



**2017 period for comment on a change in the General
Management Approach for Subtidal sand in Swallow Sand
Marine Conservation Zone**

JNCC response to period for comment



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*Cover photo illustrates starfish (Asteroidea) on deep circalittoral sand in the Swallow Sand site.

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Advice to Government

Summary

2017 Period for comment on a change in the General Management Approach for Subtidal sand in Swallow Sand Marine Conservation Zone

The Joint Nature Conservation Committee (JNCC) conducted a public period for comment between 23 October and 4 December 2017, on behalf of the Department of Environment, Fisheries and Rural Affairs (Defra), regarding a change in the General Management Approach (GMA) for Subtidal sand in Swallow Sand Marine Conservation Zone (MCZ). This report describes the period to comment, the responses received and JNCC's recommendations to Defra.

A total of five responses were received from the period to comment. Objections were received based on the apparent level of fishing activity within the southern portion of the site. In this report, JNCC clarify that since the highest level of fishing activity occurs over a small proportion of the feature's extent within the site and is a summed total of 278hrs over a seven-year period (2009-2015), we do not consider that retaining a 'Recover' GMA is justifiable without further scientific evidence. This level of fishing is considered 'low', using the average fishing hours per annum (39hrs) and following the consistent approach defined in the [MCZ guidance](#)¹.

Monitoring surveys will help further our understanding of the condition of the feature. Until monitoring baselines are established and we have returned to assess ecological change against these baselines, condition and therefore the GMA will need to remain as based on our understanding of a feature's vulnerability to pressures.

JNCC confirms its previous advice to Defra that the proposed change to the GMA of Subtidal sand within Swallow Sand MCZ should be taken under consideration as a formal change from Recover to Maintain.

¹ For details on levels of fishing categorised for MCZ designations please see Annex 6: Inshore and offshore fisheries standardisation methodologies (specifically A6.2.2, Table 220, page 1099) of the JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones (July 2012) Available at: <http://jncc.defra.gov.uk/PDF/MCZProjectSNCBAdviceBookmarked.pdf>

1. Introduction

1.1 Background to Swallow Sand MCZ

Swallow Sand MCZ was designated in 2013 within the first Tranche of Marine Conservation Zones submitted to Defra. The site is in the northern North Sea (Figure 1) and covers an area of 4,746km². The broad-scale habitats Subtidal coarse sediment and Subtidal sand are protected within the site, along with the geological feature ‘Swallow Hole’; which is an example of a North Sea glacial tunnel valley.

