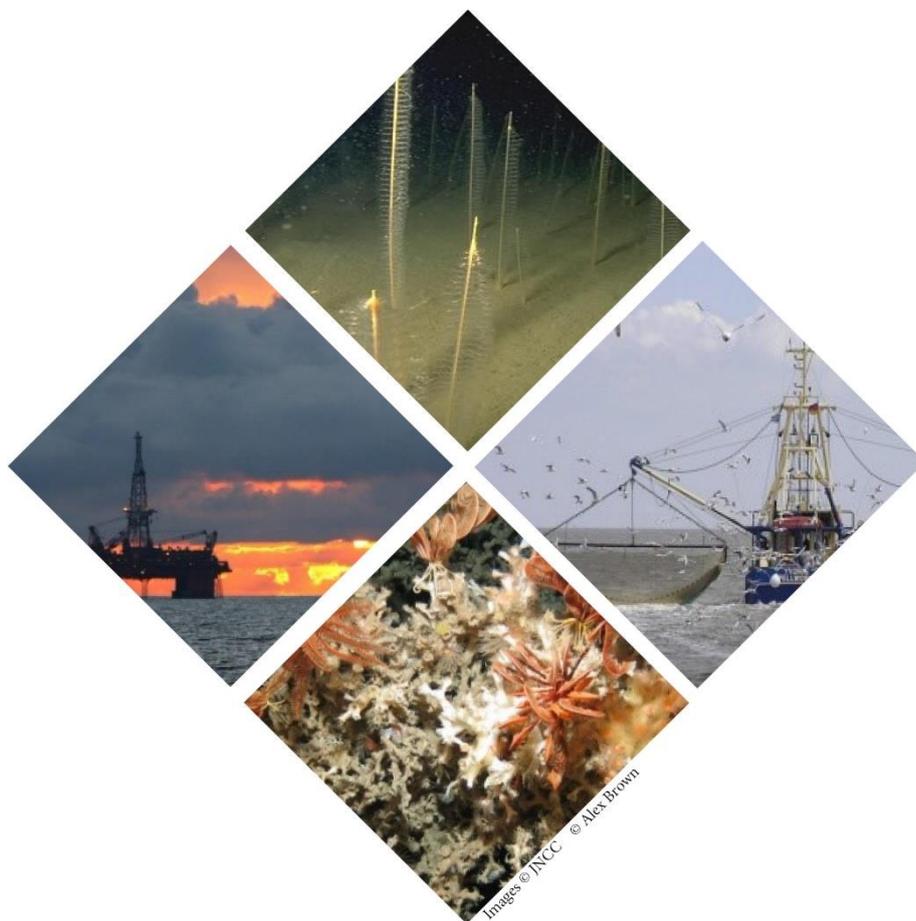


Statements on conservation benefits, condition & conservation measures for Rosemary Bank Seamount Nature Conservation Marine Protected Area

March 2018



What the conservation advice package includes

The information provided in this document sets out JNCC's current view of the site's condition, the conservation benefits which the site can provide and the measures required to support achievement of the site's conservation objectives. This forms part of JNCC's formal conservation advice package for the site and must be read in conjunction with all parts of the package as listed below:

- [Background Document](#) explaining where to find the advice package, JNCC's role in the provision of conservation advice, how the advice has been prepared, when to refer to it and how to apply it;
- [Conservation Objectives](#) setting out the broad ecological aims for the site;
- Statements on:
 - the site's protected feature condition;
 - conservation benefits that the site can provide; and
 - conservation measures needed to further the conservation objectives stated for the site. This includes information on those human activities that, if taking place within or near the site, can impact it and hinder the achievement of the conservation objectives stated for the site (this document); and
- [Supplementary Advice on Conservation Objectives](#) (SACO) providing more detailed and site-specific information on the conservation objectives.

The most up-to-date conservation advice for this site can be downloaded from the conservation advice tab in the [Site Information Centre](#) (SIC) on JNCC's website.

Conservation benefits

By maintaining or achieving favourable condition for the protected features, the site will contribute to delivering:

- Strategic objectives and policies within [Scotland's National Marine Plan](#), particularly 5 (climate change) and 9 (natural heritage);
- [Scottish Biodiversity Strategy's](#) Big Step 6 (Marine and coastal ecosystems restored) Priority Project 12 (Increase environmental status of our seas);
- A network of MPAs around the UK, as outlined under the UK Marine & Coastal Access Act (2009) (Section 123) of relevance to Scotland;

- An ecologically coherent network of MPAs which are well managed under the Convention for the Protection of the Marine Environment of the North-east Atlantic ([OSPAR Convention](#)), specifically OSPAR region: V Wider Atlantic; and
- Good Environmental Status under the Council Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy ([Marine Strategy Framework Directive](#)).

This site has been designated to protect Deep-sea sponge aggregations and Seamount communities which are both considered [Priority Marine Features](#) (PMFs) in Scottish waters and included on the [OSPAR list of Threatened and/or Declining habitats & species](#) in the North-east Atlantic. Reef framework forming corals *Lophelia pertusa* (also listed as an OSPAR Threatened and/or Declining species) and *Madrepora oculata* occur on Rosemary Bank Seamount and are a significant component of the seamount communities present. The geomorphological features Quaternary of Scotland - iceberg ploughmark field, Submarine Mass Movement - slide scars, Marine Geomorphology of the Scottish Deep Ocean Seabed - scour moats, sediment drifts, sediment wave fields and the geological feature Cenozoic Structures of the Atlantic Margin - Rosemary Bank Seamount are also protected within the site. These are a range of features representative of the Rosemary Bank Seamount (and adjacent sea floor) Key Geodiversity Area. The Rosemary Bank Seamount is a large-scale feature protected within the site which is thought to support the health and biodiversity of Scotland's seas by affecting local currents.

