



Marine
Management
Organisation

Decision
document:

Dogger Bank
SAC

April 2022



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Marine Management Organisation

Contents

Executive summary	1
1. Introduction	1
2. Dogger Bank Special Area of Conservation	2
3. Assessment of the effects of fishing in Dogger Bank SAC	4
4. Call for evidence	4
5. Formal consultation	5
6. Decision and next steps	7
Annex 1: MMO responses to site specific consultation responses received through call for evidence – Dogger Bank SAC	9
1. Site specific consultation responses	9
2. General call for evidence responses	20
Annex 2: MMO responses to site specific consultation responses received through formal consultation – Dogger Bank SAC	24
1. Site specific consultation responses	24
2. General formal consultation responses	50
References	53

Executive summary

MMO has legal obligations in relation to European Marine Sites (EMS), which include Special Areas of Conservation (SAC), specifically Regulation 6 of the Conservation of Offshore Marine Habitats and Species Regulations 2017, to secure compliance with the requirements of the Habitats Directive¹. Of particular relevance to marine conservation is section 6(2): to avoid the deterioration of habitats and disturbance of designated species. This includes a requirement to introduce appropriate management measures where fishing activity is deemed likely to have an adverse effect on site integrity.

To this end, MMO ran a call for evidence and formal consultation to seek views on draft fisheries assessments and proposed management measures for the Dogger Bank Special Area of Conservation (SAC).

MMO received a number of responses to both public consultations and have considered and reviewed all submissions and updated assessments and associated documents accordingly.

This decision document details MMO's response to key themes raised by stakeholders through both public consultations.

MMO has considered the best available evidence, including that submitted through stakeholder consultation, to inform its decision on the management required for Dogger Bank SAC. MMO concludes that in order to comply with its duties outlined above we are required to create and seek confirmation from the Secretary of State on 'The Dogger Bank SAC Special Area of Conservation (Specified Areas) Prohibited Fishing Gears Byelaw 2022' to prohibit the use of bottom towed fishing gears within the site.

1. Introduction

Between 1 February and 28 March 2021, MMO ran a formal consultation to seek views on the draft assessments of the impacts of fishing activities in four marine protected areas (MPAs).

The four MPAs that have been assessed for the impact of fishing are:

- The Canyons Marine Conservation Zone (MCZ);
- Dogger Bank Special Area of Conservation (SAC);
- Inner Dowsing, Race Bank, North Ridge SAC;
- South Dorset MCZ.

Further details on the formal consultation are provided [here](#).

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

This document presents the conclusions from the call for evidence held between 28 October and 15 December 2020 and formal consultation held between 1 February and 28 March 2021, and the decision for the next steps for Dogger Bank SAC.

2. Dogger Bank Special Area of Conservation

Dogger Bank Special Area of Conservation (SAC) was formally designated in September 2017². Dogger Bank SAC is an offshore marine protected area (MPA) designated to protect the Annex I sandbank feature - sandbanks which are slightly covered by sea water all the time (H1110)³, which covers the expanse of the SAC. The Dogger Bank is the largest single continuous expanse of shallow sandbank in UK waters³. The sandbank consists of four sub-features: subtidal sand, subtidal coarse sediment, subtidal mixed sediments and subtidal mud⁴ (Figure 1).

The conservation objectives set for the designated sandbank feature and sub-features of Dogger Bank are⁵:

Subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the favourable conservation status of its qualifying features, by maintaining or restoring:

- *the extent and distribution of qualifying natural habitats;*
- *the structure and function (including typical species) of qualifying habitats;*
- *the supporting processes on which qualifying natural habitats rely.*

Joint Nature Conservation Committee (JNCC) advises a restore objective for the extent and distribution, and the structure and function of the Annex I sandbank feature, and a 'maintain' objective for the supporting process on which the Annex I sandbank feature relies⁴.

JNCC has determined that the Annex I sandbank feature is currently in unfavourable condition⁶.

² <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030352.pdf>

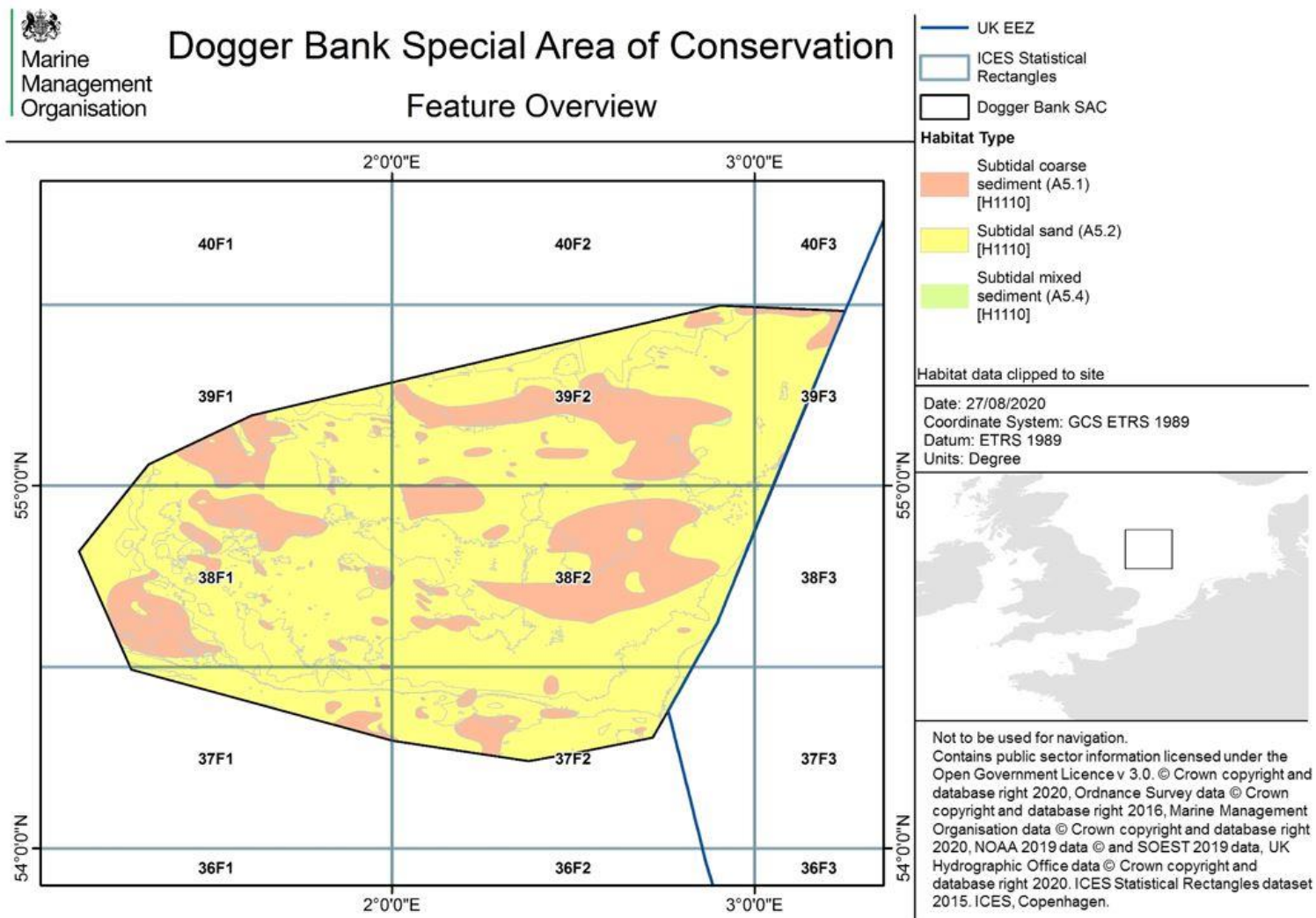
³ <https://jncc.gov.uk/our-work/dogger-bank-mpa/>

⁴ <https://data.jncc.gov.uk/data/26659f8d-271e-403d-8a6b-300defcabcb1/DoggerBank-3-SACO-v1.0.pdf>

⁵ <https://data.jncc.gov.uk/data/26659f8d-271e-403d-8a6b-300defcabcb1/DoggerBank-2-ConservationObjectives-v1.0.pdf>

⁶ <https://data.jncc.gov.uk/data/26659f8d-271e-403d-8a6b-300defcabcb1/DoggerBank-4-Statements-v1.0.pdf>

Figure 1: Dogger Bank SAC ‘sandbanks which are slightly covered by sea water all the time’



3. Assessment of the effects of fishing in Dogger Bank SAC

MMO has used a wide range of information in its assessment, including landings records, vessel monitoring system (VMS) data, fisheries sightings data and self-reported patterns of fishing activity to understand patterns of fishing activity at the site. The MMO assessment of fishing impacts at this site concluded that bottom towed fishing (including semi-pelagic trawling and demersal seining) is not compatible with the conservation objectives of the site and may result in an adverse effect on site integrity.

4. Call for evidence

4.1. Methodology for collecting responses

The call for evidence for Dogger Bank SAC included an online survey, which presented multiple management options for fishing activities.

Questions sought evidence and views from stakeholders on management options for bottom towed fishing activities and asked for information about the location, condition, and sensitivity of designated features as well as the level or nature of fishing within the site.

This call for evidence consisted of three management options:

Option 1: No fisheries restrictions. Introduce a monitoring and control plan within the site.

Option 2: Reduce/limit pressures. Due to the potential impacts of demersal and semi-pelagic trawls, demersal seines, and dredges on the features of the site, management would be introduced to reduce the risk of the conservation objectives not being achieved. This may be through a zoned management approach and/or limiting the activity/intensity of these activity types.

Option 3: Remove/avoid pressures (whole site prohibition). Demersal and semi-pelagic trawls, demersal seines and dredges will be prohibited in all areas of the site.

Stakeholders also had the option to answer the questions to consider in the call for evidence letter via email. A number of responses were received in this way, and these have been summarised here alongside the online survey responses.

4.2. MMO conclusion following call for evidence

During the call for evidence, 28 responses were received relating to Dogger Bank SAC. These included responses from individuals, academics, fishers, non-governmental organisations, industry groups and other government departments.

Responses included both support for, and objections to the proposed management options.

The subjects raised during the call for evidence fall within the following 10 overarching categories:

- sandeel fishery;
- grouping semi-pelagic fishing gear with demersal gear;
- variation in habitat sensitivity;
- factors beyond fishing that affect the protected feature or biological communities in Dogger Bank SAC;
- management of the scallop fishery;
- bycatch;
- use of fishing activity data;
- environmental benefits of the site are not fully considered;
- impacts on individual species; and
- legislative adherence.

MMO would like to thank everyone who responded to the call for evidence. We have reviewed all responses and have used these responses to update our assessment. Please see Annex 1 for detailed MMO responses to site specific consultation responses received through the call for evidence.

Based on the updated assessment, MMO has concluded that option 3 (prohibition of bottom towed gear across the whole site) is the preferred option. The majority of respondents stated that this was also their preferred option and outlined reasoning and evidence as to why this option would be most beneficial to the site, environment, and certain parts of the fishing industry.

5. Formal consultation

5.1. Methodology for collecting responses

The formal consultation for Dogger Bank SAC consisted of a survey presenting the preferred management option rather than multiple options. The preferred management option was option 3 - remove/avoid pressures (whole site prohibition of bottom towed fishing gear). Bottom towed fishing gears including demersal and semi-pelagic trawls, demersal seines and dredges will be prohibited in all areas of the site. A depth-based buffer has been applied around the edge of the site in order to account for fishing gear warp length (i.e. the length of the lines, rope or wires that

connect the gear on the seabed to the towing vessel) and to ensure that fishing activities taking place adjacent to the protected sandbank feature do not negatively impact it.

Questions sought evidence and views from stakeholders on the preferred management option and asked for information about the location, condition, and sensitivity of designated features as well as the level or nature of fishing within the site.

Stakeholders also had the option to answer the questions to consider in the formal consultation letter via email. A number of responses were received in this way. In these cases, email responses have been considered alongside the survey responses.

5.2. MMO conclusion following formal consultation

During the formal consultation, 52 responses were received relating to Dogger Bank SAC. These included responses from individuals, academics, fishers, non-governmental organisations, industry groups, UK governmental departments, the EU Commission and European Union (EU) member states. Responses included both support for, and objections to the proposed management.

