SNH. All rights reserved.

<sup>1</sup> Brooks, A.J., (2013). Assessing the sensitivity of geodiversity features in Scotland’s seas to pressures associated with human activities. *Scottish Natural Heritage Commissioned Report No. 590*.

## Overview of activities

Table 1 below lists the activities which take place within or close to the Rosemary Bank Seamount possible MPA. Further discussions with those who use the area are required to improve our understanding of these activities (e.g. distribution and intensity etc.).

Those activities which the proposed protected features are sensitive to are explored in detail in the next section. Activities which the proposed protected features are not thought to be sensitive to (i.e. any association between the activity and the features is considered to be minimal) will not be considered further within this document. New or other activities not identified within the table would need to be considered on a case-by-case basis.

**Table 1:** Overview of existing activities believed to take place within or close to the Rosemary Bank Seamount possible MPA

Activities considered capable of affecting the protected features	Activities <i>not</i> considered capable of affecting the protected features
Fishing activities: <sup>2</sup> <ul style="list-style-type: none"> <li>• Otter trawling</li> <li>• Creeling and potting</li> <li>• Line fishing</li> <li>• Set netting</li> </ul>	Shipping <ul style="list-style-type: none"> <li>• Commercial shipping</li> </ul>

## Development of management options

Management options are being developed for each possible MPA where it is considered that some form of management may be necessary to achieve the conservation objectives for each proposed protected feature. The approach to identifying management options for each activity will be risk-based i.e. advice will be focused on where it is believed that there is a risk to achieving the conservation objectives for the proposed protected features. To do this, we are using existing data and information on proposed protected features and relevant activities, and also our understanding of the relationships between the proposed protected features and activities. The management options may be informed by discussion with stakeholders. If new information becomes available during the consultation, the management options may be revised.

Management options are focussed on the activities that cause pressure(s) that a proposed protected feature is sensitive to. Pressures can be physical (e.g. abrasion of the seabed), chemical or biological. Different activities may cause the same pressure, e.g. fishing using bottom gears and aggregate dredging both cause abrasion which can damage the surface of the seabed. The proposed protected features of a possible MPA are considered sensitive to activities that could adversely affect them (because of the associated pressures) especially if they are unable to or are very slow to recover.

The online sensitivity tool ([insert weblink](#)) reflects current understanding of the interactions between activities, pressures and features and supports the first steps of the assessment of risk to the features in the possible MPAs. The tool highlights that activities can give rise to a range of pressures, which the proposed protected features of the possible MPA may be sensitive to. The online tool provides more detailed information including the evidence that has been used in developing these recommendations.

<sup>2</sup> Vessels >15m, based on Vessel Monitoring System (VMS) data from 2006 – 2009.<sup>2</sup>

Risks to achieving the conservation objectives have been identified where there is an overlap between proposed protected features and activities associated with pressures the features are sensitive to. We have recommended management options to manage this risk. Specific details of the recommended management options for each activity are provided in the following sections. The overlap between different activities/planned developments and the proposed protected features is described and where appropriate, mapped. The text focuses on interactions in terms of physical overlap but the assessment of risk in the future should also take account of the intensity and frequency of activities within the possible MPA.

The following range of management options have been identified, including:

- no additional management required
- management to reduce/limit pressures
- management to remove/avoid pressures

All of the management options provided are based on knowledge of the existing activities taking place within the possible MPA. The options do not preclude introducing management in the future for new activities, or future management where there is an increased intensity of activities beyond levels currently taking place.

We recognise that stakeholders can provide local environmental knowledge and more detailed information on activities, including in relation to intensity, frequency, and methods. This additional information may help to develop more specific management options, focussed on interactions between features and activities.

### **Management options**

Management options have been considered by activity, please click on the activities below to be directed to the relevant section:

#### **1. Fishing Activity**

##### [Mobile bottom contact gear](#)

- [Otter trawling](#)

##### [Static bottom contact gear](#)

- [Line fishing](#)
- [Set netting](#)
- [Creeling and potting](#)

### **Fishing activity**

JNCC has evaluated management options to support achievement of the conservation objectives for the proposed protected features of the Rosemary Bank Seamount possible MPA. A gradient of management options have been considered to reduce exposure to pressures, these have been described under three potential management option categories below. Proposed protected features may require a combination of these options to ensure that they achieve their conservation objective.

