

JNCC feedback on proposed fisheries management measures for the North Norfolk Sandbanks and Saturn Reef cSAC/SCI

Summary of JNCC advice

JNCC consider that the proposal would reduce the risk of not achieving the conservation objectives for *Sabellaria spinulosa* reef to some extent, however, significant areas of reef would remain exposed to activities which could affect their long term extent and distribution. Thus, the risk to the conservation objective would remain high.

The proposal would reduce the risk of not achieving the conservation objectives for sandbanks, and broadly meets the conditions for adaptive management as set out in JNCC and Natural England's adaptive management paper. Closing areas with higher fishing effort would increase the likelihood of detecting an effect of fishing through monitoring. As a consequence Defra may wish to consider including areas of higher effort within the fisheries restriction zones. It may also be advisable to take into consideration existing survey coverage including adequate representation of survey stations both within and outwith potential fisheries restriction zones.

The proposed fisheries restriction zones broadly cover the range of habitat subtypes found within the site. However, coverage of the crest component of offshore banks is relatively low. If managers wish to increase the area of restriction zones, consideration should be given to increasing coverage of the shallower area of the Indefatigable Banks.

To meet the requirements for adaptive management, a management plan must provide details of any necessary research/monitoring required to assess the effectiveness of measures.

Background to the advice

Defra led workshops were held in August 2014 and May 2015 to discuss fisheries management measures for MPAs in the southern North Sea, including NNSSR. In preparation for these meetings, JNCC prepared fisheries management options papers for the sites, which discussed the risk to achievement of the conservation objectives associated with a range of management options:

Management options for mobile bottom contact gear:

- a) **No additional management** – This option would pose a risk of not achieving the conservation objectives for **sandbanks which are slightly covered by sea water all the time**. The conservation objective for **reefs** would not be met under this management option.
- b) **Reduce/limit pressures** - This option would reduce the risk of not achieving the conservation objectives for the **reef** and **sandbanks which are slightly covered by sea water all the time**. Appropriate management of **reef** could include closure of the known extent of the feature within the sites. Areas to be covered by management restrictions would include a buffer zone around the known features to reduce any risk of accidental contact with the feature. However, given the incomplete survey coverage of the site, a risk of impact to patches of feature not identified during survey would remain. The risk could be further reduced by restricting access to areas which clearly provide favourable conditions for reef development, based on past presence of reef structures and knowledge of reef ecology. The location of areas to be covered by management

restrictions within each site would be decided in consultation with stakeholders. Appropriate management for **sandbanks** could include closure of a proportion of the feature's area to damaging gears, and there may be a greater requirement for restrictions on gears that penetrate more deeply into the sediment. The location of areas to be covered by management restrictions within each site would need to be decided in consultation with stakeholders, taking into account ecological factors and the sensitivity of the feature. Restrictions could be permanent in some cases or temporary/adaptive in others. The risks to achieving the conservation objectives decrease as the size of areas restricting pressure increase.

- c) **Additional management to remove pressures** - This option would reduce the risk of not achieving the conservation objectives for **sandbanks slightly covered by sea water all the time** and **reef** to the lowest possible levels. Restrictions would be required for all mobile bottom contact gears within the full extent of the site boundaries.