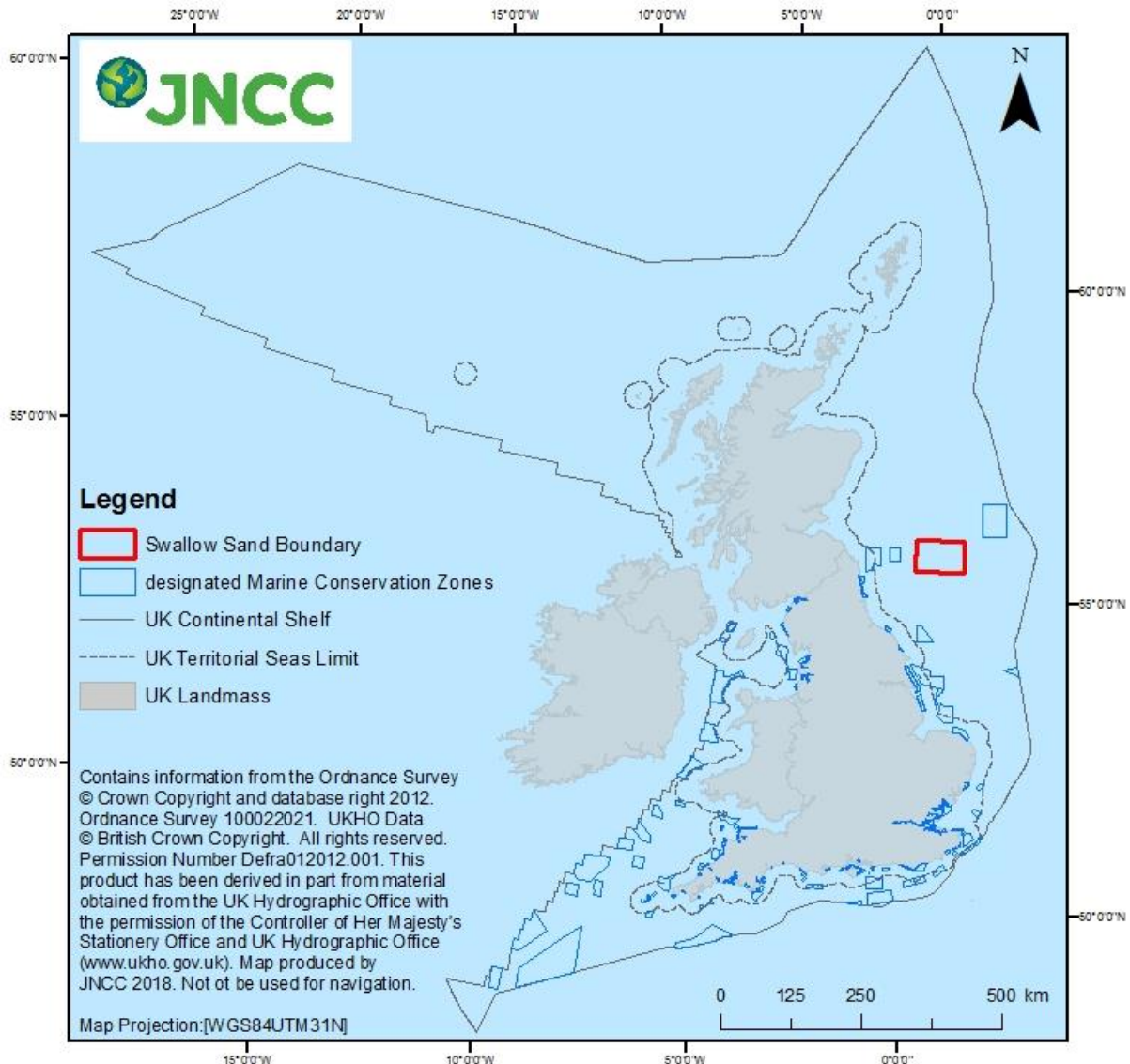


Figure 1. The location of designated Marine Conservation Zones in England

The distribution of designated features within Swallow Sand MCZ is presented in Figure 2. The General Management Approach (GMA) for Subtidal coarse sediment and the North Sea glacial tunnel valley known as Swallow Hole is currently to **maintain** both features in favourable condition. The distribution of these features within the site is available to view on [JNCC's interactive mapper](#).

