

**Scottish MPA Project
Management Options Paper**

**TURBOT BANK NATURE CONSERVATION MARINE PROTECTED
AREA**

JULY 2014

JNCC developed the present paper to support discussions with stakeholders about the management of activities within this Nature Conservation Marine Protected Area (MPA). The paper should only be considered a starting point for discussions around the ongoing process of developing any management necessary to deliver the conservation objectives of the designated features; the process will continue after site designation.

The paper does not attempt to cover all possible future activities and does not consider likely cumulative effects that could result from different types of activities being carried out within the MPA. However, it does consider a range of activities and developments considered to be taking place within the MPA at the point of writing, and focuses on where we considered there could be a risk of the protected features achieving not their conservation objectives.

The following documents provide further information about the protected features in terms of confidence in the evidence base and assessment of the MPA against the MPA Selection Guidelines and should be read alongside this Management Options Paper:

- Site Summary Document
- Data Confidence Assessment
- Detailed assessment against the MPA Selection Guidelines

These documents are all available at: www.jncc.defra.gov.uk/page-6490

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DEVELOPMENT OF MANAGEMENT OPTIONS FOR THE TURBOT BANK MPA

1 Management Options Summary

This section summarises JNCC’s management options for the Turbot Bank MPA. The options are being considered to eliminate or manage the risk of not meeting the conservation objective to conserve the protected feature within the MPA. Full details on these options are provided later in this Management Options Paper. Discussions between sea users, scientists and managers will be needed to inform the development of subsequent management measures.

Activity	Management options
<p>Fishing activity: Directed sandeel fishery</p>	<p>No additional management: JNCC considers this option is adequate to achieve the conservation objective for sandeels. If a directed sandeel fishery were to develop in the future within the Turbot Bank MPA, there would be a risk of not achieving the conservation objective for sandeels, and appropriate management would need to be considered.</p> <p>Reduce/limit pressures: If a sandeel fishery were to develop in the future, this option would reduce the risk of not achieving the conservation objective for sandeels. Appropriate management could include a limit on catches to avoid localised depletion.</p> <p>Remove/avoid pressures: If a directed sandeel fishery (including fishing for scientific investigation) were to develop in the future, this option would reduce the risk of not achieving the conservation objective for sandeels to the lowest possible levels.</p>
<p>Oil and gas activity</p>	<p>The potential impacts of oil and gas activity and/or developments on the protected features within the MPA will be assessed through the existing EIA process on a case-by-case basis. Early dialogue with DECC and JNCC would help identify and resolve any issues at an early stage.</p>