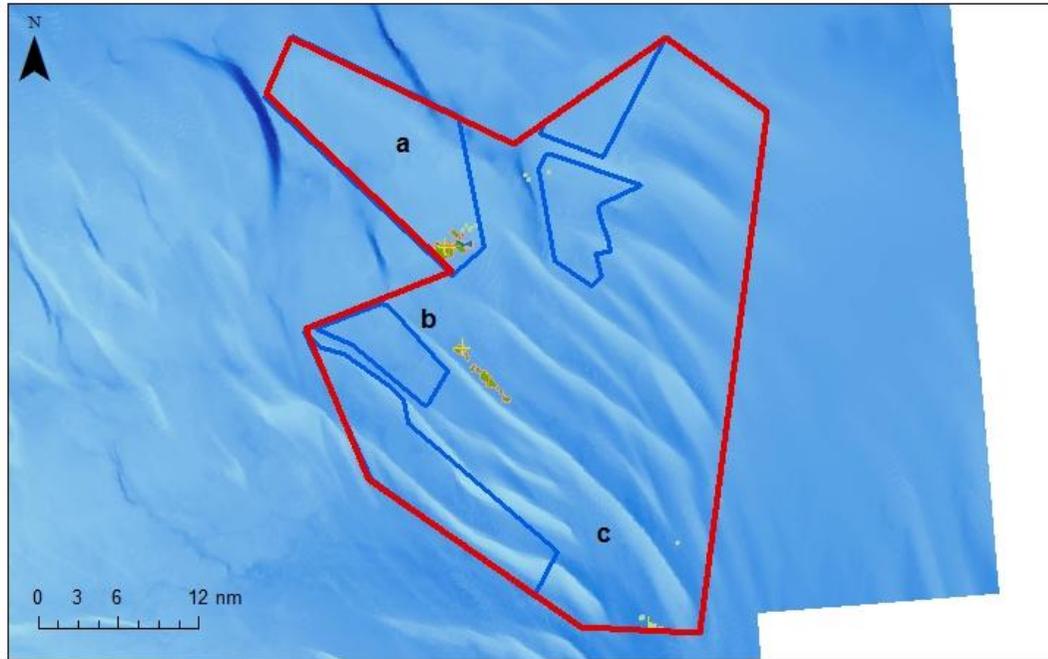
Management options for static bottom contact gear:

- a) **No additional management** - this option is considered unlikely to pose a risk of not achieving the conservation objectives for **sandbanks which are slightly covered by sea water all the time** and **reefs**. However, if monitoring of condition and fishing activity showed evidence of detrimental effects as a result of static gear activity in the future, additional management may be required.
- b) **Reduce/limit pressures** - This option would further reduce the risk of not achieving the conservation objectives for the **sandbanks which are slightly covered by sea water all the time** and **reefs**. If fishing activity were to rise to levels at which damage was occurring, appropriate management could include partial closure of the feature and/or limits on the amount of gear that can be deployed.

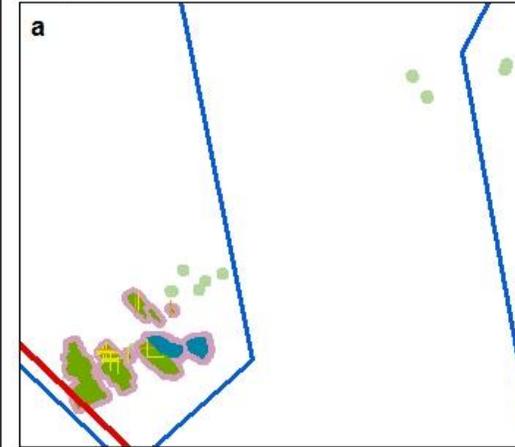
Following discussions with stakeholders at the first workshop in August 2014, Visned (a Dutch industry representative organisation) submitted a management proposal for the site prior to the second workshop in May 2015. This proposal was shared with stakeholders present at the meeting in May 2015, and is now reviewed by JNCC to determine whether the proposed management zones would pose a significant risk to achievement of the conservation objectives for the designated feature.

In 2013, JNCC and Cefas undertook a targeted survey of NNSSR, collecting data for both the sandbank and reef Annex I features. The 2013 survey report is undergoing final changes and will be published soon; however, the data from the survey has now been signed off as final. *Sabellaria* data from the 2013 survey is shown in Figure 1.