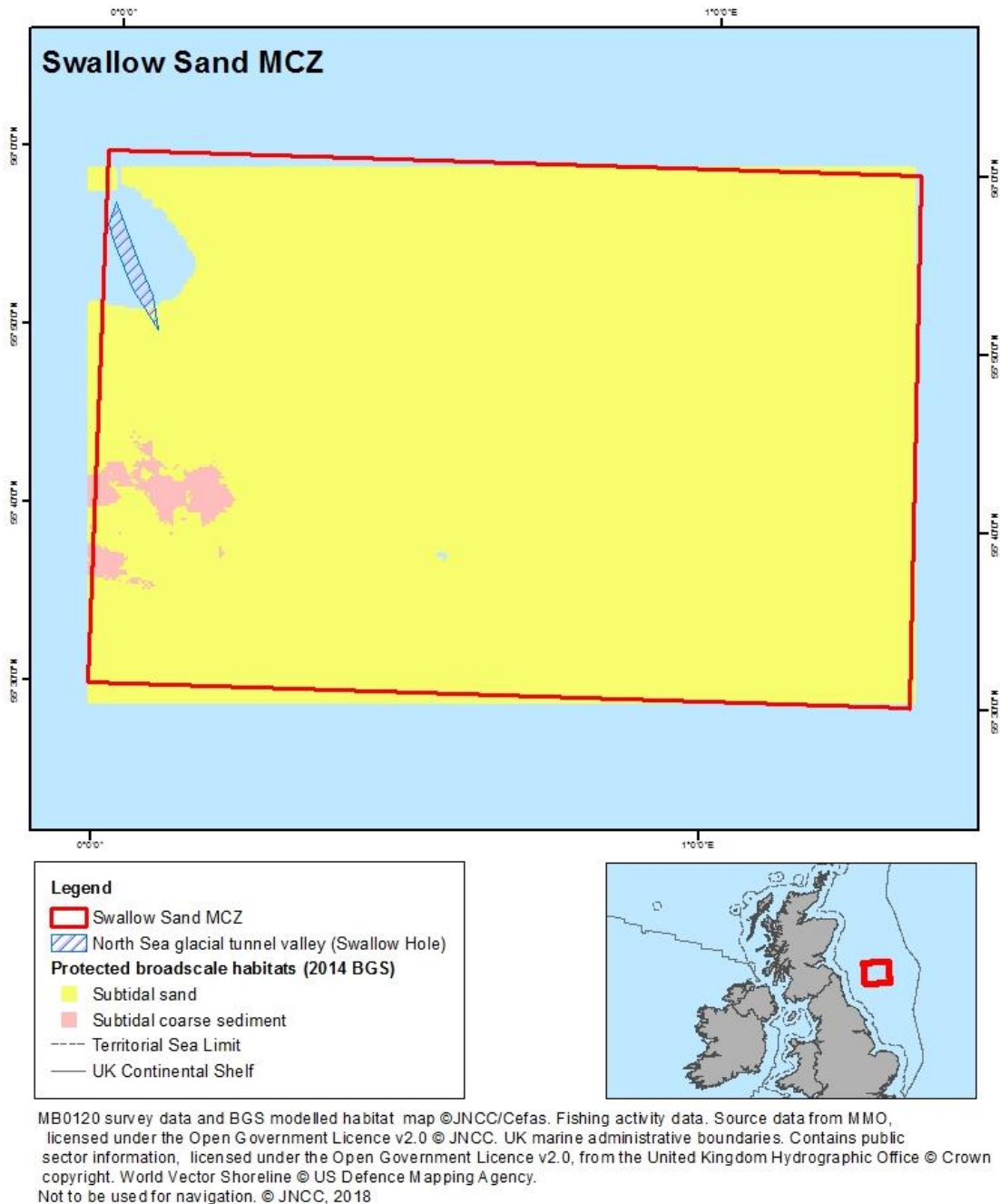


Figure 2. Swallow Sand MCZ, showing the extent and distribution of the designated features of the site

1.2 Background to setting GMAs for MCZs

The Joint Nature Conservation Committee (JNCC) is responsible for advising Defra on Marine Conservation Zones (MCZs) for UK offshore waters. The term *General Management Approach* (GMA) refers to JNCC’s considered opinion on the direction of travel needed to achieve the favourable ecological condition required to reach the conservation objective (as opposed to any statement on the management required to facilitate the direction of travel). The direction of travel (maintain/recover) may be based on a direct assessment of condition or indirectly via our understanding of how the pressures and activities occurrence on the features are likely to impact the feature’s condition (i.e. its vulnerability).

A vulnerability assessment is based on the assumption that if a feature is currently vulnerable to damage it is unlikely to be in favourable condition and an objective of Recover is set. Conversely, if a feature is not currently vulnerable to damage it is more likely to be in favourable condition and an objective of Maintain may be set. The level of exposure to activities, such as fishing, is reviewed using a consistent approach set out in Appendix 6 of [JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones](#)². Thresholds for levels of exposure (low, moderate, high) were based on area covered per year, based on swept area calculations.

Until monitoring baselines are established and we have returned to assess ecological change against these baselines, condition and therefore the GMA for MCZs will largely still need to be based on our understanding of a feature's vulnerability to pressures. When JNCC provide advice on the GMA of a feature, we also state the confidence we have in the data that has been used to justify the statement, for example if a vulnerability assessment has been used based on proxy information.

1.3 Approach to recommending a change to a GMA for an MCZ

The [Explanatory Note on Marine Conservation Zones' designation](#) (Defra, 2013) recognises that changes to GMAs may be driven by new evidence on condition and/or extent of the feature, sensitivity of features and nature of human activities on a site. It outlines that for any changes suggested by JNCC post-designation, stakeholders should be engaged and have suitable opportunity to comment.

JNCC, Natural England and Defra agreed an approach on the process to propose changes to the GMA for an MCZ feature where new evidence suggests a change is needed. This process has been followed to propose the change of GMA in Swallow Sand MCZ for Subtidal sand from Recover to Maintain.

1.4 Rationale for the proposed change to the GMA for Swallow Sand MCZ

Additional data gathered through survey prompted JNCC to advise that the GMA for Subtidal sand be reviewed within Swallow Sand MCZ to better reflect the more recent evidence on the distribution and extent of the feature.

At the time of designation (2013), best available evidence suggested that the Subtidal sand feature was exposed to relatively high levels of bottom-contact fishing practices in the north-western area of the site. This activity is thought to result in pressures to which the biological communities associated with Subtidal sand habitats are considered sensitive. As such, a recover GMA was advised. However, due to our improved understanding of the extent of Subtidal sand within the site, supporting evidence suggests that the predominant sediment type in the north-western corner of the site is subtidal mud (not a designated feature of the site). As such, much of the fishing effort is not considered to be occurring over the Subtidal sand feature and a 'recover' GMA is no longer considered to be appropriate.

JNCC ran a period for comment between October and December 2017, inviting comments from a range of stakeholders with interest in the site on a proposed GMA change for Subtidal sand from 'Recover' to 'Maintain'.

² For details on levels of fishing categorised for MCZ designations please see Annex 6: Inshore and offshore fisheries standardisation methodologies (specifically A6.2.2, Table 220, page 1099) of the JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones (July 2012) Available at: <http://jncc.defra.gov.uk/PDF/MCZProjectSNCBAdviceBookmarked.pdf>

This document provides Defra with JNCC's recommendation to progress with the change to the GMA for Subtidal sand in Swallow Sand MCZ from Recover to Maintain. The letter and associated Annex detailing the justification underpinning the advised revision of the GMA is provided in [Appendix A](#).

2. Period for comment

2.1 Purpose

The period for comment sought the views of all interested parties on the proposed change to the GMA of Subtidal sand within Swallow Sand MCZ from Recover to Maintain. It also provided an opportunity to submit any additional scientific data for the site that would support or challenge the proposed change to the GMA.