2 Introduction

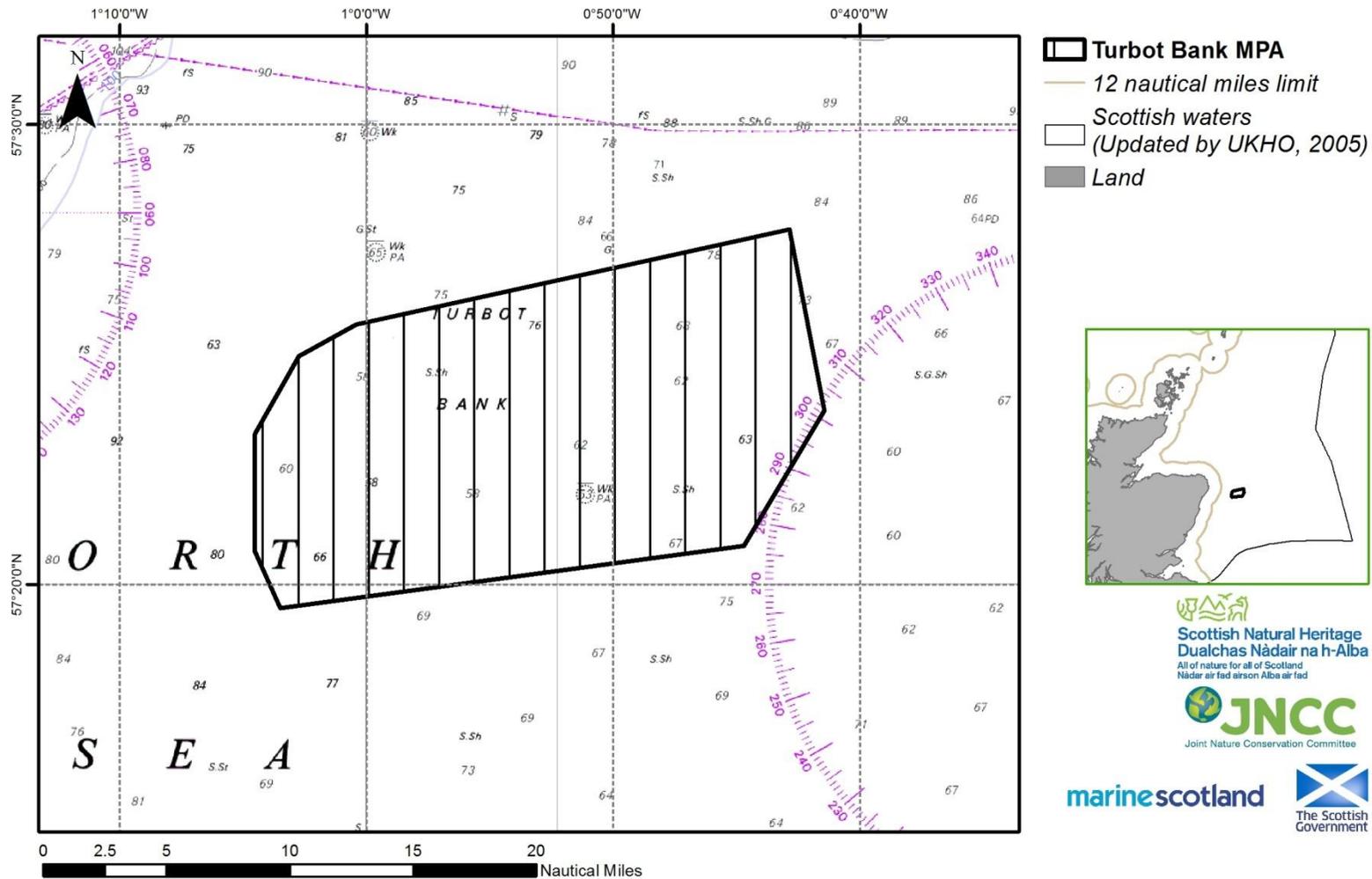
The Turbot Bank Marine Protected Area (MPA) is located off the east coast of Scotland (see map 1), and lies within an area of sandy sediment that makes up the shelf bank known as 'Turbot Bank'. The Bank is an important area for sandeels, a type of small fish closely associated with sand habitats where they live buried in the sand for months at a time. The area of the Turbot Bank MPA is approximately 251 km².

Further details on the MPA can be found in the Turbot Bank Site Summary Document which is available at www.jncc.defra.gov.uk/page-6490.

A bottom trawl fishery for haddock and associated whitefish is widespread throughout the MPA together with a lower intensity Scottish seine (fly-shooting) whitefish fishery. Although landings from both fisheries have fluctuated over the years, it is clear that they are longstanding fisheries. A significant scallop dredge fishery occurs in the vicinity of the MPA. In the past, an intensive industrial sandeel fishery existed off the east coast of Scotland, although no targeted fishery for sandeels within the MPA has taken place in recent years. The MPA sits within the Sandeel Area 4 management unit for which there is currently a very limited Total Allowable Catch for sandeels, and so could be subject to a limited fishery in the future. In addition, a small area to the west of the MPA overlaps with the East of UK sandeel closure area which was introduced to prevent localised depletion of sandeels. A reduced fishery for scientific investigation is permitted within the closed area although this option has not been taken up in recent years. No licensed activities take place within the Turbot Bank MPA at the current time, however, the central part of the MPA overlaps with license blocks identified by the Department of Energy and Climate Change (DECC) and could be subject to oil and gas development in the future.