Further to the report, JNCC have undertaken additional statistical analysis of the biological communities present within the cSAC/SCI using the data from grab and video samples from the 2013 survey. To complement previous analysis undertaken by Cefas, JNCC's analysis combines data from multiple datasets collected from the 2013 survey, to consider the biological communities present across the MPA. The biotopes identified as a result of the analysis are shown in Figure 2.



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Please note that reef polyline data may not be visible at this scale

Legend

- North Norfolk Sandbanks and Saturn Reef
 - Visned proposal (May 2015)
 - Annex I Sabellaria - Saturn Reef (2002, 2003)
 - Annex I Sabellaria extent data (2013)
 - 195m buffer (extent data)
- Annex I Sabellaria polyline data (2013)**
- Low quality
 - Medium quality
 - High quality
 - 195m buffer (polyline data)

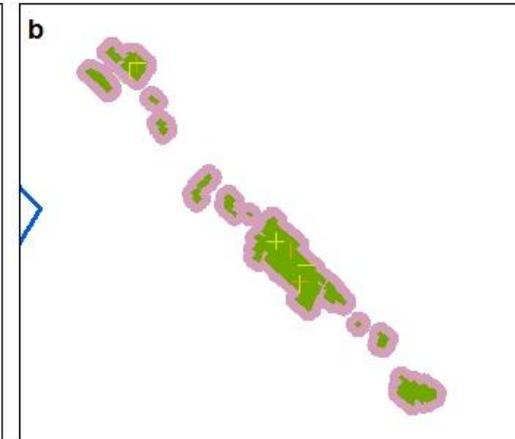
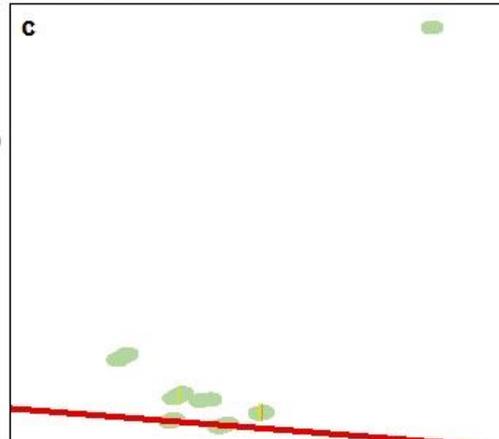
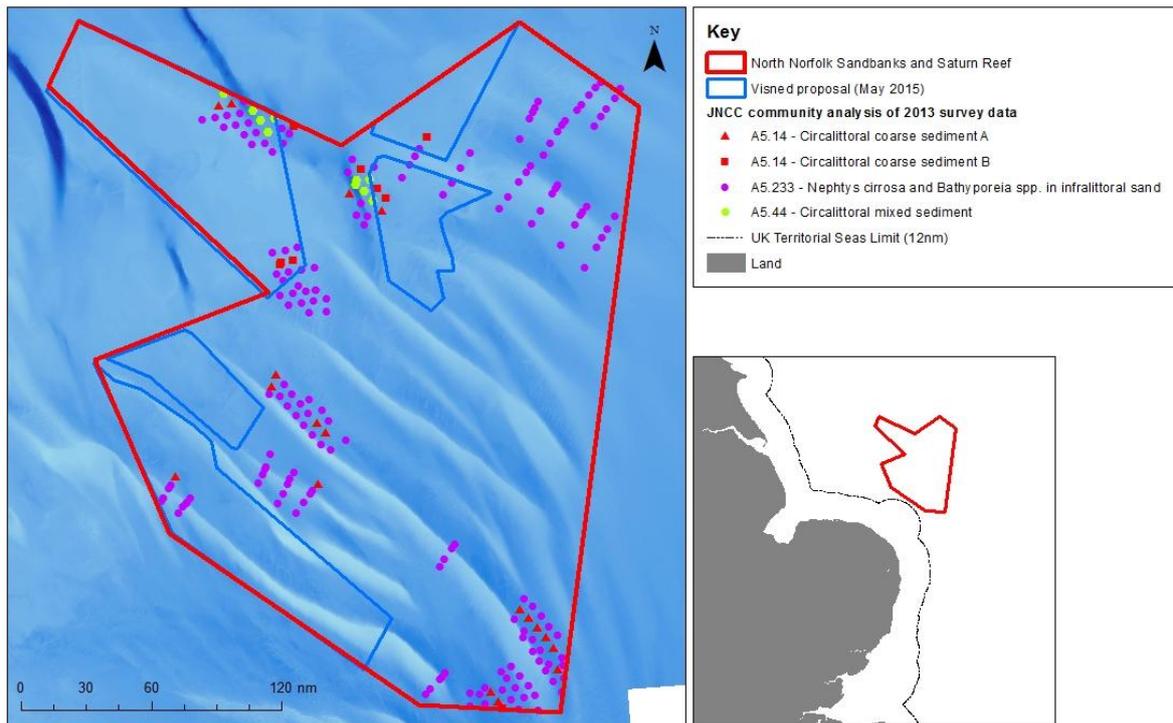