2.2 Approach

JNCC contacted 129 interested parties, including regulators, Statutory Nature Conservation Bodies and stakeholders. The period to comment ran for 6 weeks (23 October and 4 December 2017).

JNCC provided a covering letter summarising the proposal with an Annex of the justification underpinning the advised revision of the GMA for Subtidal sand ([Appendix A](#)). Recipients were also directed to the [Site Information Centre](#) for further information. Comments were requested, and received, via email and logged in a comments log for auditing purposes.

2.3 Responses received

JNCC received five responses within the period to comment via email (from non-governmental organisations and an International authority). No responses provided additional scientific evidence, and consequently, there is no change to the scientific evidence regarding the proposed GMA change. The responses were recorded in a spreadsheet and categorised into broad themes to be addressed within this report (see Section 3. Analysis of the results).

2.4 Quality assurance

This report detailing JNCC's response to comments has been reviewed and signed-off in accordance with JNCC's Evidence QA policy. Figure 2 sets out the main steps followed in this period to comment and review process.

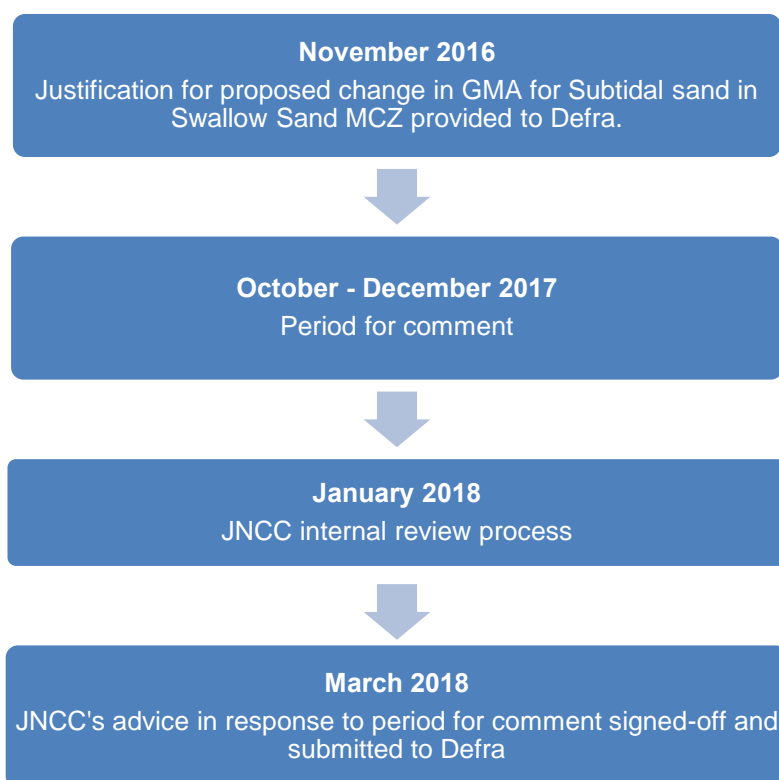


Figure 3. The main steps followed by JNCC in the preparation of formal advice to Defra

3. Analysis of the results

The responses received were categorised into three broad themes as outlined below:

- **General Management Approach (GMA):** specifically covers comments which referred to the evidence base used in setting a GMA and JNCC's approach on monitoring the condition of features and effectiveness of management measures.
- **Activities and pressures:** covers responses relating to the activity levels within the site which occur over the extent of the feature and how JNCC have analysed this data to support their advice.
- **Condition of the feature:** includes JNCC's response to comments regarding how the condition of the feature has been evaluated and explains how JNCC intend to monitor the condition of the features within Swallow Sand MCZ.

General queries regarding background information to the site (such as distribution of protected features and the current GMAs) and the approach to setting and changing a GMA have been addressed in the Background section of this report (Section [1.1](#), [1.2](#) & [1.3](#)).

3.1 General Management Approach

Defra, Natural England and JNCC recognise that the setting of GMAs for MCZs is largely based on proxy information (namely the exposure of designated features to activities associated with pressures to which they are considered sensitive). This is due largely to the absence of direct information on feature condition. Our confidence in the evidence used to set a GMA is stated within our advice.

JNCC have developed a [Marine Monitoring Strategy](#) in order to help design a scheme for long-term monitoring of the different biodiversity components in UK waters in a cost-effective and integrative way. The monitoring strategy will help fulfil different objectives, including investigating if there is a change in the condition of protected features of MPAs or if resultant management measures are fulfilling their objectives.

Until monitoring baselines are established and we have returned to assess ecological change against these baselines, condition and therefore GMAs will still be based on our understanding of a feature's 'vulnerability' (sensitivity of a given feature to pressures against exposure to activities that may give rise to said pressures to which it is considered sensitive).