#### **a) No additional management**

**b) Additional management to reduce/limit pressures** – where fisheries managers may wish to consider a range of measures that could be used to reduce the risk to features by reducing fishing pressure or preventing its increase to unacceptably high levels. These could include:

- Area restrictions (e.g. permanently closing some or the entire extent of the feature)
- Temporal restrictions (e.g. closing parts of the extent of the feature on a rotational basis)
- Seasonal restrictions
- Gear restrictions (e.g. restriction on the use of more damaging gears)

Ideally, any measures would generally apply only to the part of the site where the feature is present. However, there may be circumstances in which it could be desirable to extend management measures beyond the known area of feature distribution, for example, where conditions are suitable for a feature to exist but there are insufficient data to confirm its presence.

**c) Additional management to remove/avoid pressures** – where fishing activities known to adversely affect the feature would be excluded and prevented from occurring in the future. Such exclusion would generally apply only to the part of the site where the feature is present, unless it was necessary to apply to the whole MPA.

The likely effects on the feature condition and the risk to the conservation objectives were assessed using the evidence described in the JNCC/SNH MPA fisheries management guidance.

JNCC have used all available data to evaluate the extent of fishing activities within all offshore possible MPAs. Where possible this data has been presented in accompanying maps. However, to ensure anonymity of the data source, discrete VMS ping data is only presented in instances where it is not considered disclosive to do so (i.e. there are multiple vessels operating in the same area).

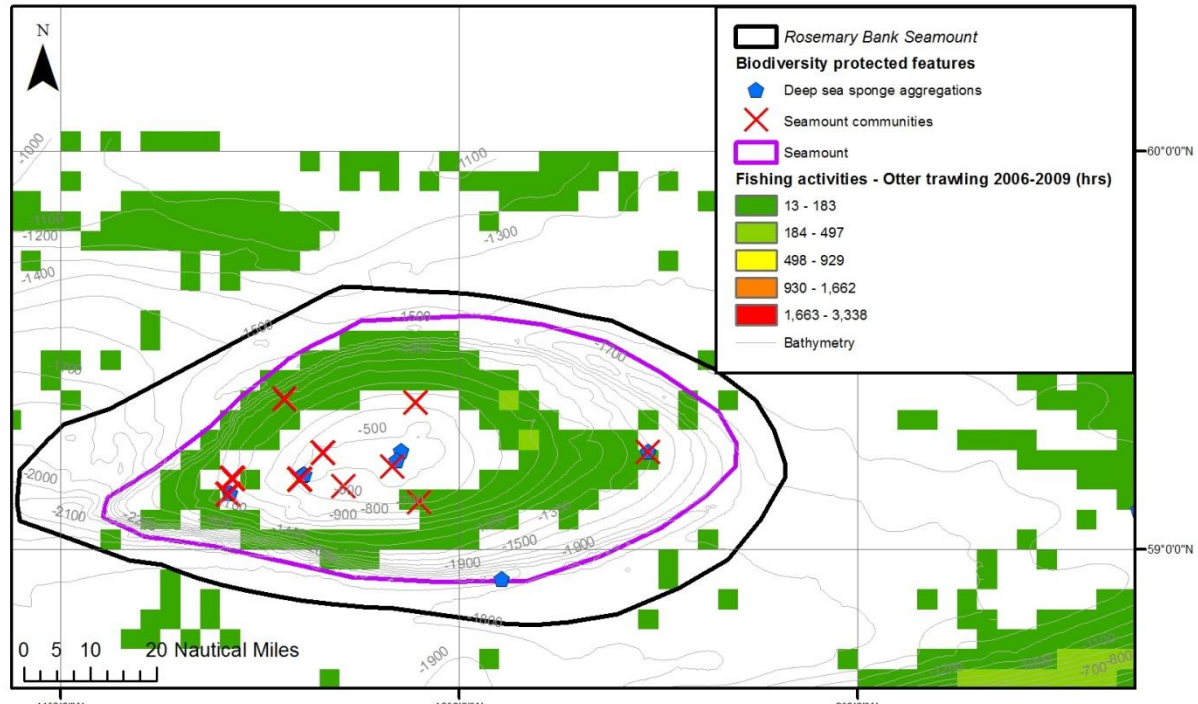
An estimation of fishing activity taking place within the region of the possible MPA was derived from Vessel Monitoring System (VMS) data, with an average 2 hourly ping rate. VMS data for UK vessels were linked to skipper logbook information, which was used to determine the location of the ping and the fishing gear being employed. For non-UK registered vessels where logbook information was not available, information on fishing gear employed was obtained from the 'primary gear' listed on the EU vessel register. All data were filtered using a simple speed rule of between 1 and 6 knots to indicate fishing activity for all gear types. Between 2006 and 2009, generalised values for intensity of effort were estimated by aggregating VMS data to a 0.05 x 0.05 decimal degree grid scale. This method has the advantage of enabling the quantification of effort at a discrete spatial scale (hours per grid per year), however, it precludes analysis of patterns of activity below the resolution of the pre-defined grid. As a result, independent "pings" were analysed for the period 2009 to 2011. To ensure anonymity of the data source, discrete VMS ping data is only presented in instances where it is not considered disclosive to do so (i.e. there are multiple vessels operating in the same area).