Figure 1 – Visned fisheries management proposal received in May 2015, in relation to location of *Sabellaria* data. A buffer of three times water depth (3 x 65m = 195m) has been applied to all reef data.



Map projected in WGS 1984 UTM Zone 30N. UK Territorial Sea Limit © Crown copyright and UKHO. All rights reserved. Combining source layers from UKHO, World Vector Shoreline © US Defence Mapping Agency. Not to be used for navigation. © JNCC 2015.

Figure 2 - Visned fisheries management proposal received in May 2015, in relation to draft biotopes identified through JNCC analysis of data from the 2013 JNCC/Cefas survey.

To enable consistency in the advice provided by JNCC on management zoning proposals, JNCC has developed a standard pro-forma approach. This is completed for the NNSR Dutch stakeholder fisheries restriction zone proposal below:

Site name	North Norfolk Sandbanks and Saturn Reef CSAC/SCI
Protected feature(s)	1170 Reefs 1110 Sandbanks which are slightly covered by sea water all the time
<i>MPA fisheries management zoning principles audit</i>	
feature considerations	
Are there any areas of designated features that will potentially be exposed to fishing activities with the ability to affect the long term distribution of the features?	Yes Some areas of known <i>Sabellaria spinulosa</i> reef are not included in the proposed fisheries restriction zones. Although only a proportion of the Annex I sandbank feature is included within the fisheries restriction zones, this is not considered to be a risk to the long term distribution of the sandbank feature.
Are there any areas of designated features that will potentially be exposed to fishing activities with the ability to affect the structure and/or function of the features?	Yes A number of areas of known <i>Sabellaria spinulosa</i> reef and a large proportion of the sandbank feature are not included in the fisheries restriction zones.

Do the areas of designated feature that are potentially exposed to fishing activities include biological communities with known high sensitivity (e.g. VMEs)	Yes <i>Sabellaria spinulosa</i> reef is considered to be highly sensitive to certain activities, which can include some mobile bottom contact gears.
Do proposed fisheries restriction zones represent the range of biological communities associated with the protected features?	Yes The proposed fisheries restriction zones include examples of the innermost, transitional and furthest offshore sandbanks and of sandbank ridges and areas between sandbanks as recommended in the Interpretative Guidance document ¹ . Recent analysis undertaken by JNCC has identified four biotopes present across the MPA. It has not been possible to map the distribution of these biotopes across the entire site, but existing sampling locations show that all four biotopes are represented within the proposed management zones.
Where we have additional information regarding the sensitivity or resilience of the communities associated with the feature, has this been taken into account?	N/A There is no additional information on feature sensitivity.
Do fisheries restrictions zones minimise inclusion of areas of non-feature? Could continued access to areas of non-qualifying feature potentially affect protected features?	N/A The Annex I sandbank feature covers the entire site.
Where physical structure is a defining element of the feature (e.g, bedrock reef, sandbank) are restriction zones at a suitable scale – i.e. are patches of feature continuous rather than fragmented.	No Fisheries restriction areas do not include the entire extent of known <i>Sabellaria</i> reefs. Examples of sandbank within the proposed fisheries restriction areas contain suitably large contiguous areas of feature.
Do the zones consider protected features that are of particular importance from a biogeographical perspective (e.g only representative feature in the region)?	Yes The proposed fisheries restriction zones include a proportion of the Indefatigables sandbanks. These are considered to be the only example of their type (open sea, tidal sandbanks in a moderate current strength) in UK waters.
2 – buffering considerations	
Where appropriate have buffers been applied?	No Where <i>Sabellaria</i> reef feature has been included within the fisheries restriction zones, buffers (three times water depth) have been considered. However, the full extent of the <i>Sabellaria</i> feature has not been included within the fisheries restriction zones.