The responses have been collated and summarised below

The subjects raised during the formal consultation fall within the following 17 overarching categories:

- positive environmental impacts;
- positive political and legislative impacts;
- positive impacts (miscellaneous);
- negative socio-economic impacts;
- disregards stakeholder involvement and a big-picture approach;
- disregards the Joint Recommendation and a zoned and/or adaptive approach;
- disregards legislation
- sensitivity and recoverability of the site from bottom towed fishing;
- displacement and negative environmental impacts;
- gear-specific inclusions in the proposed management;
- low spatial footprint;
- the proposals don't go far enough;
- scallop fishery;
- sandeel fishery;
- offshore windfarms;
- assessment and consultation critique; and
- control and monitoring.

MMO would like to thank everyone who responded to the formal consultation. We have considered all responses and taken these into account in our management decision for this site. Please see Annex 2 for detailed MMO responses to site specific consultation responses received through formal consultation.

6. Decision and next steps

Having analysed all evidence and stakeholder views received during the call for evidence and formal consultation, and updated the MMO assessment of the impacts of fishing in the Dogger Bank SAC, **MMO has concluded that bottom towed fishing should be prohibited across the entirety of Dogger Bank SAC (option 3).**

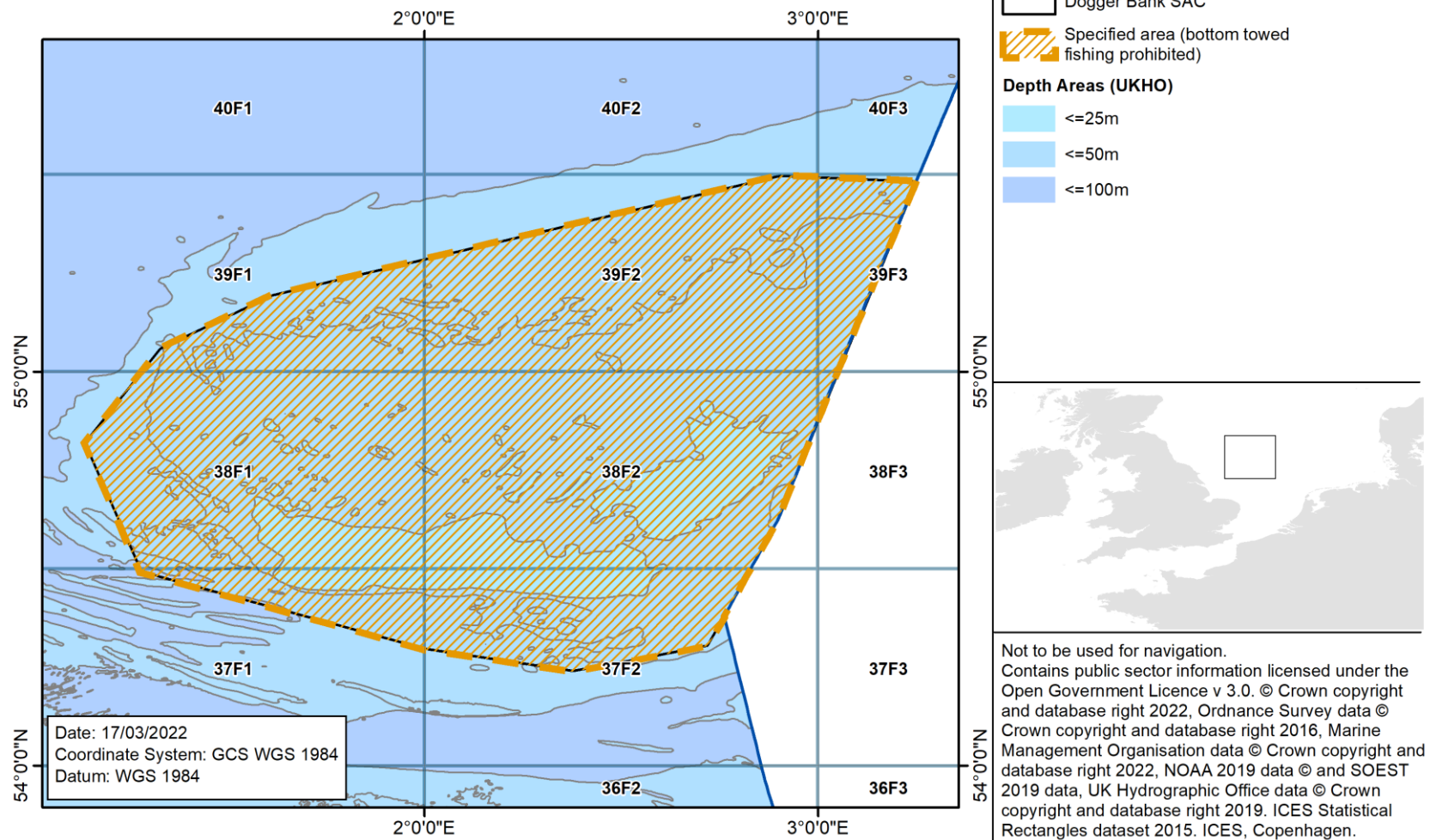
MMO has conducted a comprehensive assessment of the impacts of commercial fishing within Dogger Bank SAC and consulted widely upon required management measures to protect the sandbank feature of the site. We have considered each of the points raised through consultation when making our decision and are satisfied that all points have been addressed. Figure 2 shows the final management area.

Having considered all of the above information and best available evidence, MMO has made The Dogger Bank Special Area of Conservation (Specified Area) Bottom Towed Fishing Gear Byelaw 2022 and will submit this byelaw to the Secretary of State for confirmation.

Figure 2: The Dogger Bank SAC management area



Dogger Bank Special Area of Conservation (Specified Area) Bottom Towed Fishing Gear Byelaw 2022



Annex 1: MMO responses to site specific consultation responses received through call for evidence – Dogger Bank SAC

1. Site specific consultation responses

1.1. Sandeel fishery

The following points were raised by respondents regarding the sandeel fishery:

- 1) The sandeel stock 1r (central and southern North Sea) was above biological reference points in 2016-2018, and recruitment in 2019 was above the geometric mean for this stock. Considering the stock's status and the 2019 recruitment, based on a maximum sustainable yield (MSY) approach, the International Council for the Exploration of the Sea (ICES) advised a catch of 113,987 tonnes in 2020. No evidence is presented on how this advice could indicate that the protected sandbank feature is being impacted by fishing. The presence of a targeted annual commercial fishery limited by total allowable catch (TAC) demonstrates that the populations of sandeel stock 1r are sufficiently abundant to support a fishery. The MMO assessment should therefore consider that ICES advice permits fishing pressure on the stock and present evidence as to why this advice does not satisfactorily manage this pressure.
- 2) Sandeels are short-lived species with highly variable recruitment patterns driven by natural factors. Variability in the biomass status and productivity of sandeel stock 1r is driven by natural factors.
- 3) Sandeel stock 1r has repeatedly fallen below biological reference points since 2004, indicating that the sandeel stock is poor condition. Fishing contributes to this, with the Marine Stewardship Council suspending certification in 2019 of the sandeels in management area 1r due to the stock falling below safe biological limits.

MMO response regarding the sandeel fishery

In response to points 1 and 2, the spawning stock biomass of sandeels in stock 1r has fluctuated above and below MSY $B_{trigger}$ since 2004 (ICES, 2020a). Although several factors can affect the recruitment and survival of sandeel stocks in the North Sea, including internal regulatory factors (such as density dependence) and external regulatory factors (such as climate-driven changes in prey availability), fishing mortality also contributes to the productivity of North Sea sandeel stocks (Lindegren *et al.*, 2018). Simulation models predict that reducing fishing mortality can lead to pronounced improvements in stock status (Lindegren *et al.*, 2018).

Sandeels are listed as a species component of the characteristic communities of Dogger Bank SAC and play an important role in the biological 'structure and function' of the sandbank feature. Given the fluctuations in sandeel spawning stock biomass,

the large quantities of sandeels being removed from Dogger Bank SAC, and the contribution of this fishing mortality to the spawning stock biomass, MMO cannot rule out that sandeel removal by demersal trawling and seining is having an adverse effect on site integrity and the ability to achieve the conservation objective to restore the sandbank habitat to favourable conservation status.

In response to point 3, MMO agrees that the sandeel stock 1r has fallen below biological reference points since 2004, as shown in the 2020 ICES advice (ICES, 2020a), and fishing mortality can contribute to declines in the stock's productivity (Lindegren *et al.*, 2018). The MMO MPA fisheries assessment shows that large quantities of sandeels are estimated to be removed from Dogger Bank SAC. Consequently, the assessment concluded that the biological assemblages and structure of the sandbank feature are likely to be significantly impacted via the removal of target species pressure where it concerns sandeels. Accordingly, MMO cannot rule out that demersal trawl and demersal seine activity may result in an adverse effect on site integrity, and thus management measures have been recommended for these fishing activities.

1.2. Grouping semi-pelagic fishing gear with demersal gear

The following points were raised by respondents regarding grouping semi-pelagic gear with demersal gear:

- 1) Sandeel fishing is moving towards using fully pelagic trawl doors. Such gears have no/limited contact with the seabed, and are lighter, resulting in reduced impacts to the seabed. Grouping semi-pelagic gears with demersal towed gears is therefore not acceptable.
- 2) Draft measures for offshore MPAs in Scotland allow for semi-pelagic fishing to continue within designated areas.

MMO response regarding grouping semi-pelagic fishing gear with demersal gear

In response to point 1, MMO agrees that using pelagic and semi-pelagic trawl doors may reduce impacts on the seabed compared to bottom trawl doors, however, impacts from semi-pelagic gear (including from the ground rope and sweeps) cannot be ruled out. Unlike bottom otter trawls, the semi-pelagic trawl doors do not come into contact with the seabed, instead swimming several metres above⁷. The board component of bottom otter trawls penetrates deepest into the sediment (Eigaard *et al.*, 2016) and therefore semi-pelagic doors reduce a significant portion of the bottom impact compared with bottom otter trawls including the resuspension of sediments (Rijnsdorp *et al.*, 2017). However, the overall footprint (surface area of the seafloor swept by the gear per unit of time), which is mainly affected by the ground rope and sweeps, will not be affected (Rijnsdorp *et al.*, 2017). While some information is available detailing the reduced impact of semi-pelagic gear when compared to bottom otter trawls, there appears to be little evidence regarding the remaining impact of semi-pelagic gear. As the net is usually still in contact with the seabed (albeit perhaps more lightly than in bottom otter trawls)⁷ abrasion and some degree

⁷ <https://www.seafish.org/responsible-sourcing/fishing-gear-database/gear/semi-pelagic-trawl/>

of penetration impact is still likely to occur, and little evidence is available to establish that this is not contributing to an adverse effect on site integrity. As per otter trawls, semi-pelagic gears are unlikely to significantly impact the large-scale topography or sediment composition of the sandbank feature, however, impacts to the biological structure are likely.

In response to point 2, MMO is responsible for the assessment and management of fishing in offshore MPAs in the English region. Following a detailed technical assessment of the impacts of fishing on Dogger Bank SAC, we have determined that it is necessary to prohibit bottom towed fishing gears including semi-pelagic gears, as a result of their seabed impacts. MMO continues to welcome any additional relevant evidence, including evidence that semi-pelagic gears can continue to operate within Dogger Bank SAC without undermining the 'restore' conservation objectives of the site.