## **Mobile bottom contact gear**

### **Otter trawling**

The otter trawl fishery on Rosemary Bank is principally a French fishery (maximum effort in any overlapping fishing grid <180 hours 2006-2009) operating in the 700-1200m contour around Rosemary Bank, as shown on map 3. The greatest concentration of effort (i.e. grids >50 hours over 2006-2009) was on the eastern face of the seamount in the shallower 600-800m depth range. Although overlap of otter trawling activity with known aggregations of proposed protected features is likely to be limited on top of the seamount, there is potential overlap below 600m.

Map 3: Location of otter trawling activity in relation to proposed protected features



Scottish Natural Heritage **marine.scotland** The Scottish Government **JNCC** Joint Nature Conservation Committee

Map displayed in geographic coordinates WGS84. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright), Landmass Ordnance Survey © Crown Copyright and database right 2011. All rights reserved. Scotland (Adjacent waters) Updated by the Law of the Sea Division, United Kingdom Hydrographic Office October 2005. Bathymetry © GEBCO, 2011. Biological data from Geodatabase of Marine features in Scotland (GeMS v2 i10) © Crown copyright. Possible MPA and geodiversity features © JNCC and SNH. All rights reserved. Fishing raster data © DEFRA 2010. Fishing VMS point data ©MS 2012

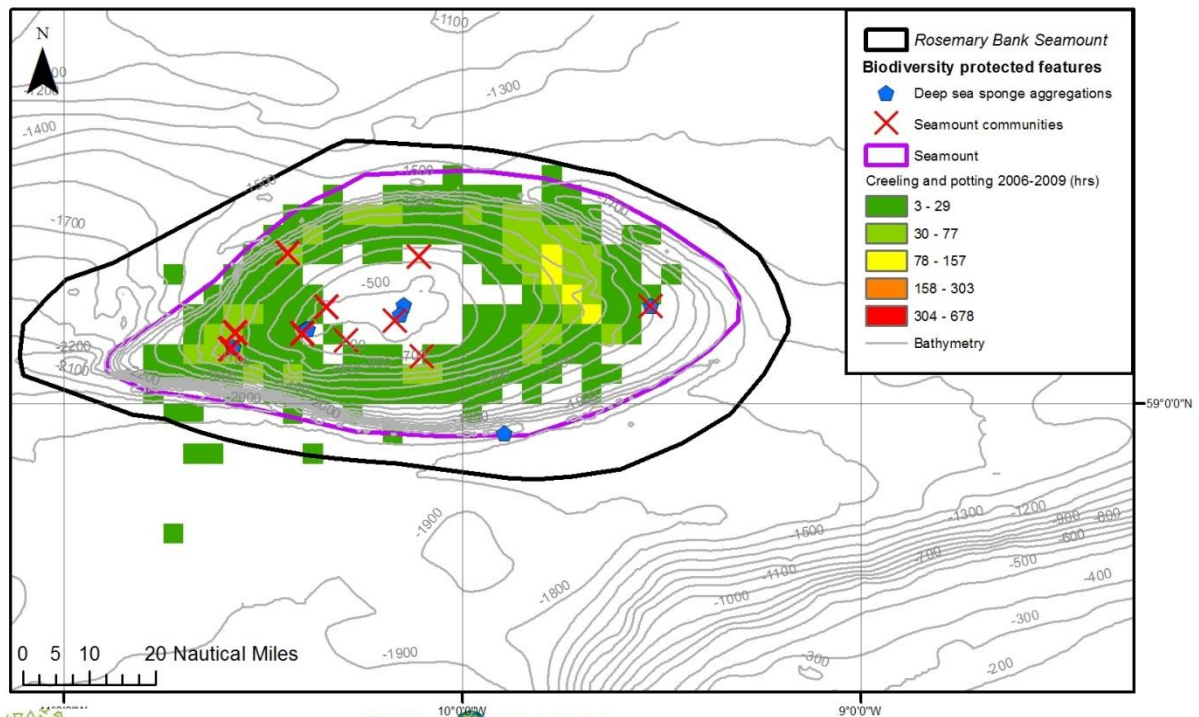
<p><b>Management options</b></p> <p><b>Bottom contact mobile gear (e.g. otter trawling)</b></p>	<p><b>No additional management and reduce/limit pressures:</b> There is a significant risk of not achieving the conservation objectives for <b>seamount communities</b> and <b>deep sea sponge aggregations</b> and it is recommended that neither of these options are applied.</p> <p><b>Remove/avoid pressures:</b> This is the only option that would allow the conservation objectives to be achieved for <b>deep sea sponge aggregations</b> and <b>seamount communities</b> and it is recommended that this option should be applied.</p>
---	--