When a Maintain objective is set for the GMA of a feature, it should be noted that this does not preclude the need for management, now or in the future. We acknowledge there have been historic losses to biodiversity in UK waters, however the aim of the MPA network and other measures is not to return the seas to a 'pristine' condition, but rather to conserve marine biodiversity where possible. The ecosystem-based approach outlined within Defra's 25 Year Environment Plan ([YEP](#)) takes all strands into account - protecting habitats to support fish stocks, food chains and other biodiversity, while ensuring the number of fish caught can be naturally replenished by natural reproductive rates for example.

3.2 Activities and pressures

*** Please note there was an error in the rationale for change of the GMA for Subtidal sand in Swallow Sand MCZ within the Annex of the notification letter (see [Annex A](#) of this report), where the value for fishing activity from the years 2009-2013 (139hrs) was used in error. Instead, the value for fishing activity from the years 2009-2015 (278hrs) ***

When reviewing the impacts of activities on a feature, the level of activity is reviewed alongside the distribution and extent of the feature.

The Vessel Monitoring Survey (VMS) data used to identify fishing pressures within the site is the summed total of hours over a 7-year period (2009-2015). This aggregated data is presented using a 0.05 decimal degree grid, each grid covering an area of ~5km².

The most frequent type of fishing which occurs over the Subtidal sand feature is Demersal trawling (surface Otter trawls). The highest number of aggregated hours recorded, occurring over the Subtidal sand feature was 278hrs in a ~5km² grid in the south of the site. This equates to an average of 39hours per year within this grid.

In accordance with the offshore fisheries methodologies for assessing levels of activity in a vulnerability assessment (outlined in Appendix 6.2 of [JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones](#) Error! Bookmark not defined.) the number of hours categorised as low activity for demersal trawls is 61 hours per year. Using this approach, the level of activity from fishing occurring over the Subtidal sand feature is considered low.

Whilst the summed total value from 2009-2015 (278hrs) may be seen as a significant increase from the summed total hours fished in 2009-2013 (139hrs), it should be noted that the level of activity is taken from the average annual value over the time period (i.e. 39hrs for 2009-2015 and 28hrs for 2009-2013).

Fishing activity across much of the extent of Subtidal sand within the site is considered minimal (0-20hours). Most of this data is thought to be a result of erroneous pings of vessels transiting the site.

Using this information, we can conclude that the fishing activity present across the full extent of Subtidal sand within Swallow Sand MCZ does not provide a high enough pressure to justify a 'Recover' GMA. The majority of fishing effort within the site is concentrated in the north-west corner of the site in an area considered to represent Subtidal mud, which is not a designated feature of the site.

Management proposals currently under consideration will protect areas of the designated features within the site (Subtidal sand and Subtidal coarse sediment) and help achieve favourable condition of all designated features. JNCC have provided advice regarding the designated features within the site and the current levels of activities and associated pressures. Our advice relating to the level of risk associated with the options for management that have been proposed would remain unchanged if the GMA of Subtidal sand was changed to Maintain. That is; no additional measures would still mean a risk to not achieving the conservation objectives, while restricting demersal trawling either over a proportion of the site or all of the features within the site would reduce / eliminate that risk respectively. The decisions on which management option to pursue lies with Defra and the MMO.

3.3 Condition of the feature

The condition of a designated feature within a site is determined by considering the full extent of the feature across the site and evaluating the intensity of pressures (vulnerability) across that feature.

The condition of Subtidal sand within Swallow Sand MCZ has been determined using data gathered from surveys in 2012 and 2014, which present the distribution of the feature across the site, and the sensitivities of the feature to pressures from activities occurring across the site (the vulnerability assessment). It is noted that the approach used is a proxy assessment and so the confidence is considered low, until further monitoring data can be reviewed.

Due to the change in our understanding of the extent of the Subtidal sand feature within the site, particularly within the north-western area of the site (refer to Figure 2 in [Appendix A](#)), JNCC felt that a review of the GMA was appropriate as the north-western section of the site was confirmed to consist mostly of Subtidal mud, rather than Subtidal sand.

The vulnerability assessment was repeated using this new understanding of feature extent and supports the case that Subtidal sand is exposed to a relatively low level of demersal trawl activity. The revised vulnerability assessment was undertaken in 2015, upon review of the data published from the 2014 survey. Vulnerability assessments are not published, however they can be made available upon request caveating that detailed explanation would be required to explain each step in the process.

The result was an overall vulnerability score of 'low' following the approach set out in Appendix 6 of [JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones](#)³ – triggering a GMA of 'Maintain'. Upon completion and internal review of the vulnerability assessment this triggered the need to re-evaluate the GMA for the Subtidal sand feature within the site. The process for proposing a change to the GMA was then initiated as described in Figure 3.