¹ JNCC (2014). Interpretation guidance for JNCC North Norfolk Sandbanks habitats layers package

Where buffer zones are included, do they follow recognised guidelines and/or provide appropriate protection?	N/A
3 – Adaptive management considerations	
In order to allow progress towards achievement of the conservation objectives, do fisheries restrictions zones include areas where fishing has occurred as well as unfished areas?	Yes VMS shows that fishing has occurred from 2009 to 2014 within the proposed fisheries restrictions zones, particularly on the western part of Swarte bank and on Ower Bank. As across most of the site, recorded fishing effort in these areas was low relative to levels elsewhere in the region.
Does the management proposal include an appropriate monitoring plan?	No A monitoring plan will be required if adaptive management is proposed.
Would the proposal allow suitable opportunities for comparative studies which could be expected to provide evidence on the effectiveness of management?	Partially. There are examples of fished and unfished areas of sandbank both inside and outside the proposed fisheries restriction zones. The full range of habitat sub-types is included and there is good existing survey coverage. This could provide a suitable basis for a comparative (Before-After-Control-Impact) study. However, it is evident that areas of highest fishing effort have not been included within the fisheries restriction zones and so it may prove more difficult to detect changes resulting from closure. Comparative studies would be more likely to detect change if areas subjected to higher fishing effort were included.
Conclusions	
<p>JNCC consider that the proposal would reduce the risk of not achieving the conservation objectives for <i>Sabellaria spinulosa</i> reef to some extent, however, significant areas of reef would remain exposed to activities which could affect their long term extent and distribution. Thus, the risk to the conservation objective would remain high.</p> <p>The proposal would reduce the risk of not achieving the conservation objectives for sandbanks, and broadly meets the conditions for adaptive management as set out in JNCC and Natural England’s adaptive management paper. Closing areas with higher fishing effort would increase the likelihood of detecting an effect of fishing through monitoring. As a consequence Defra may wish to consider including areas of higher effort within the fisheries restriction zones. It may also be advisable to take into consideration existing survey coverage including adequate representation of survey stations both within and outwith potential fisheries restriction zones.</p> <p>The proposed fisheries restriction zones broadly cover the range of habitat subtypes found within the site. However, coverage of the crest component of offshore banks is relatively low. If managers wish to increase the area of restriction zones, consideration should be given to increasing coverage of the shallower area of the Indefatigable Banks.</p> <p>To meet the requirements for adaptive management, a management plan must provide details of any necessary research/monitoring required to assess the effectiveness of measures.</p>	

Suggested changes to fisheries restriction zones (if any)

To reduce the high risk of not achieving the conservation objectives for *Sabellaria spinulosa* reef, it is suggested that all known areas of reef within the site be included within the fisheries restriction zones. JNCC are now able to provide a map showing locations where reef habitat has been detected together with appropriate buffer zones (see figure 1). A buffer of three times water depth ($3 \times 65\text{m} = 195\text{m}$) has been applied.