## Fishing activity: Static bottom contact gear

### Creeling and potting

UK registered creeling and potting vessel activity (maximum effort in any overlapping fishing grid <74 hours 2006-2009) is concentrated in the 700-1100m contour, as shown on map 4. There is no evidence of non-UK vessels operating in the possible MPA. The greatest potential for overlap of activity with known aggregations of the proposed protected features is on the western slope of the seamount.

Map 4: Location of creeling and potting activity in relation to proposed protected features



Scottish Natural Heritage  
Dualchas Nàdair na h-Alba  
All rights reserved for all of Scotland  
Nàdar air fèd airson Alba air fèd

marine scotland

The Scottish Government

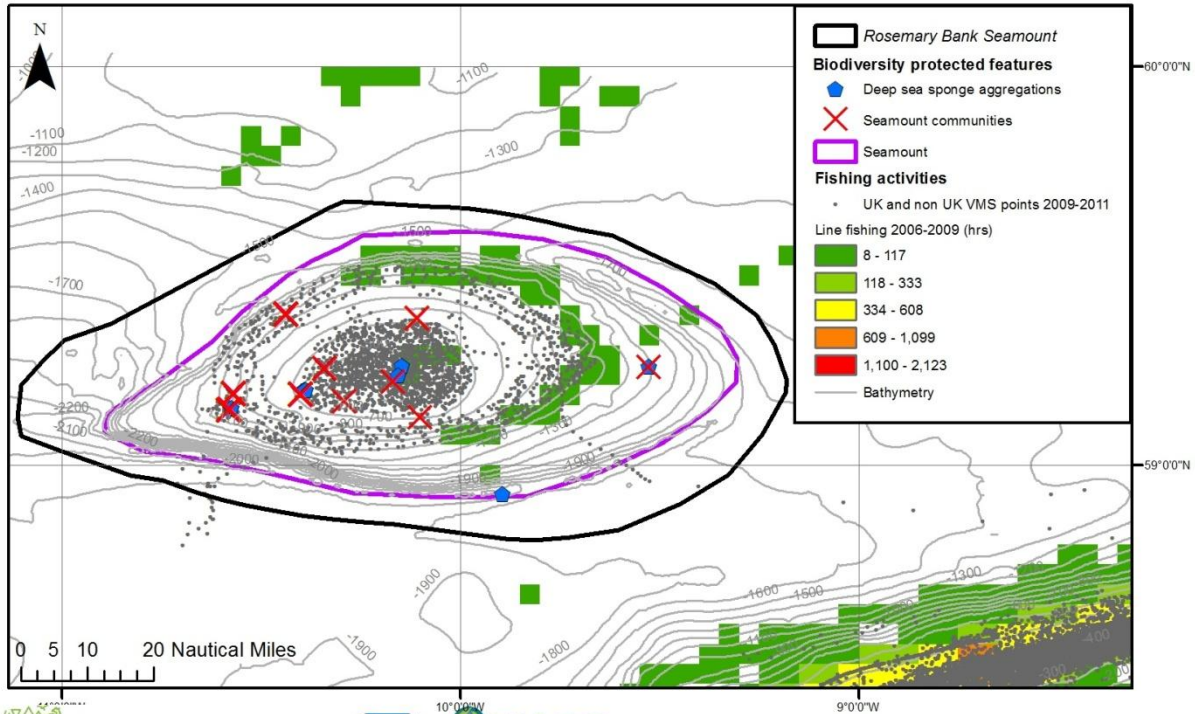
JNCC  
Joint Nature Conservation Committee