1.3. Variation in habitat sensitivity

The following points were raised by respondents regarding variation in habitat sensitivity:

- 1) The impacts of bottom towed fishing can vary with levels of natural disturbance. Areas with high disturbance (such as the top of the bank/shallow dynamic areas of the bank) have wind driven waves and high currents that lead to a variable benthic community and low species abundance. The adapted ecology of areas with high natural disturbance leads to faster recovery rates and lower sensitivity to towed fishing gear.
- 2) The impacts of bottom towed fishing can vary with sediment type. Certain sediments (e.g. sand, mud, and coarser sediments) are less sensitive and/or have greater recovery potential from bottom towed fishing.
- 3) The impacts of bottom towed fishing vary between core and peripheral fishing grounds. Closing peripheral fishing grounds (which are more likely to contain healthy benthos), whilst allowing fishing to continue in core fishing grounds would prevent displacement to healthy peripheral fishing grounds; thus, providing the best trade-off between achieving conservation benefits at the lowest costs to the fishing industry.
- 4) Areas that are most sensitive to bottom towed fishing (such as gravel habitats, which contain higher levels of long-lived species) should be prioritised for protection, whilst less sensitive areas (e.g., areas with high natural disturbance, certain sediment types and/or core fishing grounds) should remain open to bottom towed fishing.
- 5) The impacts of bottom trawling are modest in Dogger Bank SAC compared to other areas, due to the site having low biomass and species richness, and/or the site containing species that are adapted to natural disturbance and thus more resilient to trawling.

MMO response regarding variation in habitat sensitivity

In response to points 1 to 4, MMO agrees that the impacts of bottom towed gear on the seabed may vary with several factors, including the level of natural disturbance (Lambert *et al.*, 2014), sediment type (Rijnsdorp *et al.*, 2018) and exposure to previous fishing activity (Sciberras *et al.*, 2018). For example, in areas of high natural disturbance, benthic communities may recover faster from bottom towed fishing (Lambert *et al.*, 2014). Due to containing large proportions of long-lived sessile epifauna, communities in gravel habitats may be more sensitive to bottom towed fishing (Rijnsdorp *et al.*, 2018). The impacts of bottom towed fishing on lightly fished areas may also be greater (Sciberras *et al.*, 2018); likely due to historic trawling in core fishing grounds having removed sensitive species (Hiddink *et al.*, 2017). Delineating variation in habitat sensitivity (for example by levels of natural disturbance, sediment type and previous fishing exposure) does not, however, consider species-specific sensitivities, for example fragile species will be more vulnerable (Hiddink *et al.*, 2006). Studies on how the impacts of bottom towed fishing vary with sediment type can, at times, also provide conflicting results (Hiddink *et al.*, 2017; Stewart and Howarth, 2016). While some information is available detailing how bottom towed fishing impacts vary, the intensity and extent of bottom towed fishing that is sustainable, even in more resilient habitats, remains unclear (Stewart and Howarth, 2016). JNCC has advised that the Annex I sandbank feature of Dogger Bank SAC is in unfavourable condition in part due to the impacts of demersal fishing⁶. Although the impacts may vary, trawling can have large negative effects on the biomass and production of benthic communities in the North Sea, including Dogger Bank (Hiddink *et al.*, 2006). Therefore, MMO considers that bottom towed fishing activity is not compatible with the site's conservation objectives, particularly to 'restore' the structure and function of the sandbank feature.

In response to point 5, there are studies showing that the impacts of bottom towed fishing on the benthic communities of Dogger Bank SAC may be limited, possibly because the benthic fauna consist of species that are not greatly affected by trawling (Queirós *et al.*, 2006) and/or due to the area having less initial species biomass (Hiddink *et al.*, 2006). There are also studies that have identified a negative impact of trawling on the benthic ecology of Dogger Bank (Van Denderan (2015) . Historic trawling can remove more sensitive species, whilst the more resilient species remain (Hiddink *et al.*, 2017) and fishing in Dogger Bank has been on-going for decades (Plumeridge *et al.*, 2017). Such continuous fishing may have contributed (alongside other factors) to the transformation of benthic communities, including reducing benthic habitat complexity and increasing the dominance of short-lived species (Kröncke, 2011; Plumeridge *et al.*, 2017). This contributes to MMO's conclusion that bottom towed fishing activity is not compatible with restoring the site's biological communities. Furthermore, although the prohibition of bottom towed gears from the Dogger Bank SAC could lead to displacement of fishing activities to habitats elsewhere in the North Sea, the location (and thus the associated environmental costs) of displaced fishing activity is unclear. The MMO MPA fisheries assessment could not rule out that bottom towed gears are adversely affecting the integrity of the site. As such the potential impact of displacement to areas outside of Dogger Bank SAC does not remove the requirement to ensure that fishing is managed to further the conservation objectives of the site.

1.4. Factors (beyond fishing) that affect the protected feature or biological communities in Dogger Bank SAC

The following points were raised by respondents regarding factors (beyond fishing) that affect the protected feature or biological communities in Dogger Bank SAC:

- 1) A range of factors, including climatic-driven changes, could be driving changes to the benthic ecology of Dogger Bank SAC, including a decreased abundance of long-lived species and an increased abundance of short-lived species.
- 2) Wind turbine development in the area will negatively impact Dogger Bank SAC, including the sandeel population, as well as seabirds from Special Protection Areas (SPAs) that are reliant on these fish for prey. MMO should consider how such developments could, either alone or in-combination, adversely affect the site's integrity.
- 3) The consultation documents fail to mention oil and gas exploration, which from observations is very damaging to the sandeel stock. Previous seismic surveys in the area have caused the stock to suffer, and it can take years for the fish to come back to some banks following such activity.

MMO response regarding factors beyond fishing that affect the protected feature or biological communities in Dogger Bank SAC

In response to point 1, MMO has updated MPA fisheries assessment to include that factors beyond fishing could be driving changes to the benthic ecology of Dogger Bank SAC. Hydroclimatic changes, driven by changes to the North Atlantic Oscillation system, could be contributing to decreased species numbers and increased numbers of small polychaetes in Dogger Bank SAC (Kröncke and Reiss, 2007). However, while both hydroclimatic changes and fishing are hypothesised to explain changes in Dogger Bank macrofauna communities (Kröncke, 2011), centuries of trawling has likely resulted in reduced benthic habitat complexity (Plummeridge and Roberts, 2017). The presence of climate-driven factors does not exclude the possibility that fishing also contributes to changes in the biological communities of Dogger Bank SAC.

In response to point 2, the fisheries assessment of Dogger Bank SAC considers wind turbine development in Part C of the assessment. Part C of MMO's MPA fisheries assessments investigates the effects of fishing activities, which alone are considered compatible with the conservation objectives of an MPA, in-combination with other relevant activities. The only assessed fishing activities that were considered compatible with the conservation objectives of Dogger Bank SAC were anchored nets/lines and traps. In addition, fully pelagic fishing was considered not likely to be having significant effect on the site. The MPA fisheries assessment concluded that the pressure associated with traps and anchored nets/lines, in combination with these other activities, were compatible with the conservation objectives of the site. The aim of an MMO MPA fisheries assessment is to determine whether adverse effects from fishing pressures on designated features can be excluded, whilst also considering the effects of fishing activities in-combination with

other relevant activities. The assessment determined that bottom towed fishing is not compatible with the conservation objectives of Dogger Bank SAC, and thus appropriate management measures were suggested. Windfarm development within Dogger Bank SAC are consented through the Planning Act 2008⁸. The regulator for this is the Planning Inspectorate, who are therefore be responsible for ensuring the appropriate level of environmental assessment when assigning windfarm developments. Once consented MMO is the lead regulator responsible for enforcing post-consent monitoring, and varying, suspending, and revoking any deemed marine licence(s) as part of the development consent order (DCO) should evidence change regarding the potential for the activities to have an adverse effect on site integrity.

In response to point 3, MMO have incorporated new evidence submitted detailing the presence of oil and gas activities within the Dogger Bank SAC and included the associated pressures in Part C of the MPA fisheries assessment as appropriate. Oil and gas activities are regulated by the Oil and Gas Authority (OGA) for exploration and development and the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) for decommissioning.

1.5. Management of the scallop fishery

The following points were raised by respondents regarding management of the scallop fishery:

- 1) No reference is made to the recent measures being implemented and developed for the sustainable exploitation of scallops in Dogger Bank SAC, including the temporary cessation of the fishery in 2020. The conclusion that the removal of target species by dredges is not compatible with the conservation objectives is therefore not appropriate if management is to permit a sustainable level of exploitation.
- 2) Industry groups support Option 2, including an adaptive, collaborative, and zonal management approach informed by science and industry. The industry is committed to promoting sustainable harvesting and delivery of well-managed fisheries and would support a zonation and adaptive management approach using environmental disturbance thresholds to identify levels of disturbance that could be carried out without negatively affecting the conservation objectives of the site. This approach would allow fishing in areas until one of these limits is met, at which point the area would be closed to fishing, creating a set of rolling openings/closures that would enable fishing to continue whilst achieving the site's conservation objectives. Skippers who have knowledge of the fishery should be involved in any management discussions.
- 3) Option 1 could lead to overfishing of scallops, affecting stock sustainability, and is therefore not supported by industry groups.
- 4) Additional knowledge on the status and distribution of the scallop stock in Dogger Bank SAC is required to develop a suitable management plan.

⁸ <https://www.legislation.gov.uk/ukpga/2008/29/contents>

MMO response regarding management of the scallop fishery

In response to point 1, MMO has updated its assessment regarding the impact of scallop removal on the sandbank feature. Scallops are not listed in JNCC conservation advice as 'key and influential' species or as part of 'characteristic communities' of the site⁴ and are not currently considered to have a critical role in maintaining the structure and function of the sandbank feature. As such, MMO now considers that impacts from removal of target species by dredges on the sandbank feature are compatible with the conservation objectives of the site and will not result in an adverse effect on site integrity.

In response to point 2, following the call for evidence, MMO has updated the MPA fisheries assessment with the inclusion of the new evidence provided. However, MMO concludes that due to a number of significant pressures, demersal dredging activities are not compatible with the conservation objectives of the site and a zoned/adaptive approach is not appropriate as the areas open to fishing activity will continue to adversely affect site integrity and result in an ongoing suppression of the condition across the site as a whole.

In response to point 3, MMO agrees that option 1 is not compatible with the conservation objectives of Dogger Bank SAC.

In response to point 4, MMO is assessing the impact of fishing activities on the designated sandbank feature of Dogger Bank SAC. MMO has updated its assessment following the submission of new evidence. As detailed in the response to point 1, MMO now considers that impacts from the pressure 'removal of target' species (scallops) by dredges on the sandbank feature are compatible with the conservation objectives of the site. Despite this, management of dredging activity is still required as the other pressures exerted by dredges (i.e. abrasion/penetration of the substrate etc) are not considered compatible with the conservation objectives of the site.

1.6. Bycatch

The following points were raised regarding bycatch:

- 1) Bycatch from sandeel fishing is extremely minimal.
- 2) Regarding the removal of non-target species by demersal seines, no consideration is given to the rate of capture or whether bycaught species are likely to be returned unharmed.
- 3) Bycatch from the scallop fishery is limited, with bycatch mostly comprised of plaice. Sandeel bycatch is extremely minimal, and no biogenic habitat-forming organisms (such as corals, sea fans or sea pens) have been caught by consulted scallop vessels.
- 4) No consideration is given to harbour porpoise bycatch, such as from gillnets.

MMO response regarding bycatch

In response to point 1, the sandeel fishery can be highly selective and thus may have low bycatch of protected species (ICES, 2020b); however, there is limited evidence to suggest that bottom towed fishing (including demersal trawl, seines, and semi-pelagic gear) does not affect the protected sandbank feature of Dogger Bank SAC through the removal of non-target species. Although semi-pelagic gear can have reduced seabed impacts compared to bottom otter trawls (Rijnsdorp *et al.*, 2017), the similar footprint of these gears and the continued contact of the net with the seabed suggest that abrasion and penetration contact with the seabed are likely to occur for semi-pelagic gear, albeit to a reduced degree particularly via penetration (Rijnsdorp *et al.*, 2017). Removal of non-target species is therefore likely to occur during fishing using bottom trawling and semi-pelagic gear owing to continued abrasion. Removal of non-target species via abrasion may not always appear as bycatch, with long lived sessile species being damaged or killed but not necessarily retained in the fishing gear and identifiable as bycatch.

As there is little evidence to suggest otherwise, MMO cannot rule out that bottom towed fishing (including demersal trawl, seines, and semi-pelagic gear) has adverse effects on the integrity of Dogger Bank SAC via the removal of non-target species.