This site provides conservation benefits to the wider marine environment and society by affording protection to Deep-sea sponge aggregations and Seamount communities along with their associated species and consequently the provision of the following ecosystem services:

Deep-sea sponge aggregations

- Nutrition: Sponges filter feed organic matter out of the water column, therefore Deep-sea sponge aggregations are a potentially important link in the flow of nutrients between the pelagic and benthic environment. For example, cold-water corals can secrete mucus which becomes a source of dissolved and particulate organic matter. Sponges feed on the organic matter produced by cold-water corals and it is incorporated into sponge tissue, which is then shed and can be consumed by higher trophic levels. This may serve to increase the availability of

prey species to predators through enhancement to levels of biological diversity, potentially act as spawning grounds and provide refugia from predators for commercially important fish species;

- Silicon regulation: by providing a long-term sink for silicon; and
- Provision of biochemical and biotechnological products: Sponges and their associated microbes produce a diverse array of chemicals, many of which have been shown to have applications in drug development. Sponges may also have wider biotechnological applications e.g. chitin networks from one species of sponge are effective at absorbing uranium contamination. Sponge species typically found in Deep-sea sponge aggregations may also prove to have useful applications in the future.

Seamount communities

- Nutrition: Coral habitats are potentially an important link in the flow of carbon between the pelagic and benthic environment. Cold-water coral species secrete mucus which becomes a source of dissolved and particulate organic matter for the ecosystem. Sponge species can feed on this and it is incorporated into sponge detritus, which is then consumed by higher trophic levels. This may serve to increase the availability of prey species to predators through enhancement of biological diversity, potentially providing refugia from predators, locations to lay eggs or nurseries for fish species. There is some evidence that the abundance of certain commercial fish species is higher within coral habitats compared to non-coral habitats;
- Climate regulation: Dead coral skeletons are a long-term store of carbon, although the coral calcification process emits carbon dioxide. Ocean acidification is expected to corrode the skeletons of dead deep-water scleractinian corals although cold-water coral reefs shallower than ~150 m, are not expected to be subject to corrosion as they will remain above the aragonite saturation horizon;
- Provision of recruits: The larvae of corals have a planktonic phase giving the potential for long distance dispersal. A coral habitat can create a supply of recruits to establish new or help maintain existing coral habitats elsewhere; and
- Provision of biochemical and biotechnological products: Chemicals extracted from corals have been shown to have applications in the pharmaceutical industry.

Managing activities that affect the protected features of the site to conserve them at, or recover them to, favourable condition, will support provision of ecosystem services and help fulfil the policy obligations listed above.

Site Condition

Table 1 below sets out JNCC’s view on the overall condition of the site’s protected features based on our understanding of the feature. In summary, a feature is considered to be in unfavourable condition either where evidence indicates it needs to be recovered or where recovery is not considered to be possible through human intervention. Conversely, a feature is considered to be in favourable condition where evidence indicates it is not being adversely affected.

Table 1. JNCC’s view on the condition of the protected features in the site.

| Protected feature | View of condition |
|---|-------------------|
| Deep-sea sponge aggregations | Unfavourable |
| Seamount communities | Unfavourable |
| Iceberg ploughmark fields, Slide scars, Sediment drifts, Sediment wave fields, the Seamount scour moat and the Rosemary Bank Seamount itself representative of the Rosemary Bank Seamount (and adjacent seafloor) Key Geodiversity Area | Favourable |
| Seamount | Favourable |

The conservation measures listed below set out JNCC’s view as to which, if any, human activities may require additional management to conserve or recover the features within the site.

Conservation measures

As set out in Table 1 above, the Deep-sea sponge aggregations and Seamount communities need to be conserved in favourable condition.

Using evidence available about the site and information contained within the [Feature Activity Sensitivity Tool](#) (FeAST), we consider that the activities listed below are capable of significantly affecting the qualifying features of the site. These activities should be managed to conserve the Deep-sea sponge aggregations and Seamount communities by minimising associated pressures:

- Fishing, including bottom contact static and mobile gear.

As set out in Table 1, the large-scale feature (Seamount) and geological / geomorphological features (including iceberg ploughmark fields, slide scars, sediment drifts, sediment wave fields and the seamount scour moat) are considered to be in favourable condition. Based on best available evidence, JNCC do not consider that activities taking place are capable of affecting this protected feature. However, this does not preclude the need for management in the future.

Management of the site should be informed by the sensitivity of protected features to pressures associated with human activities. The [Feature Activity Sensitivity Tool](#) (FeAST), provides an initial assessment of whether a proposed plan or project (or ongoing activity) may have an impact on a protected feature in the site. FeAST identifies pressures associated with the most commonly occurring marine activities, and provides a detailed assessment of feature sensitivity to these pressures. A human activity is considered capable of affecting, other than insignificantly, a feature where the feature is known to be sensitive to associated pressures. The sensitivity assessments provided in FeAST, should be used at an early stage of a plan or project when considering potential impacts of an activity.

The simple presence of such human activities would not necessarily significantly affect the site were they to occur. FeAST should be used in conjunction with the specific details of a proposed plan or project (e.g. indirect and/or additive impacts, activity duration, time of year, scale etc.) and the Supplementary Advice on Conservation Objectives (SACO) to develop assessments of impacts to features within the site. You may also find the information available in the Activities and Management tab of the site's [Site Information Centre](#) useful.