Currently, it is not possible to determine from our benthic survey data whether there is a biological difference between areas fished at low or moderate effort within the extent of

³ For details on levels of fishing categorised for MCZ designations please see Annex 6: Inshore and offshore fisheries standardisation methodologies (specifically A6.2.2, Table 220, page 1099) of the JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones (July 2012) Available at: <http://jncc.defra.gov.uk/PDF/MCZProjectSNCBAdviceBookmarked.pdf>

Subtidal sand within the site. A baseline monitoring survey was undertaken in 2016, which collected data to form the first dataset of a time-series against which to monitor change in condition of the designated features of the site. The data from this survey is currently being analysed and the report will be made available in 2018. JNCC and Cefas are undertaking a type 3 monitoring survey of Swallow Sand MCZ during 2018 to gather evidence to support a future evaluation of the effectiveness of management measures for this MCZ. This report will be made publicly available in due course.

4. Conclusion and final recommendations

The majority of queries from respondents to the public period for comment focused on the level of fishing activity within the southern section of the site. JNCC have set out to address these queries within Section 3 of this report.

We conclude that due to a change in our understanding of the extent of Subtidal sand within the site, a second vulnerability assessment was undertaken and this identified that only low levels of fishing activity are recorded, occurring over a small proportion of the site. Consequently, we do not consider that retaining a 'Recover' GMA is justifiable without further scientific evidence.

Monitoring surveys which have been undertaken in 2016 and due to be undertaken in 2018 will help further our understanding of the condition of the feature within the site. Until monitoring baselines are established and we have returned to assess ecological change against these baselines, condition and therefore the GMA will need to be based on our understanding of the feature's vulnerability to pressures.

JNCC confirms its previous advice to Defra that the proposed change to the GMA of Subtidal sand within Swallow Sand MCZ should be taken under consideration as a formal change from Recover to Maintain.

Appendix A: Stakeholder Letter and Annex

RE: A change in the General Management Approach for Subtidal sand within Swallow Sand MCZ – notice of public consultation

To whom it may concern.

JNCC is advising Defra that the General Management Approach (GMA) for Subtidal sand, a designated feature of the Swallow Sand MCZ, is changed from 'Recover' to 'Maintain'. The justification underpinning the advised revision of the GMA for Subtidal sand is provided in an Annex to this letter and briefly summarised below. You may also want to visit the [Site Information Centre](#)⁴ for Swallow Sand MCZ where all current information on the site is presented.

Since our scientific advice on the site in 2013, two scientific surveys⁵ have been undertaken and analysis of these data support a change in our knowledge of the distribution and extent of Subtidal sand within the site. In turn, this triggered a review of the GMA previously advised at the point of designation and which was based on a Vulnerability Assessment (VA), as per the MCZ Conservation Objective Guidance⁶.

At the time of designation, best available evidence suggested that the Subtidal sand feature was exposed to relatively high levels of bottom-contact fishing practices; an activity thought to result in pressures to which the biological communities associated with subtidal sand habitats are considered sensitive. As such, a recover GMA was advised. However, due to our improved understanding of the extent of subtidal sand within the site, much of the fishing effort is not considered to be occurring over the subtidal sand feature and a Recover GMA is no longer considered to be appropriate.

Following the principles set out in the Marine Conservation Zones designation explanatory note⁷ concerning a change to a General Management Approach (paragraphs 17-20), JNCC as the relevant statutory conservation advice body is offering stakeholders a period to comment on the proposed change to the GMA for Subtidal sand within Swallow Sand MCZ from 'Recover' to 'Maintain'.

If you wish to make a comment on the advised change in GMA please get in touch with JNCC by emailing offshoreMPAs@jncc.gov.uk, using the subject header 'response to advised Subtidal sand GMA change in Swallow Sand MCZ'. The period to comment is open for 6 weeks and closes midnight Monday 4th December 2017.

Yours faithfully,

Louisa Jones
Marine Protected Areas Advisor
JNCC

Email: offshoreMPAs@jncc.gov.uk and include **Swallow Sand** in the subject header

⁴<http://jncc.defra.gov.uk/page-6558>

⁵<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=2&ProjectID=18983>

⁶<http://jncc.defra.gov.uk/page-4881>

⁷https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259972/pb14078-mcz-explanatory-note.pdf

Annex**Justification for proposed change in General Management Approach for Subtidal sand in Swallow Sand MCZ**