JNCC produced a document to provide background information on the development of management for the Turbot Bank MPA, and will be used to support stakeholder discussions. The document describes the known location and extent of protected feature and our current knowledge of where activities take place within the MPA. It also presents the management options for each of those activities that JNCC consider capable of delivering the conservation objective for the protected sandeel feature. The document encourages stakeholders with an interest in the area to input to the development of appropriate management measures that will ensure the Turbot Bank MPA makes a genuine and long-lasting contribution to the protection of Scotland's marine environment.

Map 1 Location of the Turbot Bank MPA



Map projected in Mercator (World) projection, geographic coordinate system WGS1984. The exact limits of the UK Continental Shelf are set out in the Continental Shelf (Designation of Areas) Order 2013, Statutory Instrument 2013/3162 (© 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. MPA © JNCC and SNH, 2014. All rights reserved. Admiralty Chart © Crown Copyright, 2013. All rights reserved. License No. EK001-20130405. NOT TO BE USED FOR NAVIGATION

3 Roles

JNCC provides conservation advice to Scottish Government on how it might be possible to achieve the conservation objectives for the protected features in MPAs. JNCC's advice includes possible management options for controlling human activities for the Turbot Bank MPA.

Marine Scotland lead the discussions on developing appropriate management with stakeholders, taking account of JNCC's and others' advice, identify the preferred management option and develop specific management measures with relevant authorities. Marine Scotland are responsible for making recommendations to Scottish Ministers on these measures and any review of site management in the future. Scottish Ministers will decide whether to implement these measures. Marine Scotland expect licensed activities taking place within, or nearby, the MPA will continue to be managed through the existing licensing system. For MPAs in offshore waters, Marine Scotland expect the process under the EU Common Fisheries Policy that is already in place for delivering any fisheries management requirements for Special Areas of Conservation will be followed.

