Statements on conservation benefits, condition & conservation measures for The Barra Fan and Hebrides Terrace Seamount Nature Conservation Marine Protected Area

March 2018

JNCC

jncc.defra.gov.uk

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 a range of Priority Marine Features (PMFs) in Scotland's seas. These include the sedimentary seabed habitats Burrowed mud, Offshore deep-sea muds and Offshore subtidal sands and gravels; Seamount communities and the deep-water fish orange roughy (*Hoplostethus atlanticus*). The large-scale features of the Scottish continental slope and the seamount itself, along with a range of geomorphological features representative of The Barra Fan and the Peaches Slide Complex Key Geodiversity Areas, are also protected within the site. Seamount communities support a range of marine life including cold-water corals and deep-sea sponges. Seamount communities, seapens and burrowing megafauna communities (a component of the Burrowed mud protected feature) and orange roughy are included on the OSPAR list of Threatened and/or Declining habitats and species.

This site provides conservation benefits to the wider marine environment and society by affording protection to a range of seabed habitat types and their associated species and orange roughy and consequently the provision of the following ecosystem services:

Orange roughy

This site provides conservation benefits to the wider marine environment and society by affording protection to orange roughy and consequently the provision of the following ecosystem services:

- Nutrition: Providing food for a broad range of fish and marine mammals and supporting the wider orange roughy population as a commercial fish species;
- Provision of recruits: The protection of orange roughy within the site will help the wider stock to recover from severe decline[1]; and
- Whale watching: Orange roughy provide a food source for toothed whales in the wider marine environment.

[1] Scottish MPA Project Draft Fisheries Management Guidance for Orange Roughy (*Hoplosetethus atlanticus*) February 2014. Available from: http://jncc.defra.gov.uk/pdf/Orange%20roughy_v%201.pdf

Sedimentary seabed habitats (Burrowed mud, Offshore deep-sea muds and Offshore subtidal sands and gravels)

- Nutrition: Different sediment types offer habitat for breeding and feeding for various commercial species, which in turn are prey for larger marine species, including birds and mammals;
- Bird and whale watching: Foraging seals, cetaceans and seabirds may also be found in greater numbers near some Subtidal sedimentary habitats due to the common occurrence of prey for the birds and mammals;
- Climate regulation: Providing a long-term sink for carbon within sedimentary habitats.

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 CO2. Ocean acidification is expected to corrode the skeletons of dead deep-water scleractinian corals although cold-water coral reefs shallower than ~ 150 m, are expected to escape 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.
- 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. 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
Burrowed mud (seapen and burrowing megafauna communities)	Unfavourable
Seamount communities	Unfavourable
Offshore deep-sea muds	Unfavourable
Offshore subtidal sands and gravels	Unfavourable
Orange roughy	Unfavourable
iceberg ploughmark field, prograding wedges, continental slope turbidite canyons, slide deposits, scour moat, continental slope and Hebrides Terrace Seamount representative of The Barra Fan & The Peaches Slide Complex Key Geodiversity Areas	Favourable. Unfavourable for iceberg ploughmark fields.
Continental slope	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 sedimentary seabed habitats (Burrowed mud, Offshore deep-sea muds, Offshore subtidal sands and gravels), Seamount communities and orange roughy need to be recovered to 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 sedimentary seabed habitats and Seamount communities by minimising associated pressures:

- Mobile and static demersal fishing.

As set out in Table 1, the large-scale features (Seamount and continental slope), the geological / geomorphological features are considered to be in favourable condition. Based on the best available evidence, JNCC do not consider that activities taking place are capable of affecting these protected features. 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.