In response to point 2, MMO MPA fisheries assessment now includes further detail on the removal of non-target species by demersal seines. Rate of capture (and therefore bycatch rate) varies with species and mesh sizes. Examples are given as follows: discard rates of *Arctica islandica* are on average 5 per hour for Scottish seines with mesh size 100 to 119 mm versus 1 per hour for mesh sizes over 120 millimetres (mm), and discard rates of *Alcyonium digitatum* are on average 2 per hour for mesh sizes 100 to 119 mm and 14 per hour for mesh sizes greater than 120 mm (Van der Reijden *et al.*, 2014). Survival rates of bycatch are influenced by several factors including the species caught, time fish spend on deck and fish body size (Benoît *et al.*, 2010). It is noted that Scottish seines do encounter long-lived species such as dead man's fingers (Van der Reijden *et al.*, 2014), such fragile species are particularly sensitive to removal and displacement (Jager *et al.*, 2018).

In response to point 3, dredges can catch large amounts of bycatch for a range of non-commercially targeted species (Howarth and Stewart, 2014). Due to crushing under the gear and/or the initial encounter with the gear, the majority of damage to large benthic invertebrates during scallop dredging can occur unobserved on the seabed (Jenkins *et al.*, 2001), with benthic megafauna on the seabed having similar (or even higher) levels of damage as those landed on the deck (Jenkins *et al.*, 2001). Given benthic communities can be significantly altered by scallop dredging (Bradshaw *et al.*, 2001), MMO cannot rule out that dredging has adverse effects on the integrity of Dogger Bank SAC via the removal of non-target species.

In response to point 4, gill netting activity and therefore potential for harbour porpoise bycatch in Dogger Bank SAC is minimal. Additionally, harbour porpoise is not a designated feature of Dogger Bank SAC; however, they are a designated feature of the Southern North Sea SAC. MMO MPA fisheries assessment for the Southern North Sea SAC will assess the effects of fishing pressures (including bycatch by gill nets) on harbour porpoise.

1.7. Use of fishing activity data

The following points were raised by respondents regarding usage of fishing activity data:

- 1) No Pr-values are included in the assessment, and therefore conclusions on the intensity of fishing activity from visual interpretations of VMS are premature. References are made to high levels of activity without quantification or reference to the level of certainty.

MMO response regarding use of fishing activity data

The MMO MPA fisheries assessment for Dogger Bank SAC has been updated to include spatial footprint analysis (Pr-values). This analysis has confirmed the high intensity of bottom towed gear activity in areas of the site.

1.8. Environmental benefits of the site are not fully considered

The following points were raised by respondents regarding the environmental benefits of the site that they consider are not fully considered:

- 1) The sandeel stock within Dogger Bank SAC is an important foraging area for the seabird features (black-legged kittiwake, northern gannet, razorbill, and common guillemot) of the Flamborough and Filey SPA. Declines in sandeel availability (exacerbated by fishing mortality) are adversely affecting the breeding success of these seabirds and thus possibly the overall condition status of these SPA conservation features.
- 2) Sandeels are an important food source for harbour porpoises, yet no consideration is given to the impacts of fishing activity on the harbour porpoise feature of the Southern North Sea SAC, of which about half of Dogger Bank SAC overlaps with.
- 3) High amounts of organic carbon are stored in UK continental shelf sediments, with the carbon storage potential of Dogger Bank SAC being over four megatonnes. Continued abrasion by bottom towed fishing gear would reduce carbon storage capacity and release carbon, contributing to climate change.
- 4) European sturgeon, which are recommended for restoration by European countries under the Habitats Directive, were historically present in Dogger Bank SAC.

MMO response regarding environmental benefits of the site are not fully considered

In response to points 1 and 2, sandeels are considered to be part of the 'characteristic communities' of Dogger Bank SAC and play an important role in the biological 'structure and function' of the sandbank feature. The MMO MPA fisheries assessment concluded that an adverse effect on site integrity cannot be ruled out for bottom towed fishing. As part of the assessment, the removal of sandeels as a target

species was found not compatible with the site's conservation objectives. Although this site-level assessment was for Dogger Bank SAC, the measures recommended for managing these fishing activities (including bottom towed fishing for sandeels) could have benefits to the protected features of other MPAs, including the Southern North Sea SAC and Flamborough and Filey Coast SPA.

In response to points 1 to 4, sturgeon are not a designated feature of Dogger Bank SAC and are not identified by JNCC as part of the characteristic communities of the sandbank feature. Although sturgeon may have been historically present (Debus, 1996), evidence that sturgeon are currently present in Dogger Bank SAC is limited (Lassalle *et al.*, 2010). However, the non-monetary benefits of Dogger Bank SAC, including the importance of the site for critically endangered fish species (e.g. common skate and angelshark), carbon storage, and food web dynamics (including how the large numbers of sandeels at the site are an important prey species to seabirds and cetaceans), are considered in the MMO Dogger Bank SAC fisheries byelaw regulatory triage assessment (RTA).

1.9. Impacts on individual species

The following points were raised by respondents regarding impacts on individual species:

- 1) The assessment notes the abundance of dead man's fingers as evidence that anchored gill nets are not impacting this species. If this is the case, it would also suggest that other potentially impacting gears are also not impacting the species either.
- 2) The assessment references the reduction in fish species such as the thornback ray but does not detail a management objective for the species.

MMO response regarding impacts on individual species

In response to point 1, MMO has updated the fisheries assessment, removing the reference to Diesing *et al.* (2009) due to the little empirical evidence supporting a link between the impacts of gill nets and the removal of soft corals. The linking of dead man's finger corals in Dogger Bank SAC to a lack of impact by netting (or other gears) did not consider the location of the samples in regard to the dominant areas of fishing activity. Although bycatch rates can vary, dead man's fingers have been recorded as bycatch in demersal seines, beam trawls and bottom otter trawls (Van der Reijden *et al.*, 2014). As well as being landed onboard vessels as bycatch, dead man's fingers may also be left damaged on the seafloor following disturbance from bottom towed fishing (Jager *et al.*, 2018). This species is permanently attached to the substratum and once it is displaced, it may not have the ability to re-attach (Jager *et al.*, 2018). This species is therefore considered highly sensitive to removal and displacement, and mortality following disturbance is likely to be high (Jager *et al.*, 2018). As a slow growing coral, dead man's fingers are also likely to take much longer to recover following the impacts of bottom towed fishing (Kaiser *et al.*, 2006). Therefore, MMO cannot rule out the potential for bottom towed gear to have negative impacts on the sandbank feature via removal of non-target species such as such as dead man's fingers.

In response to point 2, MMO is intending to manage the impact of fishing activities on the designated sandbank feature within Dogger Bank SAC. There is no specific management objective for the thornback ray with regard to the Dogger Bank SAC. The conclusion drawn with regard to the compatibility of demersal trawl activity with the conservation objectives of the site does not relate specifically to thornback ray, the reference was included to highlight the potential impact of demersal trawling and the associated abrasion/penetration pressure on the sandbank feature and its associated biological community.

1.10. Legislative adherence

The following points were raised by respondents regarding legislative adherence:

- 1) Considering Dogger Bank SAC in isolation from the wider UK Marine environment undermines the duties outlined in the UK Marine Strategy Regulations 2010: namely, that MMO, as a public authority, is failing in its duty that it *“must, in exercising any functions so far as affecting the marine strategy area, have regard to any marine strategy developed under regulation 5”* and in so failing is therefore hindering progress towards good environmental status (GES).
- 2) Considering the extent and frequency of the interaction between bottom towed fishing and the protected feature of Dogger Bank SAC, and in the view of MMO that the site will not achieve its conservation objectives due to these activities, failure to restrict bottom towed fishing will be in breach of the Habitats Directive, and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- 3) The UK is signatory to the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS) and, therefore, is also committed to the Conservation Plan for Harbour Porpoise in the North Sea.
- 4) Atlantic sturgeon is recommended for restoration by European countries under the Habitats Directive and evidence suggests Dogger Bank was once home to the sturgeon. This was not covered in MMO’s draft fisheries assessment for Dogger Bank SAC.

MMO response regarding legislative adherence

In response to point 1, MMO MPA fisheries assessment contains a detailed assessment of the impacts of fishing in the site and takes into account evidence received and advice from JNCC. This has been used to develop management measures which have been subject to public consultation. MMO has had regard to the UK Marine Strategy in the development of these draft measures, as required by regulation 9 of the Marine Strategy Regulations 2010 and consider that the proposed measures will contribute to the achievement of good environmental status (GES).

In response to point 2, MMO MPA fisheries assessment concluded that bottom towed gears are not compatible with the conservation objectives of the Dogger Bank

SAC. As such MMO has proposed management to exclude these activities from the site in accordance with its duties under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹.

In response to point 3, MMO has duties under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ to support the conservation objectives of European marine sites, including the Dogger Bank SAC. The MMO MPA fisheries assessment and proposed management measures have been developed to ensure MMO is compliant with these duties in respect of Dogger Bank SAC. Harbour porpoise is not a designated feature of the site and therefore neither the assessment nor management proposal have been developed specifically for the protection of harbour porpoise. However, the exclusion of demersal trawls from the Dogger Bank SAC is likely to benefit harbour porpoises in the North Sea through, for example, habitat recovery and increased prey availability and thus indirectly supporting the Conservation Plan for Harbour Porpoise in the North Sea.

In response to point 4, and as per our response to point 3, MMO assessment is focussed on the Dogger Bank SAC and its features. Atlantic sturgeon is not a designated feature of the site and therefore neither the assessment nor management proposal have been developed specifically for the restoration of Atlantic sturgeon. However, given the likely impact of commercial fishing activities on the status of the species and evidence suggesting the Dogger Bank once provided a home for them, it is possible the management measures developed may contribute to the restoration of the Atlantic sturgeon population in the North Sea.

2. General call for evidence responses

MMO received consultation responses which apply to the general assessment process which do not relate to specific MPAs. Therefore, MMO has summarised these consultation responses in the section below together with MMO's response to the comments.

2.1 Assessment format

Respondent comment: It is not appropriate to discount fishing activities from the in-combination assessment where it is concluded the activities will have an adverse effect on the site alone. Due to the uncertainty around the management measures being put in place for fishing activities which are causing an adverse effect, the respondent has no confidence that management will be effective and therefore suggest these activities must also be included in the in-combination assessment.

MMO response: The MMO MPA fisheries assessments aims to assess whether there are adverse effects on designated features from fishing pressures and suggest appropriate management measures to ensure the site's conservation objectives are met, in accordance with scientific advice provided by JNCC and NE¹⁰.

⁹ <https://www.legislation.gov.uk/ukxi/2017/1013/contents/made>

¹⁰ <https://jncc.gov.uk/our-work/marine-activities-and-pressures-evidence/>

The assessment is completed in several parts: Part A provides a coarse sensitivity assessment to identify which fishing activities can be discounted from further assessment (Part B) as they are not taking place or are not a significant concern. Part B provides an in-depth analysis to assess the pressures of fishing activities relevant for the site. Part C considers the effects of activities in-combination with other relevant activities taking place. These can include:

- Fishing activity/pressure combinations which were excluded in Part A due to not having a significant effect on features alone but could have an in-combination affect.
- Fishing interactions assessed in Part B but not resulting in a significant risk to the site's conservation objectives or an adverse effect on site integrity.
- Plans or projects such as marine development works requiring a marine licence.

Where activities have been identified in Part B to result in an adverse effect/significant risk alone, their consideration during Part C depends on the mitigation identified as a result of impacts identified in Part B. Where an activity is identified in Part B as having an adverse effect/significant risk alone, and mitigation is introduced to reduce, but not entirely remove the impacts of this activity, the residual impact will be considered in Part C to ensure all in-combination impacts are captured.

Where mitigation will be introduced to entirely remove a pathway for a pressure from the activity to affect the feature, this pressure from this activity will not be considered in Part C. For example, where the identified mitigation is a prohibition of use of a certain fishing gear type within the site, all of the pressures from this activity would be removed from the site and it is not therefore considered during the in-combination assessment, the methodology is Annex 1 of each assessment.

Respondent comment: The fisheries assessments would benefit from a glossary of terms and consistent use of them throughout the documents, and that an overarching assessment methodological conceptualisation would help communicate how the assessments are undertaken.

