Statements on Conservation Benefits, Condition & Conservation Measures for Firth of Forth Banks Complex Nature Conservation MPA

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JNCC

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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);
- Supplementary Advice on Conservation Objectives (SACO) providing more detailed and site-specific information on the conservation objectives; and
- Advice on Operations providing 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.

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 II: Greater North Sea; and
- Good Environmental Status under the UK Marine Strategy.

This site has been designated to protect Offshore subtidal sands and gravels and Ocean quahog (*Arctica islandica*) aggregations. Both are Priority Marine Features (PMFs) in Scotland's seas and Ocean quahog are included on the OSPAR list of threatened or declining habitats and species across the North-east Atlantic. The site is also designated for the protection of Shelf banks and mounds as a large-scale feature, which is considered to be significant to the health and biodiversity of wider Scottish seas, and Wee Bankie Key Geodiversity Area, a series of prominent submarine ridges marking an ice limit during the retreat of the British-Irish Ice Sheet.

This site provides conservation benefits to the wider marine environment and society by affording protection to Offshore subtidal sands and gravels and their associated biological communities, Ocean quahog aggregations and their supporting habitat, the Shelf banks and mounds large-scale feature and the Wee Bankie Key Geodiversity Area and consequently the provision of the following ecosystem services:

Offshore subtidal sands and gravels

- Nutrition: the different sediment types offer habitat for various commercial species, for instance the habitats can be suitable for sandeels and king scallops and shallow sandy sediments can offer habitat for spawning ground for commercially important fish species such as plaice;
- Bird and whale watching: foraging seals, cetaceans and seabirds may be found in greater numbers in the vicinity of some subtidal sedimentary habitats due to the more common occurrence of prey species; and
- Climate regulation: by providing a long-term sink for carbon within sedimentary habitats.

Ocean quahog aggregations

- Nutrition: by providing prey for a broad range of fish and invertebrate species;
- Regulatory processes: providing a bentho-pelagic link by removing plankton and detritus from the water column;
- Scientific study: the longevity of the species makes it of value in the study of long term climatic and environmental change. They are also of value as an indicator species for heavy metal pollutant concentrations on seabed sediments and research into the aging process; and
- Carbon cycling and nutrient regulation: maintaining healthy and productive ecosystems through the laying down of carbonate during shell growth and filter-feeding.

Shelf banks and mounds large-scale feature

- Nutrition: Berwick Bank is a spawning ground for plaice, the larvae of which may be important for repopulating exploited stocks. The feature also provides conditions suitable for king scallops and sandeels; and
- Enhanced levels of biological productivity: the banks and mounds have functional significance for the wider health and biodiversity of Scotland's seas through providing foraging opportunities for seabirds and marine mammals.

Wee Bankie Key Geodiversity Area

- Scientific study: the protected geodiversity features of the Wee Bankie Key Geodiversity Area form a series of prominent submarine ridges marking an ice limit during the retreat of the British-Irish Ice Sheet, and they play an important role in furthering scientific understanding of the deglacial history; and
- Habitat provision: The moraines that form this Key Geodiversity Area are considered to be of functional importance as the ridges are composed of Subtidal sands and gravels and provide suitable habitat for Ocean quahog aggregations and sandeels.

Further detail on ecosystem services which the site can provide are available in the Supplementary Advice on Conservation Objectives (SACO) under the structure and function attribute.

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 sites' protected features. This view is based on information provided in the Supplementary Advice on Conservation objectives (SACO) (hyperlink is provided in the box at the top of this document). The SACO sets out our understanding of the feature attributes which are listed in the conservation objectives (hyperlink is provided in the box at the top of document). In summary, a feature is in unfavourable condition either where evidence indicates one or more of its attributes need to be recovered or where recovery is not considered to be possible through human intervention. Conversely, a feature is in favourable condition where evidence indicates none of the attributes are being adversely affected. To understand JNCC's view on condition you will need to refer to the SACO for this site.

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

Protected feature	View of condition
Offshore subtidal sands and gravels	Unfavourable
Ocean quahog aggregations	Unfavourable
Shelf banks and mounds large-scale feature	Favourable
Wee Bankie Key Geodiversity Area	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 Tables 1 above, Offshore subtidal sands and gravels and Ocean quahog aggregations need to be recovered to favourable condition.

Please see the Supplementary Advice on Conservation Objectives for more detail (hyperlink is provided in the box at the top of this document). Using evidence available about the site and information contained within the Advice on Operations, we consider that the activities listed below are capable of significantly affecting the protected features of the site.

These activities should be managed to prevent further deterioration to Offshore subtidal sands and gravels and Ocean quahog aggregations by removing or reducing (where appropriate) their associated pressures:

- Demersal trawling and dredging: Additional management is needed for demersal trawling and dredging within the site to prevent further deterioration of the feature from exposure to associated pressures like abrasion and removal of non-target species; and
- Renewable energy: Associated activities have not yet occurred, but should development take place appropriate mitigation may need to be put in place.

Management of the site should be informed by the sensitivity of protected features to pressures associated with human activities. The Advice on Operations 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. The Advice on Operations 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 a feature where the feature is known to be sensitive to associated pressures. The sensitivity assessments provided in the Advice on Operations workbook and the guidance within 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. Advice on Operations 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 site-specific 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.