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

4 Protected features and conservation objectives

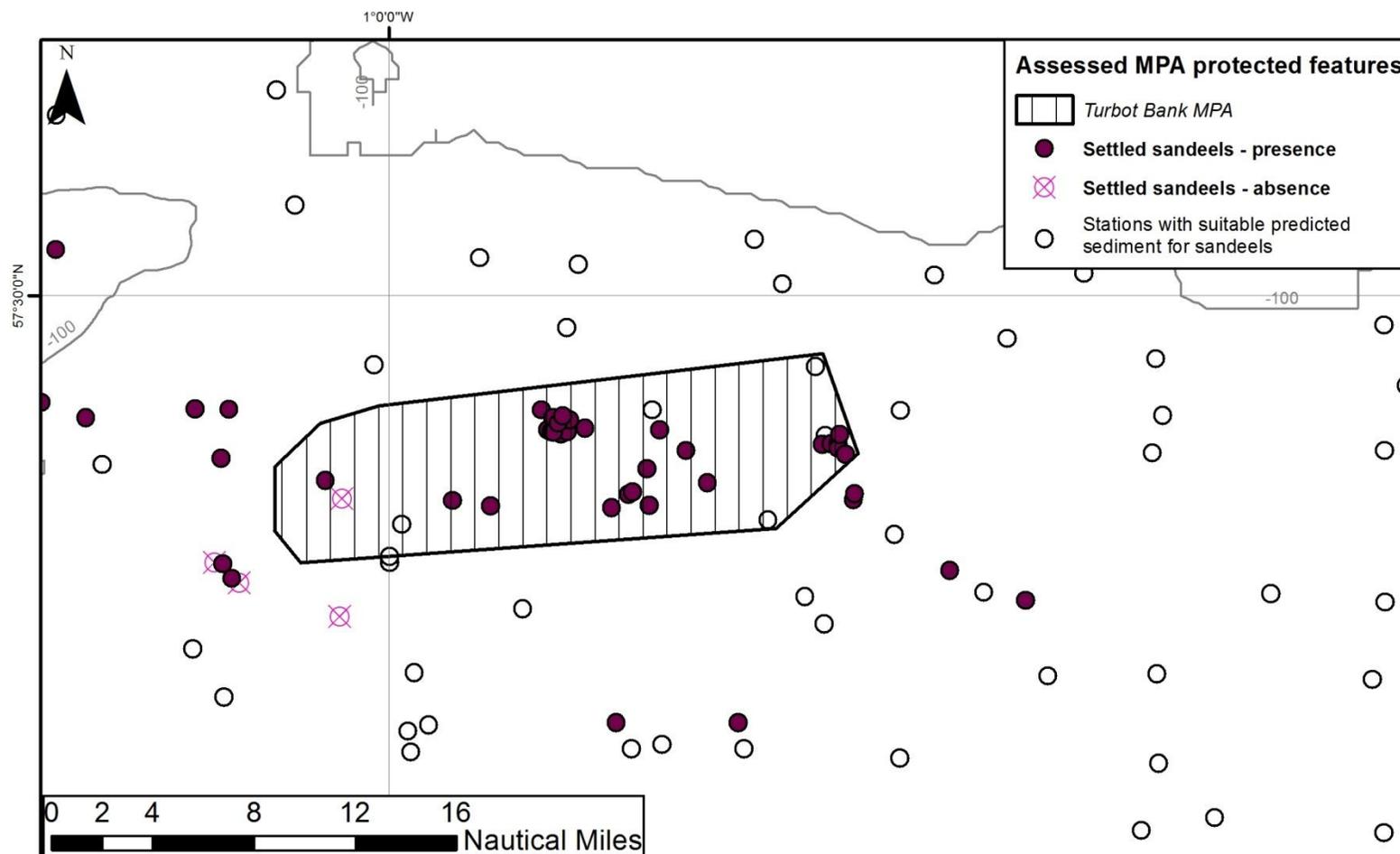
The Turbot Bank MPA has been designated as part of a network of Nature Conservation MPAs which is being established to help conserve a range of Scotland's important marine habitats, wildlife, geology and landforms. The Turbot Bank MPA has been designated for the following protected feature, as shown in Map 2:

- Sandeels

Conservation objectives set out the desired quality of the protected features within each MPA. JNCC recommended that the conservation objective for the sandeel protected feature within the Turbot Bank MPA is '*conserve*'. The ecological condition of the feature has not been verified by direct evidence so the uncertainty of the feature condition is noted alongside the objective (feature condition uncertain).

Improved evidence on the condition of the feature will be collected 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 JNCC's recommendations for management to achieve the feature's conservation objective.

Map 2 The known distribution of the sandeel protected feature within the Turbot Bank MPA



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

marinescotland



Map displayed in geographic coordinates WGS84. The exact limits of the UK Continental Shelf are set out in the Continental Shelf (Designation of Areas) Order 2013, Statutory Instrument 2013/3162 (© 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 (GeMSv4) © Crown Copyright; MPA areas © JNCC and SNH 2014.

5 Overview of activities

Table 1 below lists the human activities believed to take place within or close to the Turbot Bank MPA. Further discussions with those who use the area will continue to improve our understanding of these activities (e.g. distribution and intensity etc.).

Those activities to which the protected feature is sensitive are explored in detail in the next section. Activities to which the protected feature is not thought to be sensitive (i.e. any interaction between the activity and the feature is considered to be minimal) will not be considered further within this document. Other activities not identified within the table would need to be considered on a case-by-case basis should they occur, or be proposed at some future time.

Table 1: Overview of existing activities believed to take place within or close to the Turbot Bank MPA

Activities considered capable of affecting the protected features	Activities <i>not</i> considered capable of affecting the protected features
<p>Licensed activities:</p> <ul style="list-style-type: none"> • Oil and gas industry developments, including their ongoing use and maintenance. <p>Fishing activities:</p> <ul style="list-style-type: none"> • Specialised mesh trawling for sandeels 	<p>Shipping:</p> <ul style="list-style-type: none"> • Commercial shipping <p>Fishing activities:*</p> <ul style="list-style-type: none"> • Pelagic trawling and purse seining

*Only the specific examples of the activity listed have been excluded, rather than the broad activity types.