Feature name (and code)	Subtidal Sand (NG 16_A5.2)
General Management Approach (GMA) at designation	Recover – designated 21 st November 2013 (link to Designation Order)
Proposed General Management Approach (GMA) revision	Maintain
Rationale for change	<p>At the time of determining the most appropriate GMA in 2013, available data indicated high levels of demersal fishing activity (457 hrs in total between 2009 and 2013, based on gridded VMS data) over the Subtidal sand feature in the north-west corner of the site, noting the feature distribution was mapped from a habitat model (see Figure 1). Consequently, the Subtidal sand feature was assessed to have relatively high exposure to the pressures associated with mobile demersal fishing to which the feature was sensitive, and therefore considered vulnerable.</p> <p>The target species for this fishing activity appears to be ‘Nephrops norvegicus’, a burrowing crustacean typically associated with ‘Subtidal mud’ as opposed to ‘Subtidal sand’. JNCC concluded further survey work was needed to better understand the substrate type and distribution in that part of the MCZ.</p> <p>Particle Size Analysis data gathered from MB0120 surveys in 2012 and 2014, and an updated British Geological Survey modelled habitat map (Lark, 2014) show that the distribution of Subtidal sand is significantly different to that on which our 2013 advice was based, particularly with respect to the north-west corner of the site which was identified as Subtidal mud.</p> <p>Due to this change in our understanding of the extent of the Subtidal sand feature within the site, JNCC felt that a review of the GMA was appropriate. The Vulnerability Assessment (VA) was repeated for the Subtidal sand feature, using all available survey data and updated information on activities.</p> <p>The VA supports the case that Subtidal sand is exposed to a relatively low level of demersal trawl activity (typically 0-20 hours across most of the site with isolated areas of</p>

	<p>higher activity reaching a maximum of 139 hours based on 2009-2015 aggregated VMS data). This level of activity does not therefore justify a 'Recover' GMA but rather 'Maintain'. Figure 2 shows a map of updated feature extent and activities occurring which was used to inform this VA.</p>
<p>Evidence for change</p>	<p>Distribution of feature:</p> <ul style="list-style-type: none"> • MB0120 surveys in 2012 and 2014 • Updated British Geological Survey modelled habitat map (Lark, 2014) <p>Impact of human activities</p> <ul style="list-style-type: none"> • 2014 activity data (pipelines) • 2009-2015 aggregated VMS data.