Map displayed in geographic coordinates WGS84. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). Landmass Ordnance Survey © Crown Copyright and database right 2011. All rights reserved. Scotland (Adjacent waters) Updated by the Law of the Sea Division, United Kingdom Hydrographic Office October 2005. Bathymetry © GEBCO, 2011. Biological data from Geodatabase of Marine features in Scotland (GeMS v2 i10) © Crown copyright. Possible MPA and geodiversity features © JNCC and SNH. All rights reserved. Fishing raster data © DEFRA 2010. Fishing VMS point data © MS 2012

## Line fishing

In 2006- 2009, evidence of UK long line activity (maximum effort in any overlapping fishing grid <10 hours 2006-2009) was limited to the eastern 900-1100m contour and on top (maximum effort in any overlapping fishing grid <6 hours 2006-2009) of the seamount, as shown in map 5. However, the 2009-2011 VMS ping data suggests that UK vessel activity is more wide-spread across the depth contours and on top of the seamount. There is no evidence of non-UK vessels operating in the possible MPA. The data suggests potential overlap of line fishing activities with known aggregations of the proposed protected features across the seamount possible MPA.

Map 5: Location of line fishing in relation to proposed protected features



Scottish Natural Heritage  
Dualchas Nàdair na h-Alba  
All of nature for all of Scotland  
Nàdar air fad ann an Alba air fad

marinescotland



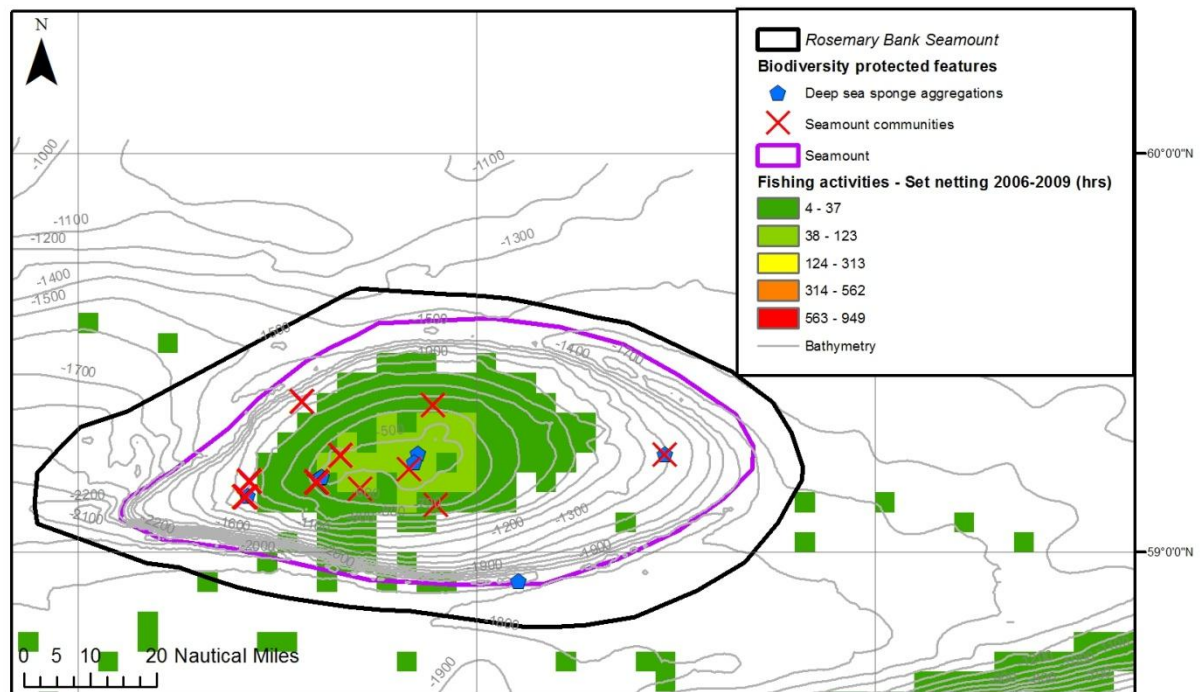
JNCC  
Joint Nature Conservation Committee