6 Development of management options

Management options have been developed for each MPA where JNCC consider that some form of active management intervention may be necessary to achieve the conservation objective for each protected feature. A risk-based approach was used to identify appropriate management options i.e. the advice was focused where JNCC believe there is a risk of not achieving the conservation objective for the protected features. We have used existing data and information on protected features and relevant activities, and also our understanding of the relationships between the protected features and activities to assess this risk. JNCC expect on-going discussions with stakeholders during the development of any management actions.

Management options are focused on those activities that cause a pressure to which the protected feature is sensitive. 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 surface abrasion which can damage the seabed although the scale and intensity of the pressure can vary between activities. Thus, the protected features of a MPA are considered sensitive to activities that could adversely affect their conservation value especially if they are unable or are very slow to recover from damage.

The Features Assessment Sensitivity Tool ([FeAST](#)) reflects our current understanding of the interactions between activities, pressures and features and supports the first steps of the assessment of the risk that the features will not achieve their conservation objectives in the MPAs. The tool highlights that activities can give rise to a range of pressures, to which the protected features of the MPA may be sensitive. The online tool provides more detailed

information including the evidence that has been used in developing these recommendations.

Risks to not achieving the conservation objectives have been identified where there is an overlap between protected features and activities associated with any pressures to which the features are sensitive. 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 ongoing activities and/or planned developments and the 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 the activities occurring within the MPA.

JNCC identify the following three management scenarios:

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

All of the management options provided are based on the best available evidence of existing activities taking place within the MPA. The options do not preclude the introduction of a management measure in the future for new activities, or where an existing activity occurs at an increased intensity.

7 Management options

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

Fishing Activity

- Directed sandeel fishery

Licensed activity

- Oil and gas activity

7.1 Fishing activity

JNCC evaluated the management options to manage the risk that the protected feature will not achieve its conservation objectives in the Turbot Bank 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. The protected feature may require a combination of these options to ensure that it achieves its 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 those fishing activities known to adversely affect the feature would be excluded and prevented from occurring over 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 a wider area or even 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](#).

An estimation of >15m fishing activity taking place within the region of the 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 fishing gear being employed for each ping. 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. This gridding method has the advantage of enabling the quantification of effort at a discrete spatial scale (hours per unit area (grid resolution) per year), however, it precludes analysis of patterns of activity below the pre-defined resolution of the grid. Consequently, the individual "pings" were analysed for the period 2009 to 2011. To ensure anonymity of the data source, discrete VMS ping data is presented only in instances where it would compromise the anonymity of an individual vessel (i.e. there are multiple vessels operating in the same area).

7.1.1 Directed sandeel fishery

Following the east coast of Scotland sandeel closure in 2000, the industrial sandeel fishery in Scottish waters has decreased dramatically. Although in the past an intensive industrial sandeel fishery existed off the East coast of Scotland, no targeted fishery for sandeels has taken place within the MPA in recent years. However, the MPA sits within the Sandeel Area 4 management unit for which there is currently a very limited Total Allowable Catch for sandeels, and so could be subject to a limited fishery in the future.