MMO response: The MMO MPA assessments aim to use clear accessible language and provide explanation where required for use of non-standard terminology. MMO recognises it would be valuable to provide some supporting information to aid interpretation of the assessments for wider audiences and so have developed a glossary for the current and future assessments. Annex 1 of the MMO MPA assessment fully details the methodology and aims of the assessment as well as referencing the need for assessment in a manner consistent with section 126 of the Marine and Coastal Access Act, 2009. Evidence sources and SNCB advice packages are referenced in our assessments where appropriate.

2.2 Displacement of fishing effort

Respondent comment: Any spatial management measure to reduce fishing pressure must also consider the potential displacement effects, and the wider impacts this could have on the benthic communities and mobile species associated with them.

MMO response: MMO MPA assessments use the best available evidence to fully consider all impacts against the conservation objectives, as identified by scientific evidence. If the assessment concludes that use of certain fishing gear types are not compatible with the site's conservation objectives, management measures may be put in place which could cause displacement of this fishing to other areas. This potential impact of displacement to areas outside of the MPAs or management areas does not remove the requirement to ensure that fishing is managed to further the conservation objectives of the site. However, MMO has regard to displacement and monitor every MPA by undertaking annual reports of fishing activities and pressures within MPAs in our jurisdiction, and by regularly reviewing and updating the MPA assessments to reflect any such changes that have been observed. See section 8 of the MMO MPA fisheries assessment for further details on the MMO process on reviewing assessments.

2.3 Additional management required

Respondent comment: The outcome of this call for evidence and any subsequent consultations will not provide the proper protection needed for the most ecologically important parts of our seas. The process lacks ambition, both in the number of MPAs included and the management options proposed. It is also unnecessarily slow and cumbersome as a process for delivering the scale and extent of ambition required to protect our oceans.

The respondent highlighted that bottom trawling took place in 71 offshore MPAs in 2019 and advocated a ban on all destructive fishing gears starting with bottom trawlers and supertrawlers, across the entire MPA network. The respondent suggests these bans should be introduced from 1 January 2021, by removing licenses for supertrawlers and bottom trawlers to fish in MPAs, via powers in the Fisheries Act 2020.

MMO response: The purpose of the call for evidence was to gather additional evidence and stakeholder views on the draft MMO assessments and management options for fishing in four offshore MPAs: Dogger Bank SAC, Inner Dowsing, Race Bank and North Ridge SAC, South Dorset MCZ and The Canyons MCZ. MMO MPA fisheries assessments contain detailed assessments of the impacts of fishing in these sites and set out a range of management options. The outcomes of updated MMO assessments, taking into account evidence received and advice from NE and

JNCC, were used to develop ambitious and proportionate draft management measures which were subject to public consultation.

2.4 SNCB advice

Respondent comment: More explicit reference to SNCB advice within Part B would provide greater transparency on how the assessment is drawing its conclusions. The management objectives for mobile species were also identified as lacking clarity and purpose.

MMO response: Mobile species are not a designated feature of any of the sites assessed within the call for evidence or formal consultation. NE and JNCC conservation advice packages may include species (including mobile species) as a component part of a feature and impacts on certain species may influence a target attribute for a site feature (feature target attributes are set out in NE or JNCC conservation advice packages). Where fishing impacts (for example the removal of target and non-target species) have the potential to impact a sites' conservation objectives, we have used the best available evidence to assess this, in accordance with the pressures activities database published by JNCC and NE¹¹.

2.5 Data analysis

Respondent comment: The spatial footprint analysis (Pr-values) methodology uses vessel speeds of than 0 to 6 knots. The respondent suggested applying a rule of using vessel speeds of 1-6 knots instead.

MMO response: The Pr-values presented incorporate gear specific fishing speeds which are used to identify relevant vessel pings to be included within the values presented. Annex 2 in the MMO MPA assessments provides information regarding the speeds that have been included for each of the fishing gears included. It is acknowledged in the description, that there are strengths and limitations of fishing activity data provided in the assessments, and that this may overestimate, or in some cases, underestimate the true level of fishing activity.

¹¹ <https://jncc.gov.uk/our-work/marine-activities-and-pressures-evidence/#jncc-pressures-activities-database>

Annex 2: MMO responses to site specific consultation responses received through formal consultation – Dogger Bank SAC

1. Site specific consultation responses

1.1 Positive environmental impacts

In addition to the points raised in the call for evidence (see Annex 1 section 1.8), the following points were raised by respondents regarding positive environmental impacts of the proposed management:

- 1) Improving, protecting, and conserving fish stocks to enable sustainable fishing.
- 2) Increasing prey food availability, such as sandeels, for birds and mammals and indirectly supporting features associated with nearby MPAs and the Conservation Plan for Harbour Porpoise in the North Sea.
- 3) Providing a seeding sanctuary and positive spill-over effects in adjacent areas.
- 4) Enhancing and protecting biodiversity.
- 5) Restoring the structure and function of the sandbank feature and allowing the site to reach favourable conservation status.
- 6) Reducing pollution.
- 7) Reducing seabed damage and protecting and enabling recovery of benthic ecology, including trawling-vulnerable and habitat-forming species (which in-turn will provide more complex and diverse habitats).
- 8) Reducing bycatch pressures (e.g. on undersized fish, commercial fish, and non-commercial species).
- 9) Contributing to healthier and more resilient seascapes, which are better able to withstand the impacts of storms, increasing sea temperatures and anthropogenic activity.
- 10) Protection of potential *Sabellaria spinulosa* reefs.
- 11) Providing habitat for endangered species (e.g. common skate, Atlantic halibut, starry ray, and spiny dogfish), and potentially historically present species (e.g. European, and Atlantic sturgeon).
- 12) Reducing carbon release from sediments due to bottom trawling (Dunkley and Solandt, 2021) and supporting better storage and sequestration of blue carbon assets.
- 13) Providing ecosystem services (such as provisioning and regulation benefits) and non-use benefits, such as existence value, wherein the value of the ecosystem is

not directly or indirectly related to humans, but the value instead comes from the knowledge that the ecosystem exists.

MMO response regarding positive environmental impacts of the proposed management

In response to points 1 to 13, while the management measures have been developed solely in relation to the MMO's legal duties relating to Dogger Bank SAC and its designated features, MMO agrees that the proposed management is likely to have a wide range of ancillary environmental benefits, from protecting fish stocks and benthic ecology to increasing prey availability for marine top predators. As detailed in the Dogger Bank SAC RTA, the proposed management will allow the site to continue to provide carbon storage and reduce carbon released from the seabed (Luisetti *et al.*, 2019). Critically, the MMO MPA fisheries assessment concluded that an adverse effect on site integrity from bottom towed fishing activity could not be ruled out and thus prohibiting these gears will allow for a restoration of the habitat to favourable conservation status.

In response to point 10, MMO is not aware of the presence of *Sabellaria spinulosa* reef within Dogger Bank SAC. While this is not a designated feature of the site and management has not been designed for this purpose, providing suitable physiological/ecological conditions occur, the removal of abrasion and penetration pressures from bottom towed fishing gears could allow trawling-sensitive species, such as *S. spinulosa*, to establish.

1.2 Positive political and legislative impacts

The following points were raised by respondents regarding positive political and legislative impacts of the proposed management:

- 1) UK government can demonstrate leadership in marine protection and a benefit of leaving the EU.
- 2) Meeting legislative duties and Government nature and charitable goals.
- 3) Contribute to climate change goals under the Paris agreement.

MMO response regarding positive political and legislative impacts of the proposed management

In response to points 1 to 3, MMO agrees that the management measures developed will contribute towards marine protection, both in terms of the specific conservation objectives of Dogger Bank SAC, and in terms of ancillary benefits for wider marine biodiversity. This in turn is likely to support contributing to a range of UK policy objectives and international commitments.

1.3 Positive impacts for sea users and cultural heritage

The following points were raised by respondents regarding miscellaneous positive impacts of the proposed management:

- 1) Protection of underwater cultural heritage.
- 2) Spill-over effects will increase yields for fisheries (including commercial and recreational fishers) in adjacent areas and benefit local businesses.
- 3) Allowing the site to be used for other activities (e.g. marine conservation activities, wildlife observation/tourism, navigation, and windfarms).

MMO response regarding positive impacts for sea users and cultural heritage

In response to points 1 to 3, MMO agrees that the management measures could have a range of ancillary benefits including those raised by respondents, such as reducing damage to potential archaeological sites.

Regarding marine conservation activities and wildlife observations, these can already take place within Dogger Bank SAC. The proposed management measures may contribute to enhanced fish stocks and marine biodiversity within the site which may in turn lead to an increased presence of marine megafauna, such as seals and cetaceans that are known to frequent the site. While this may provide enhanced opportunities for observing such wildlife, the distance from shore is likely to prevent such activities; thus, MMO don't see this as a likely benefit of the management outlined.

1.4 Negative socio-economic impacts

The following points were raised by respondents regarding the negative socio-economic impacts of the proposed management:

- 1) Clarification on consideration of socio-economic impacts – The proposed byelaw will directly restrict fishing on traditional fishing grounds for fishers from EU member states, the UK and Norway and directly affect the viability of fishers and impact coastal communities around the North Sea. Several vessels may have to cease activity due to adaptation costs (e.g., increasing transit time, adapting gear) and the unavailability of catch in other areas. There will be economic losses to the fishing industry and increased pressure on other sectors, yet the proposal disregards the socio-economic consequences to stakeholders. Information is required to understand how the impacts of the proposed management on fishing vessels and coastal communities were taken into account.
- 2) Not a balanced approach for sustainability - The proposed management is not a balanced approach to sustainable management and the three pillars of sustainability: economic viability, environmental protection, and social equity. Fisheries management measures should be backed-up by scientific and socio-economic arguments. Science-based management is the most efficient way to achieve UN Sustainable Development Goal number 14, as well as goals on food security and socio-economic development.
- 3) The proposed management will have significant socio-economic costs to the scallop industry, resulting in the loss of 6 - 12% of the UK scallop yield

(approximately 3,000 tonnes worth between £1.7M and £3.4M), causing possible job losses. The economic importance of scallops to the fishing industry is continually increasing. As such, a valuable national resource will be squandered with limited conservation benefits as the site is resilient to fishing pressures anyway.

MMO response regarding negative socio-economic impacts of the proposed management

The management measures are non-discriminatory as they apply equally to vessels regardless of the country conducting the fishing activity. However, due to varying levels of activity in Dogger Bank SAC, some countries may be impacted more than others.

The social and economic impact of the proposed management has been assessed and considered as part of the process of developing and introducing management measures. Please see the Dogger Bank SAC RTA for further details.

MMO strives to avoid any unnecessary costs to the fishing industry, financial or otherwise in the development of management measures. However, MMO has a duty under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ to exercise all relevant functions to ensure compliance with the requirements of the Habitats Directive¹. The potential for management to have a socio-economic impact does not override this duty. In this instance MMO have deemed the management measure outlined is necessary to meet its duties as detailed above.

In response to point 2, using the best available evidence, including empirical scientific research, and fishing activity data, MMO have determined the management measure outlined is necessary to meet its duties detailed above.

1.5 Disregards stakeholder involvement and a big-picture approach

The following points were raised by respondents, stating that the proposed management disregards stakeholder involvement and a big-picture approach:

- 1) The approach has disregarded stakeholders including the fishing industry and contiguous neighbouring states with waters covering Dogger Bank (i.e., the Dutch, German and Danish Ministries and the EU). Considering the mobility of marine species and the continuous nature of the marine environment, co-ordinated management of the connected Dogger Bank Natura 2000 sites is necessary. As Dogger Bank covers the waters of different countries, cooperation between countries is critical for setting up management measures. Collaborative engagement with the fishing industry and co-management is essential to obtain effective marine conservation outcomes. Co-management must be based on sound scientific basis, stakeholder involvement, transparency, proportionality, and non-discrimination for authorised users, taking into account the potential effects of the fishing restrictions on the downstream industry (processing and marketing).