Map displayed in geographic coordinates WGS84. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). Landmass Ordnance Survey © Crown Copyright and database right 2011. All rights reserved. Scotland (Adjacent waters) Updated by the Law of the Sea Division, United Kingdom Hydrographic Office October 2005. Bathymetry © GEBCO, 2011. Biological data from Geodatabase of Marine features in Scotland (GeMS v2.10) © Crown copyright. Possible MPA and geodiversity features © JNCC and SNH. All rights reserved. Fishing raster data © DEFRA 2010. Fishing VMS point data © MS 2012

## Set netting

There is evidence of limited UK (maximum effort in any overlapping fishing grid <15 hours 2006-2009) and non-UK registered (i.e. French and German; maximum effort in any overlapping fishing grid <88 hours 2006-2009) set netting concentrated on the top of the seamount, predominantly in the 500-800m depth range, as shown in map 6. There is potential for overlap of set netting activities with known aggregations of the proposed protected features on the shallower sections of the seamount.

Map 6: Location of set netting in relation to proposed protected features




  
 Map displayed in geographic coordinates WGS84. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). Landmass Ordnance Survey © Crown Copyright and database right 2011. All rights reserved. Scotland (Adjacent waters) Updated by the Law of the Sea Division, United Kingdom Hydrographic Office October 2005. Bathymetry © GEBCO, 2011. Biological data from Geodatabase of Marine features in Scotland (GeMS v2 i10) © Crown copyright. Possible MPA and biodiversity features © JNCC and SNH. All rights reserved. Fishing raster data © DEFRA 2010. Fishing VMS point data © MS 2012

**Management options**  
**Bottom contact static gear** (e.g. creeling and potting, line fishing and set netting)

### No additional management and reduce/limit pressures:

There is a significant risk of not achieving the conservation objectives for **seamount communities** and **deep sea sponge aggregations** and it is recommended that neither of these options are applied.

**Remove/avoid pressures:** This is the only option that would allow the conservation objectives to be achieved for **deep sea sponge aggregations** and **seamount communities** and it is recommended that this option should be applied.

## **Conclusions and further recommendations**

Before any firm recommendations are made, discussions should be held with stakeholders to ensure that there is a good understanding of the features and the likely interactions with activities. Marine Scotland will lead the discussions on management with stakeholders. These discussions will start during the formal consultation and, if necessary, may continue after the consultation. The discussions should lead to an improved understanding of the risk to the proposed protected features. The options presented here will then be reviewed by JNCC and a preferred way forward may be recommended. This will form the basis of advice from JNCC to Marine Scotland on management requirements for this possible MPA should it be designated as a Nature Conservation MPA.

Marine Scotland will be responsible for making recommendations to Scottish Ministers on any management measures that may be required. These measures will be developed through discussion with stakeholders after the formal consultation on the possible MPA. Should any management measures require statutory underpinning, Marine Scotland will undertake further consultation.

## **Further information**

The following documents are available for background information:

- [SNH and JNCC MPA network advice \(December 2012\)](#)
- [Marine Scotland Report to Parliament on progress in establishing an MPA network](#)
- [The draft MPA Management Handbook](#)
- The online sensitivity matrix tool
- Draft fisheries guidance

The following documents about the possible Rosemary Bank Seamount possible MPA are also available:

- Site summary
- Data confidence assessment
- Detailed assessment against the MPA Selection Guidelines