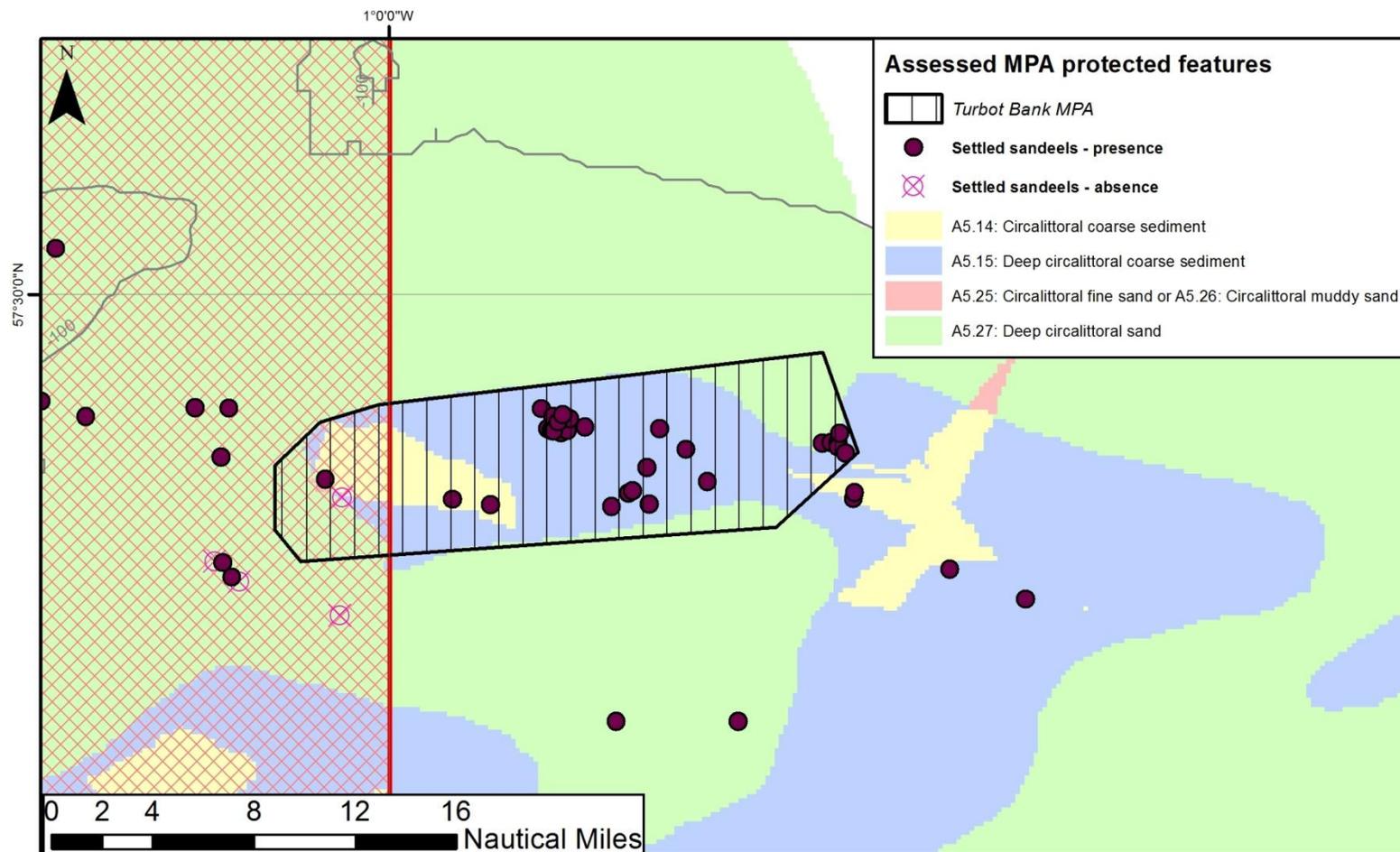
In addition, a small area to the west of the MPA overlaps with the East of UK sandeel closure area that was introduced to prevent localised depletion of sandeels (see Map 3). A reduced fishery for scientific investigation is permitted within this closure area, although this option has not been taken up in recent years. As such, the management options proposed reflect the potential for a targeted sandeel fishery to occur in the future rather than evidence of recent activity.

Management options Directed sandeel fishery	<p>No additional management: JNCC considers this option is adequate to achieve the conservation objective for sandeels. If a directed sandeel fishery were to develop in the future within the Turbot Bank MPA, there would be a risk of not achieving the conservation objective for sandeels, and appropriate management would need to be considered.</p> <p>Reduce/limit pressures: If a sandeel fishery were to develop in the</p>
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future, this option would reduce the risk of not achieving the conservation objective for **sandeels**. Appropriate management could include a limit on catches to avoid localised depletion.