- 2) The proposed management is not a sustainable food solution as EU and UK consumers will be denied sustainable, local, nutritious food.
- 3) The proposed management does not consider cumulative impacts. The impacts of the proposed management should be considered alongside the full range of lost fishing opportunities, such as from the departure from the EU, COVID-19, the illegal dumping of materials on the seabed, offshore renewables, the closure of multiple fishing grounds through MPAs and aggregate extraction.
- 4) The proposed management is a foregone political conclusion. The management decision is not based on science but is politically motivated and predetermined.

MMO response regarding disregarding stakeholder involvement and a big-picture approach

In response to point 1, MMO has conducted two stakeholder consultations in which stakeholders from the UK, EU member states and other relevant countries were invited to contribute.

MMO reviewed all responses and evidence provided and updated our assessments and documentation accordingly; however, based on the evidence available MMO has determined the proposed management is necessary for compliance with our legal duties.

Upon leaving the EU Common Fisheries Policy and the passing of the Fisheries Act 2020, the UK is responsible for managing fishing activity in the UK's exclusive economic zone (EEZ) including MPAs. As the national fisheries regulator, MMO has a duty under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ to exercise all relevant functions to ensure compliance with the requirements of the Habitats Directive¹. MMO has determined that the management measure outlined is necessary to comply with this duty and is in accordance with the UK-EU Trade and Cooperation Agreement (TCA) and in accordance with the UK's status as an independent coastal state.

In response to point 2, MMO recognises the importance of fishing to UK food security and public health. A well protected network of marine protected areas is a key element to support the UK vision for clean, healthy, safe, productive and biologically diverse seas. By sufficiently protecting the Dogger Bank SAC, fish biomass is likely to increase within the site with potential spill over to fishing grounds outside of the SAC.

In response to point 3, the focus of the MMO RTA is on the decision to introduce fisheries management measures for Dogger Bank SAC. MMO recognises the impacts that wider issues such as COVID-19 are continuing to have on the UK fishing industry. MMO has been at the forefront of supporting the fishing industry throughout the COVID-19 pandemic, including setting up and administering the Fisheries Response Fund. However, as detailed previously, MMO has a duty under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ to

exercise all relevant functions to ensure compliance with the requirements of the Habitats Directive¹ and MMO has determined that the management outlined is required to comply with that duty.

In response to point 4, MMO had no predetermined management approach ahead of the MMO MPA fisheries assessment. MMO has completed two stakeholder consultations including a 'call for evidence' to ensure in all circumstances we have followed the best available scientific evidence, or lack thereof, to make management decisions. Decisions are made in line with the precautionary approach and our legislative duties as outlined previously.

1.6 Disregards the joint recommendation and a zoned and/or adaptive management approach

The following points were raised by respondents regarding the negative impacts of the proposed management at disregarding the joint recommendation (Dogger Bank Background Document (2016)¹²) and a zoned and/or adaptive management approach:

- 1) The Dogger Bank SAC Joint Recommendation by the Scheveningen Member State Group (agreed by all EU Member States including the UK) is at an advanced stage of development and is consistent with a precautionary approach and Government commitments to the industry for a balanced and evidence-based approach. The Joint Recommendation, submitted to the Commission in June 2019, represents 10 years of work, which should be used as a starting point for management and not ignored. The proposed management represents a dramatic change of policy direction in the implementation of an MPA network in English waters. Regulators should consider adaptive management to deliver their obligations under Article 6(2) of the Habitats Directive. An adaptive approach would reduce socio-economic impacts and negative environmental impacts (from displaced fishing activity), whilst achieving the conservation objectives.
- 2) The fisheries assessment, the proposed management and the rejection of a zoned approach translates to an extreme interpretation of the precautionary principle. This is contrary to guidance that the precautionary principle should not be used to imply activities must be eradicated unless proved harmless (DETR and The Welsh Office, 1998). The current approach effectively transforms an amber risk (under Defra's revised approach for bottom towed gear interactions with sedimentary habitats¹³) to a red risk. This is not in line with JNCC advice that activities must look to minimise, as far is practical, changes to biological communities⁴. European marine sites were selected with many activities already taking place. The aim should not be to exclude

¹²

https://lbst.dk/fileadmin/user_upload/NaturErhverv/Filer/Fiskeri/Natura_2000_hav/Fiskeriregulering_i_andre_lande/20160531_Dogger_Bank_Background_Document_final.pdf

¹³ <https://www.gov.uk/government/publications/revised-approach-to-the-management-of-commercial-fisheries-in-european-marine-sites-overarching-policy-and-delivery>

these activities, but to ensure that they take place in ways that do not threaten conservation interest¹⁴.

- 3) MMO has not used available data to evidence spatial occurrence and intensity of fishing, and the understanding of spatial sensitivity to inform an adaptive and/or zoned management approach. For example, four offshore windfarms have been licensed on Dogger Bank and if there were insufficient spatial sensitivity data, then this logic would suggest this deficiency would hold true for these applications. However, these windfarms used spatial biotope data to produce Valued Ecological Receptors (VER) against which impact assessments were undertaken. Marine habitats are also mapped to at least EUNIS (European Nature Information System) level 4 in Dogger Bank. Furthermore, the Dogger Bank Joint Recommendation was based on applying management measures to cover four benthic communities and this approach was not challenged in STECF (2019) - a review by the European Commission's Scientific, Technical and Economic Committee for Fisheries (STECF). Additionally, Eggleton *et al* (2016) similarly confirmed that spatial variability was apparent in sediment and biological communities across Dogger Bank. MMO has not so far used this information to evidence spatial sensitivity of sub-features to fishing. The statement that there is not currently sufficient evidence to identify areas where bottom towed fishing can continue without undermining the site's conservation objective is disagreed with and sources of additional data were provided to refute the statement.
- 4) An appropriate co-management plan can be developed that limits fishing impacts to a relatively small part of this large MPA where the feature is subject to regular disturbance through natural conditions. Respondents suggest developing industry/regulator trials to explore the maximum disturbance model as tested in Cardigan Bay and existing co-management approaches used in other MPAs. These more flexible approaches, which recognise multi-stakeholder interests, could determine levels of bottom towed fishing that could enable sustainable levels of fishing that do not negatively impact the site.
- 5) The proposed management is inconsistent with management in The Wash and North Norfolk SAC where a zoned approach was deemed appropriate. The Eastern Inshore Fisheries and Conservation Authority (EIFCA) identified areas for closure in The Wash and North Norfolk Coast SAC through targeted protection of sensitive habitats. The EIFCA applied several methods in its assessment of shrimp trawling (EIFCA, 2018).
- 6) Displacement within the site is not a valid basis for rejecting Option 2. If a zoned approach is undertaken, displacement within the site could be managed through monitoring activity levels, which could be used to trigger

¹⁴ http://ukmpa.marinebiodiversity.org/uk_sacs/ms1.htm

reductions in activities levels if required.

MMO response regarding the disregarding of the Joint Recommendation and a zoned and/or adaptive management approach

In response to point 1, previous proposals for management of fishing in many English offshore MPAs were developed as joint recommendations under the CFP Regulation (EU) 1380/2013 Article 11 process. These measures were constrained by the requirement to achieve agreement from all EU member states with a management interest in the site. This led to a significant trade-off between protection of the sandbank and socio-economic fishing interests of member states. STECF noted this trade-off may have negative impacts on the ecological requirements of the natural habitat types in Annex I and the species in Annex II present on the Dogger Bank¹⁵.

Now that the UK is an independent coastal state, it is able to introduce fisheries management measures to protect MPAs, provided that they conform to the UK-EU Trade and Cooperation Agreement. To determine the most appropriate management measures for the Dogger Bank SAC, the MMO undertook a detailed MPA fisheries assessment which was unable to conclude that the use of bottom towed gears in the Dogger Bank SAC will not have an adverse effect on the integrity of the site. As such, allowing bottom towed gears to operate in the site would be in breach of MMO's legal duties to protect the SAC from damage. Therefore, alternative management options such as those proposed under the joint recommendation have not been deemed appropriate by MMO.

In response to point 2, please see Annex 2 section 1.4 regarding socio-economic impacts and Annex 2 section 2 regarding displacement. Regarding that the precautionary principle should not be used to imply that activities must be eradicated unless proved harmless (DETR and The Welsh Office, 1998), the MMO MPA assessment presented clear evidence that bottom towed fishing gear is harmful to benthic communities, causing declines in benthic biota irrespective of habitat type (Hiddink *et al.*, 2017). Bottom towed fishing can have large negative effects on the biomass and production of benthic communities across shallow sediment areas in the North Sea, including in Dogger Bank (Hiddink *et al.*, 2006). Therefore, such impacts are not compatible with furthering the site's favourable condition targets to restore the extent of biological assemblages and the biological structure of the sandbank.

In response to points 2 to 6, MMO has analysed the best available habitat and biotope evidence available for Dogger Bank SAC and using JNCC's marine evidence-based sensitivity assessment (MarESA) assigned likely sensitivities to the pressures associated with bottom towed gears. Offshore windfarms have also used biotope data to assess the impacts of the windfarms in Dogger Bank, and consistent with the polluter pays principle, the offshore windfarm industry bear the costs for monitoring and assessing the impacts from offshore windfarm installations (OSPAR Commission, 2008). The VER approach taken by offshore windfarm assessments enables different "values" to be assigned to the same biotope, dependent on the

¹⁵ [Joint Recommendation Dogger Bank.docx \(lbst.dk\)](#)

status of this biotope (i.e. whether that biotope or habitat is within or outside the boundary of a designated site). This is useful for large projects such as offshore windfarms where the area of impact extends outside of an MPA and therefore the same biotope within the project area may need to be considered differently. As the fisheries assessment only considers impacts within the MPA the same biotopes hold the same value regardless of location within the site.

While MMO identified some areas of sandbank habitat considered to have a lower sensitivity to bottom towed fishing pressures than other areas of the sandbank, as detailed previously, relatively lower sensitivity does not preclude negative impacts of fishing disturbance in areas of low sensitivity and high natural disturbance (Deising *et al.*, 2013). This is particularly important considering the current unfavourable status of the sandbank feature has been attributed, in large part, to the long history of demersal fishing activity that has taken place (NSRAC, 2011), which may have removed sensitive species (Kröncke, 2011).

Empirical evidence from Dogger Bank SAC concerning the impact of demersal fishing activities on the sandbank habitat are inconclusive with some, such as van Denderan *et al.* (2015), identifying a negative impact while others, such as Queirós *et al.* (2006), finding none. Although respondents have interpreted MMO's approach as equivalent to transforming an amber risk to red risk, a key point to consider is that the sandbank feature is in unfavourable status and the conservation objectives of the site include to restore (rather than maintain) the structure and function of the sandbank feature. Appropriate management approaches will differ between MPAs as a result of many factors including the features protected, the status/condition of said features, activity levels and natural disturbance. Given the uncertainty and conflicting evidence regarding the impact of bottom towed gears on the sandbank feature, MMO cannot rule out an adverse effect on site integrity if areas of Dogger Bank SAC remain open to bottom towed gears, nor identify activity thresholds that will allow some activity from bottom towed fishing without having adverse effects on site integrity. MMO has therefore concluded that an adaptive or zoned management approach is not sufficient to further the conservation objectives of Dogger Bank SAC.

In response to point 5, as above, MMO has analysed the best available habitat and biotope evidence available for Dogger Bank SAC including JNCC's MarESA. There are several key differences between Dogger Bank SAC and The Wash and North Norfolk SAC, such as the levels and type of bottom towed fishing activity that are occurring. EIFCA assessed the impacts of shrimp trawls, which are relatively light compared to other bottom towed gears (EIFCA, 2018). Critically, 72% of the sandbank feature in the Wash and North Norfolk SAC is in favourable condition whereas the sandbank feature in Dogger Bank SAC is in unfavourable condition.

In response to point 6, a zoned approach is likely to result in increased bottom towed gear activity and associated impacts in areas that remain open to bottom towed gears due to displacement from closed areas. Given that current levels of bottom towed fishing activity are likely preventing the conservation objectives from being furthered, increased levels of activity in open areas would likely continue to hinder

the site's conservation objectives.