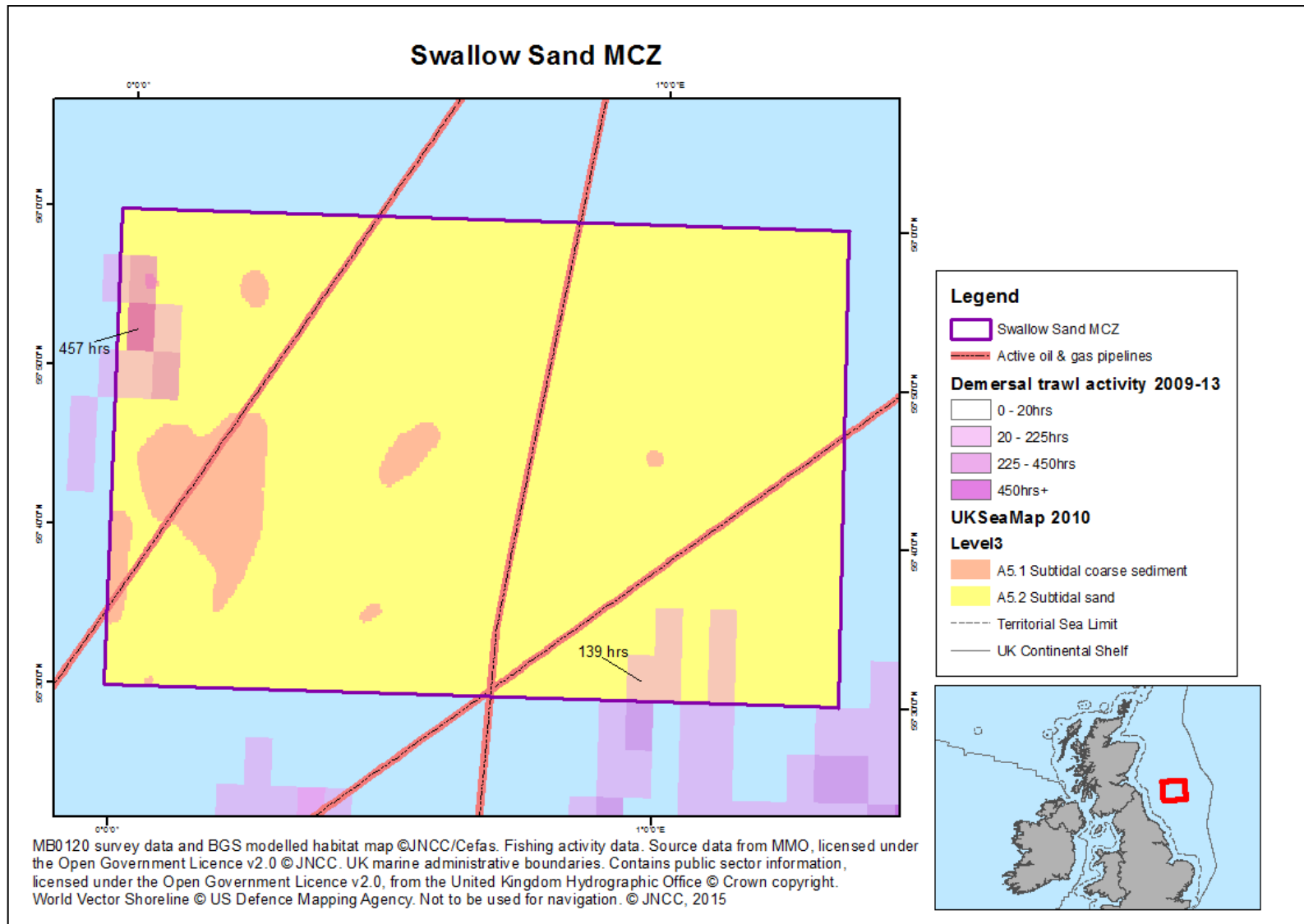


Figure 1: Distribution of features and activities within Swallow Sand MCZ at point of designation (2013)

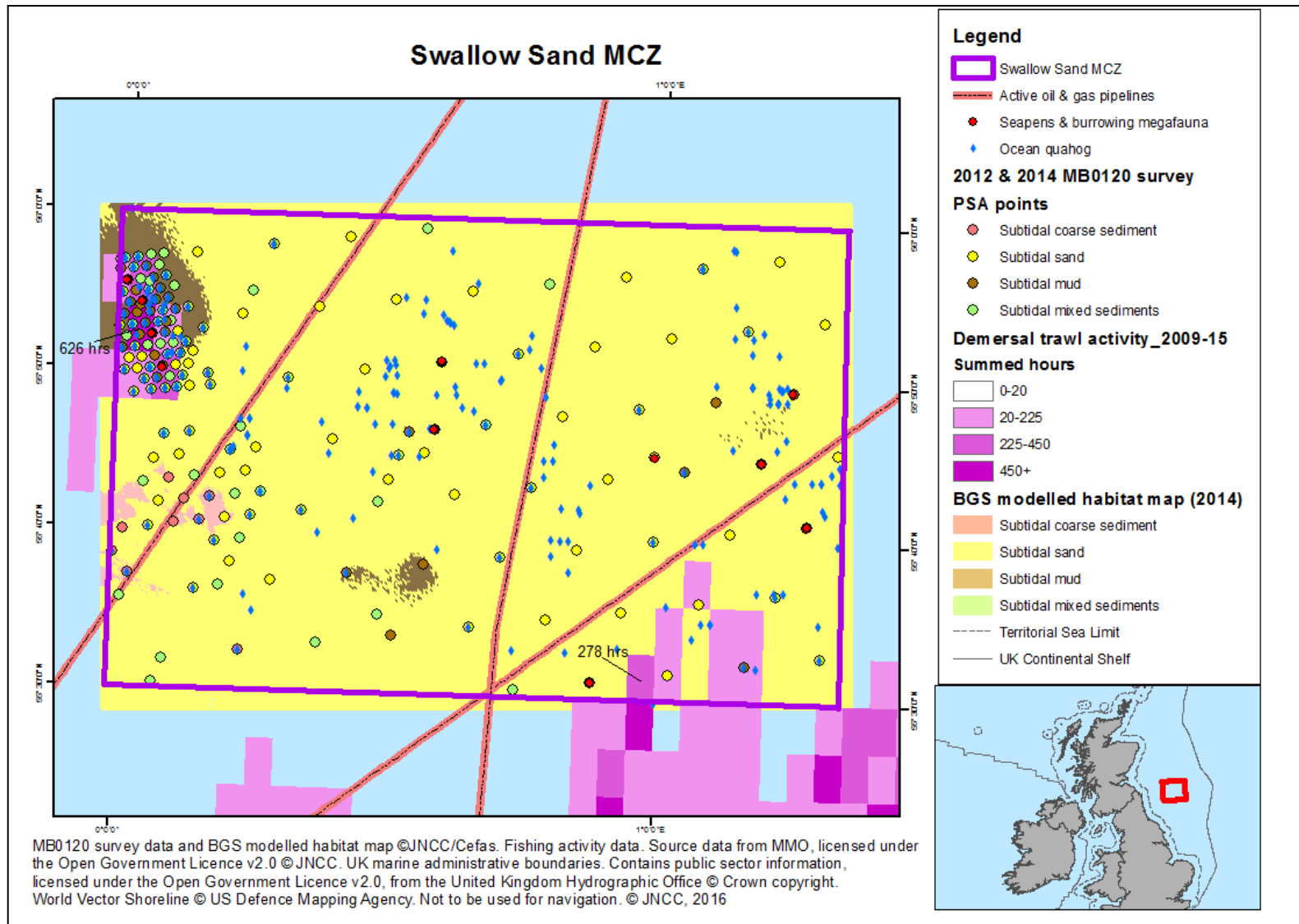


Figure 2: Updated feature extents, location of ground-truthing data and activities occurring at Swallow Sand MCZ (20