Remove/avoid pressures: If a directed sandeel fishery (including fishing for scientific investigation) were to develop in the future, this option would reduce the risk of not achieving the conservation objective for **sandeels** to the lowest possible levels.

Map 3: Location of the East of UK sandeel closure area in relation to the Turbot Bank MPA



Scottish Natural Heritage

 Dualchas Nàdair na h-Alba

All of nature for all of Scotland

Nàdair air fad airson Alba air fad

marinescotland

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 the Continental Shelf (Designation of Areas) Order 2013, Statutory Instrument 2013/3162 (© 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 (GeMSv4) © Crown Copyright; MPA areas © JNCC and SNH 2014.

7.2 Licensed activities

Although no licensed activities take place within the MPA at the current time, Map 4 shows the large section of the MPA that overlaps with license blocks identified by the Department of Energy and Climate Change (DECC) and so may be subject to oil and gas development in the future.

The Department of Energy and Climate Change (DECC), as the regulator for oil and gas activity in the UK, would be responsible for making the decision on whether a proposed activity and/or development is capable of affecting (other than insignificantly)¹ the protected features of a Nature Conservation MPA. For those activities and/or developments that DECC requires an EIA, JNCC is willing to engage at an early stage with DECC and the operator to discuss the specific details of the proposed operation and/or development and offer advice on any potential effects. In so doing, JNCC will make reference to information on the sensitivity of the protected features to proposed activities and/or developments that is publicly available through 'FEAST' – The FEatures, Activities, Sensitivities Tool (Marine Scotland, 2013).

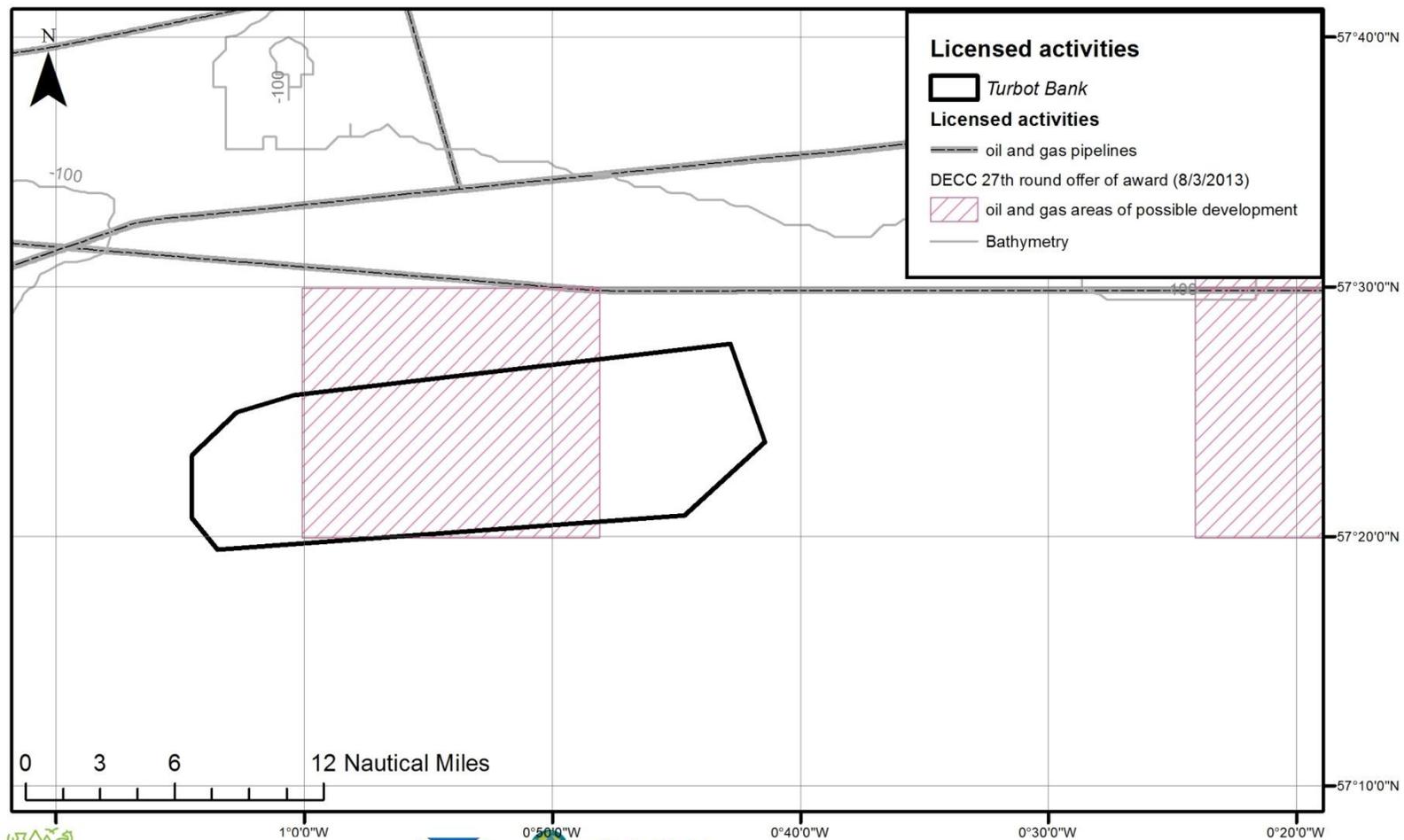
JNCC will consider the nature, scale, timing and duration of activities in providing advice. Early engagement will facilitate discussions on the information required to advise on any possible implications to the protected features achieving their conservation objectives. If JNCC identify a potentially significant effect, mitigation measures may be advised. Any such advice provided as part of the licensing process will need to be site and operation specific. On this basis, the information JNCC provides as part of the (present) Management Options Paper is necessarily generic and therefore indicative.