1.7 Disregards legislation

The following points were raised by respondents regarding the view that the proposed management disregards legislative duties:

- 1) The proposed management is opposed to the Habitats Directive Article 2(3) by not considering economic, social, and cultural requirements and regional and local characteristics.
- 2) Regarding, the Conservation of Offshore Marine Habitats and Species Regulations 2017, MMO a) is not acting in a way that is consistent with section 24 (1) to undertake co-ordinated management of the site with an adjoining member state; and has not b) taken account of economic, social and cultural requirements and regional and local characteristics as per 26 (6) (b) of the regulations; and has not c) taken account of a management scheme that has been substantially developed as per 26 (c).
- 3) The proposed management fails on sustainable development as outlined by the Marine Coastal and Access Act 2009.
- 4) The proposed management forgoes the need to consult and take consideration of social-economic factors, which is in breach of the spirit of the Brexit Treaty.
- 5) The proposed management is in contradiction to, and conflicts with, other government approaches to sustainable management of fishing activities within the UK EEZ, in particular the development of fisheries management plans, co-management and the avoidance of negative and unintended consequences.

MMO response on disregarding legislation

In response to point 1, in accordance with the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹, the social and economic impact of the proposed management has been assessed and considered as part of the process of developing and introducing management measures. This is documented in the Dogger Bank SAC RTA for further details.

In response to point 2, the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ paragraph 26 (c) states competent authorities must have regard for management schemes which have been established for the site concerned. The proposed management measures for Dogger Bank SAC under the Joint Recommendations have not been accepted or implemented and as such are not established management. However, MMO has considered this management proposal and as stated previously, has not deemed it appropriate nor sufficient to adequately protect the site.

Section 24 paragraph 1 of the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ states: “*Where a European offshore marine site... adjoins a special area of conservation or a special protection area which has been (respectively) designated or classified by another member State, the Secretary of State must consult that State in relation to the co-ordinated management of the site and the area in question.*”

In accordance with this and as stated previously, MMO has conducted two stakeholder consultations in which UK, EU member states, and non-EU countries, and stakeholders were invited to contribute.

In response to point 3, MMO considers that this byelaw makes a significant contribution to sustainable development by ensure that the conservation objectives for the SAC are furthered by prohibiting damaging fishing activities while allowing others to continue. MMO has considered the social and economic impact of the proposed management as part of the process of developing and introducing management measures. However, MMO have deemed the management measure outlined is necessary.

In response to point 4, as detailed in Annex 2 section 1.4, MMO has had regard for socio-economic impacts of the proposed management measures and while a socio-economic impact is likely this does not override our duties under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹. Similarly, and as detailed in Annex 2 section 2 the management proposed is in line with the UK-EU Trade and Cooperation Agreement.

In response to point 5, marine protected areas, and the appropriate management of activities, is an important part of the UK government policy of the marine environment and sits alongside other measures such as fisheries management plans.

1.8 Sensitivity and recoverability of the site to bottom towed fishing

The following points were raised by respondents regarding the sensitivity and recoverability of the site from bottom towed fishing:

- 1) The site has low sensitivity to fishing due to high natural disturbance (Diesing *et al.*, 2013), which leads to the site having low levels of biodiversity. Bycatch is also minimal due to the homogenic nature of the dynamic sand.
- 2) Comparative studies, such as Queirós *et al.* (2006), which found no difference between size structure of infauna and trawling intensity, are dismissed on an unproven hypothesis that benthic communities have been altered to a trawling resilient state.
- 3) The fisheries assessment takes a hypothetical view that features identified in the historical record may re-establish rather than considering that other

factors (e.g. climate change) may prevent this. If such features were capable of re-establishing in their historical locations, then preference could be given to remove pressures from those areas.

- 4) Higher-energy, coarser sedimentary habitats have greater recovery potential following fishing impacts compared to lower-energy, finer sedimentary habitats (Dernie *et al.*, 2003), indicating that it is possible to implement a zoned management approach.

MMO response regarding the sensitivity and recoverability of the site from bottom towed fishing

In response to point 1, please see Annex 1 section 1.3. Additionally, Diesing *et al.*, (2013) estimated that, as a shallow area with high natural disturbance, fishing disturbance was below that of natural disturbance in Dogger Bank. However, Diesing *et al.*, (2013) used conservative estimates for determining the area impacted by bottom towed fishing gear, for example the area impacted by otter trawls was assumed to be 2 x 2 metres (i.e. only the trawl doors disturb the seabed). Such dimensions likely underestimate the spatial footprint of otter trawls by an order of magnitude or more as the warps and footrope might also damage epifauna (Diesing *et al.*, 2013); thus, the width of the seabed affected by an otter trawl likely ranges from 25 to 250 metres (Eigaard *et al.*, 2016). Furthermore, caution needs to be taken when comparing natural disturbance with bottom-towed fishing, as fishing can cause impacts (e.g. direct penetration of the seabed) that natural disturbance does not (ABPmer and Ichthys Marine, 2015). Therefore, fishing impacts do not directly equate to natural disturbance (Diesing *et al.*, 2013). Additionally, as stated by Diesing *et al.*, (2013), fishing may add extra sources of mortality and therefore it would be wrong to preclude negative impacts from fishing in areas of high natural disturbance.

In response to point 2, there is a wealth of evidence that trawling removes sensitive species, such as soft corals, and can shift the composition of benthos, for example towards smaller-bodied and shorter-lived species (de Juan *et al.*, 2007; Kaiser *et al.*, 2000; Rijnsdorp *et al.*, 2018; Tillin *et al.*, 2006). These species can recover more quickly and are less susceptible to trawling damage (Hiddink *et al.*, 2017; Josefson *et al.*, 2018). Benthic communities in heavily trawled areas can be dominated by fauna that are resilient to damage (Kaiser *et al.*, 2000), as historical trawling may remove sensitive organisms so that only resilient organisms remain (Hiddink *et al.*, 2017).

In response to point 3, MMO agree that numerous factors (such as climate-driven changes) may prevent the recovery of historical biological communities, such as *Spisula* and *Mactra* bivalve patches (Kröncke, 2011). However, MMO cannot rule out the impact of fishing in contributing to these changes. Indeed, continuous fishing in Dogger Bank might have prevented these bivalves from re-establishing in the last

decades, as these species have only been found in low numbers of juveniles (Kröncke, 2011). In addition, prohibition of bottom towed fishing gear within Dogger Bank SAC could allow the development or recovery of macrofauna communities to be studied (Kröncke, 2011).

In response to point 4, MMO agrees that the impacts of bottom towed fishing on the seabed may vary with several factors, including sediment type (Rijnsdorp *et al.*, 2018). However, coarser sediment types are generally thought to be most sensitive to bottom towed fishing, as coarser sediments contain larger proportions of larger, long-lived, and sessile epifauna (Bolam *et al.*, 2017; Hiddink *et al.*, 2017; Rijnsdorp *et al.*, 2018).

1.9 Displacement and negative environmental impacts

The following points were raised by respondents regarding displacement and negative environmental impacts of the proposed bylaw:

- 1) The proposed management will cause displacement of fishing to other (possibly more diverse) areas. This will lead to negative environmental consequences elsewhere and could undermine the sustainable management of stocks and be contrary to UK conservation policy.
- 2) The proposed management will lead to increased socio-economic stressors in the areas to where fishing is displaced, including potentially disadvantaging the inshore fleet. Mitigation measures should be put in place to ensure inshore fleets are not disadvantaged. Effort to minimise displacement (such as allowing some degree of closely managed fishing within the site) should also be considered.
- 3) Displacement of bottom towed fishing to outside of the site could lead to gear conflict, particularly with inshore static gear (crab, lobster, and whelk pots).
- 4) Displacement of fishing to other areas could expose unknown heritage assets to new or increased fishing interactions (Firth *et al.*, 2013).
- 5) The cumulative impacts of displacement by closing multiple fishing grounds through MPAs has not been considered but could have large impacts on fisheries.
- 6) Minimal attention has been paid to displaced fishing activity; thus, the proposed management represents a comprehensive failure of marine spatial planning. The proposal fails to deliver a systematic approach to marine planning of our seas. Although marine plan policies are listed in the RTA, no explanation is provided on how they have been accounted for. There has been no systematic analysis of displacement issues despite the availability of

guidance¹⁶.

- 7) The proposed management may lead fishermen to not catching their usual quota, and therefore lead to increased fish imports from third countries, which may have less stringent management measures.

MMO response regarding displacement and negative environmental impacts following the proposed bylaw

In response to points 1 to 7, please see sections 1.3 and 2 of Annex 1 and section 2 of Annex 2. The potential environmental and socio-economic impacts of displacement to areas outside of the proposed management area and the potential negative environmental impacts arising from increased imports from countries with less stringent management measures does not remove MMO's legal obligations to ensure that fishing does not undermine the conservation objectives of the site. As detailed in the RTA, the management has been assessed against the East Marine Plan and is compliant with the marine policies held within. However, MMO is aware of and acknowledge the increasing pressure on the fishing industry through displacement and reduced area of fishing grounds.

Through onboard vessel monitoring system data, landings records and surface and aerial surveillance, MMO closely monitors fishing activity, and therefore displacement of activities. MMO will respond to any issues that may arise as a result of displacement and welcome input from the fishing industry to assist in this process.

MMO will also regularly review and update the MPA fisheries assessments to reflect any significant changes in fishing activity, including potentially increased fishing effort as a result of displacement. If assessments for other MPAs conclude that high levels of fishing activity are hindering the conservation objectives from being furthered, suitable management would be proposed.

In response to point 4, displacement of fishing to other areas could expose unknown heritage assets to new or increased fishing interactions. However, the prohibition of bottom towed fishing within the proposed management area would also reduce fishing impacts on potential heritage sites within the extensive Dogger Bank SAC, which contains several shipwrecks (Coolen *et al.*, 2017).

In response to point 5, as detailed previously, MMO has a duty under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ to ensure the site receives suitable protection and MMO has determined that the management outlined is required to comply with that duty. MMO will consider socio-economic impacts for each MPA. The social and economic impact (of this proposed management and any future management for other MPAs) is assessed as part of the

¹⁶ Natural England Commissioned Report NECR241: Displacement of fishing effort from Marine Protected Areas <http://publications.naturalengland.org.uk/publication/5674265573064704>

process of developing and introducing management measures, and is documented in the associated RTA.

1.10 Gear-specific inclusions in the proposed management

The following points were raised by respondents regarding gear-specific inclusions in the proposed management:

- 1) The proposal to ban bottom towed gears, semi-pelagic trawls, bottom seines, and dredges over the entire area is far from a balanced approach.
- 2) The proposal ignores the fact that some gears are the only viable ones for that fishery.
- 3) Continuous improvements in gear are reducing bottom impacts. It is unacceptable to ignore this constant technical innovation and developments of less impactful gears. The management approach should leave room for experimentation with modified gear, with scientific monitoring to verify any impacts.
- 4) Most Belgian beam trawlers fish with Sunwing gear that is lighter and reduces contact and friction on the seafloor, resulting in reduced environmental impacts. Beam trawl fishing also has less impact on sandbanks.
- 5) Demersal seines do not have the same characteristics as other bottom trawls (e.g. absence of heavy panels and shoes). Seining is considered an environmentally friendly fishing method (Polet and Deposteale, 2010). Danish seines (targeting plaice) have low impacts on sandbanks due to low gear power. Allowing a limited level of seine netting would not hamper the site's conservation objectives.
- 6) There is strong opposition to the implication of the proposed management to ban semi-pelagic activities. Seafish define semi-pelagic trawls as "*off bottom trawls*", which differentiates them from other bottom contacting gears⁷. The gear used by a sandeel fishing vessel fishing in Dogger Bank (Sunbeam) weighs approximately 4 – 7 kilograms per metre and has a maximum footrope length of 260 metres and has a pure pelagic net/trawl and no weights to keep it down. Therefore, the possibility of this gear contacting the bottom is further reduced. As per its definition and such supporting evidence, Sunbeam has an impact that is not comparable to other demersal gears. Consequently, respondents strongly oppose grouping this pelagic trawl with demersal-towed gears.
- 7) The impacts of semi-pelagic gear are not comparable to the impacts of other gears. Lambert *et al.*, (2017) supports consideration of more nuanced

management measures for semi-pelagic gear. Lambert *et al.*, (2017) found that 1) recovery rate is habitat- and gear-dependent; 2) scallop dredging has the greatest negative impacts on all habitats; and 3) fishing has reduced effects in dynamic habitats. Similar findings on the recovery capability and resilience of communities in high natural-disturbance environments are confirmed by Rijnsdorp *et al.*, (2018). Scallop dredging (which is considered the most impactful bottom gear) has an impact on dynamic sites that is comparable to natural disturbance, semi-pelagic trawling has lower impacts than a dredger and less than any other bottom contacting gears. There is therefore no reason to preclude the continuation of semi-pelagic fishing. This evidence supports that semi-pelagic trawls will not hinder the conservation objectives.