Further information on the regulatory framework concerning oil and gas activity within Nature Conservation MPAs is included in the [MPA Management Handbook](#).

Management options	The potential impacts of oil and gas activity and/or developments on the protected features within the MPA will be assessed through the existing EIA process on a case-by-case basis. Early dialogue with DECC and JNCC would help identify and resolve any issues at an early stage.
Oil and gas activity:	

¹ Reference to 'affecting the status of (other than insignificantly)' relates to the requirements on public authorities set out in the UK and Scottish Marine Acts (Sections 125 and 82 respectively) in relation to licensed activities taking place within MPAs.

Map 4: Location of Oil and Gas license blocks in relation to protected features



0 3 6 12 Nautical Miles

1°0'0"W 0°50'0"W 0°40'0"W 0°30'0"W 0°20'0"W

57°40'0"N 57°30'0"N 57°20'0"N 57°10'0"N






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8 Conclusions and further recommendations

Marine Scotland will be responsible for making recommendations to Scottish Ministers on any management measures that may be required for Turbot Bank MPA. Such measures will be developed through discussion with stakeholders following MPA designation. Any statutory measures will be subject to consultation and the processes normally required by the legislation will be utilised. Where fisheries management measures are necessary and the Nature Conservation MPA is located where Scottish Ministers do not have exclusive competence, Marine Scotland would application to the European Commission for appropriate measures using the mechanisms of the EU Common Fisheries Policy. This process will include consultation on the measures at the EU level.

9 Further information

The following documents are available for background information:

- SNH and JNCC MPA network advice (December 2012) – www.jncc.defra.gov.uk/page-5510
- The MPA Management Handbook - www.scotland.gov.uk/Topics/marine/marine-environment/mpanetwork/engagement/ManagementHandbook
- FEatures Activities Sensitivity Tool (FeAST) - www.marine.scotland.gov.uk/FEAST/Index.aspx
- JNCC and SNH Fisheries guidance – www.jncc.defra.gov.uk/page-6498

The following documents about the Turbot Bank MPA are also available at www.jncc.defra.gov.uk/page-6490:

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