MMO response regarding gear-specific inclusions in the proposed management

In response to points 1 and 2, MMO has legal duties to protect SACs. The MMO MPA fisheries assessment could not conclude that that bottom towed fishing (including semi-pelagic trawling and demersal seining) would result in an adverse effect on site integrity. Therefore, MMO has determined to introduce appropriate management measures for these fishing gears.

In response to points 3 and 4, MMO have updated the fisheries assessment to include information on the Sumwing beam trawl used by Belgian beam trawlers. Although the overall environmental impacts may be reduced by this beam trawl design, negative impacts cannot be ruled out. The MMO MPA fisheries assessment on Dogger Bank SAC will be reviewed every five years, or sooner if significant new information is received. If information is received that demonstrates that specific gears do not pose a risk to site integrity, the assessment and suitable management would be updated accordingly. Experiments on the impacts of modified gear on the seabed which could result in negative impacts are not appropriate within the SAC and so should take place outside of the boundaries of the SAC.

In response to point 5, MMO agrees that, with the absence of specific gear components (e.g. otter boards) and lighter ground gear, seines tend to cause less damage to the seabed via abrasion and penetration compared to other demersal gears (Polet and Deposteale, 2010). However, demersal seines have the potential to remove epifauna, particularly when the ropes of the seine net are closed up to herd demersal fish and can result in the removal of non-target species via incidental bycatch (e.g. Van der Reijden *et al.*, 2014). Therefore, demersal seines may still undermine the site's conservation objective, particularly restoring the biological structure and communities of the sandbank habitat.

In response to points 6 and 7, please see Annex 1 section 1.2. The Seafish definition for semi-pelagic trawls⁷ also states that, although the trawl doors are lifted off the seabed (eliminating impacts from trawl doors), usually the net is still in contact with the seabed (albeit perhaps more lightly than for bottom otter trawls). Therefore, abrasion and some degree of penetration will still likely occur. Although semi-pelagic gear likely has lower impacts than scallop dredging and scallop dredging has been compared to natural disturbance in highly dynamic habitats (Lambert *et al.*, 2017),

natural disturbance and fishing disturbance are not directly comparable as fishing can cause additional mortality and impacts that natural disturbance does not (e.g. direct penetration of the seabed; Diesing *et al.*, 2013). Little evidence is available to establish that semi-pelagic gear is not contributing to an adverse effect on site integrity. Semi-pelagic gears are unlikely to significantly impact the large-scale topography or sediment composition of the sandbank feature; however, impacts to the biological structure are likely. The MMO MPA fisheries assessment will be reviewed every five years, or sooner if significant new information is received. If information is received that specific gears do not pose a risk to site integrity, the assessment and suitable management would be updated accordingly.

1.11 Low spatial footprint

The following points were raised by respondents regarding the location and effort of fishing activity within Dogger Bank SAC:

- 1) Pr values indicate that fishing activity is not as spatially extensive as shown from VMS. The annual gear footprint of demersal trawls ranged from 766 square kilometres (km²) to 1886 km², with corresponding Pr values of 0.062 and 0.15 respectively (an annual maximum of 15% of the SAC). Seine gears had higher areas of impact than potting and netting but remained much lower than demersal trawl activity. This highlights that the fishing footprint is not as extensive as a visual inspection of VMS data would suggest, albeit this analysis does not include 2020 scallop dredging.

MMO response regarding low spatial footprint

MMO agrees that within Dogger Bank SAC the spatial footprint of demersal seines is lower than that of demersal trawl activity; however, MMO does not consider that the spatial footprint of demersal trawl activity, represents an insignificant proportion of the site. Additionally, the sandbank feature covers the whole of the site, all of which is considered to be in unfavourable condition⁶. Furthermore, Pr values may underestimate the true spatial footprint of bottom towed fishing activity, as Pr values currently do not include interpolated trawl tracks between the VMS records.

1.12 The proposals don't go far enough

The following points were raised by respondents regarding the proposed management not going far enough:

- 1) Static gear use in the site should be capped at current levels and considered for reduction to zero by 2030 in line with making offshore sites Highly Protected Marine Areas (HPMAs) with no commercial fishing. A static gear ban would help preserve and recover mobile species such as harbour porpoise.

- 2) Climate mitigation measures should be a key reason for management from the offset, allowing Dogger Bank to become a project that receives income from carbon markets.

MMO response regarding the proposed management not going far enough

In response to point 1, there is no government intention to make all offshore sites highly protected marine areas (HPMAs). Given the low levels of static gear activity and limited direct evidence that static gears impact subtidal sediments, static gears are not considered to be having an adverse effect on site integrity. Fishing activity within the site will, however, be monitored and the fisheries assessment will be reviewed every five years (or sooner if new evidence is received), to determine if any fishing activity (including static gear) is causing a risk to the site's conservation objectives.

In response to point 2, the aim of MMO MPA fisheries assessments is to determine whether adverse effects from fishing activities can be ruled out. There is not currently enough evidence available to determine whether the proposed management will reduce levels of carbon from being released from the seabed.

1.13 Scallop fishery

The following points were raised by respondents regarding the scallop fishery:

- 1) An industry-led voluntary closure has led to permanent closure and discriminatory action against the scallop industry. Temporary closure of the Dogger Bank scallop fishery was undertaken in 2020 to protect stocks while a stock assessment was carried out. This closure was a genuine attempt by the industry to engage in responsible co-management. This industry-led voluntary closure has led to scallop fishing being excluded from the site while other bottom-impacting gears continue to fish. The industry feels tricked and will not engage in such a strategy again, as it will likely lead to permanent closure. The process has set back relationships between industry and administrators resulting in a loss of trust in fisheries managers and set the aim of co-management back by decades.
- 2) Scallop grounds are located around the edge of Dogger Bank on steep gravel, rather than sand partially covered by sea water, which is the protected feature. Therefore, the extend of the SAC extends past the habitat type it is protecting.
- 3) Scallop vessels that fish in this area are offshore nomadic vessels that only spend a few months per year in Dogger Bank SAC.
- 4) The proposed management will directly and disproportionately impact fishing activities, including directly affecting the activities of UK scallop vessels. The displacement of these vessels will have consequences for other fishing fleets. Spatial management of the area would mediate the need for the protection of the site with a level of sustainable fishing.

MMO response regarding the scallop fishery

In response to point 1, the temporary industry led voluntary closure of scallop grounds in *and around* Dogger Bank SAC demonstrates the industry's commitment to sustainable management of the newly discovered scallop stock. The temporary closure enabled improved scientific understanding of the scallop stock to be developed to aid future sustainable management.

This temporary closure was intended for scallop management and not protection of the designated features of Dogger Bank SAC. However, given the fisheries assessment of Dogger Bank SAC concluded scallop activity may lead to adverse effect on site integrity and management of this activity (among others) was required, MMO did not deem it appropriate to open the area to these damaging gears while discussions were ongoing regarding their management within the SAC.

As a result, from 4 April 2021, the four UK Fisheries Administrations (UKFAs) agreed to suspend the temporary closure to allow fishing for scallops in the areas outside of Dogger Bank SAC while maintaining the temporary closure within Dogger Bank SAC until the management outlined in this document is confirmed.

The MPA fisheries assessment concluded that scallop removal was not a concern as scallops are not listed as a 'key and influential' species nor considered a species component of the 'characteristic communities' of Dogger Bank SAC⁴. However, the MPA fisheries assessment concluded the abrasion and penetration pressures associated with scallop dredging activity may lead to adverse effect on site integrity, and this is what has led to scallop dredging activity (as well as other bottom towed gears) being prohibited from the site.

In response to point 2, the protected feature of Dogger Bank SAC ("*Sandbanks which are slightly covered by sea water all the time*") consists of sandy sediments. This can include a range of sediment types including subtidal mud, subtidal mixed sediments, subtidal sand, and subtidal coarse sediments. Gravel areas fall under the latter habitat so while not a subtidal sand habitat they are considered a sandy sediment and therefore a component of the protected sandbank feature. It is also important to consider that the gradient and structure of the sandbank is an important aspect of the feature. As such, the protected feature covers the entire site, the SAC does not extend beyond it.

In response to point 3, although scallop vessels may only fish in the site seasonally, scallop dredging may have adverse effects on site integrity via pressures such as penetration and abrasion of the seabed and the removal of non-target species. Dredges can cause large amounts of bycatch for a range of non-commercially targeted species (Howarth and Stewart, 2014) and adversely impact infauna and epifauna found on the sandbank feature through direct physical impacts (Roberts *et al.*, 2010). Given the proven impact of scallop dredges on benthic communities, demersal dredging activities are not considered compatible with furthering the conservation objectives of the site.

In response to point 4, MMO has legal duties to ensure fishing activities do not undermine the conservation objectives of MPAs. The management measures will be non-discriminatory and apply equally to all vessels from all countries. Most

displacement of fishing activity is likely to take place into existing fishing grounds, as this is where the commercially targeted species can be caught, which may result in additional pressure on these areas. However, these pressures may be offset by the management of significant areas where bottom towed fishing will no longer be allowed. This may therefore provide increased access for fishing gears that do not impact on the conservation objectives of the site in these management areas. For a response to spatial management, please see Annex 2 section 1.6.

1.14 Sandeel fishery

The following points were raised by respondents regarding the sandeel fishery:

- 1) North Sea sandeel fishery already has management in place, and if fishing is compatible with sustainable exploitation of the stock, there are no grounds for banning the activity.
- 2) Respondents prefer a managed sandeel fishery. Recognising that the objective for the site's conservation objective is restoring and not maintaining, a strictly managed sandeel fishery should be introduced, with spatial management (zoning) being suggested
- 3) Sandeel fishing has limited impacts. Just one UK vessel fishes sandeels in the site therefore it causes limited impacts. The sandeel fishery is also seasonal and uses advanced technology that discriminates between sizes.
- 4) Sandeel management and TACs do not account for closed areas. ICES assessments and TACs are based on the entire stock and do not account for area closures. Fisheries governments must work with ICES to develop advice that accounts for closed areas and minimises the risk of local depletion.
- 5) Norway's sandeel allocation in EU waters is typically ca 20,000 tonnes, all of which may be taken from Dogger Bank.
- 6) Sandeels are known to favour the perimeter slopes. Accordingly, the western extremity of Dogger Bank is of major importance for the fishery.
- 7) The fishing industry proposes to work with UK science institutes to explore possible data collection that could overcome knowledge gaps and help develop management measures, as the lesser sandeel is Data Deficient (IUCN), with much remaining unknown on their biology and population status.
- 8) The sandeel stock is in decline. A recent report (Otto *et al.*, 2019) addressed the status of the sandeel stock in the central and southern North Sea, including Dogger Bank, in relation to the conservation objectives of German MPAs. The report notes that the spawning stock biomass of sandeel stock SA 1r has repeatedly fallen below B_{pa} (the precautionary reference point for spawning stock biomass) since 2004, and the authors attribute the poor condition of the stock mainly to high fishing pressure. A report by Lindegren *et al* (2018) estimated that current sandeel spawning stock biomass on the Dogger Bank would have been approximately twice as large had fishing

mortality been maintained at lower levels between 1999 and 2009. In 2019, the Marine Stewardship Council suspended certification of sandeels in stocks SA 1r and SA 2r owing to the 'depleted' stock falling below safe biological limits.

- 9) Declining sandeel availability is adversely affecting the breeding productivity of certain seabird species, including kittiwakes. Although climate change is held primarily responsible (MacDonald *et al.*, 2015), commercial sandeel fishing can exacerbate sandeel population declines (Frederiksen 2006), strengthening the argument for prohibiting sandeel extraction from this SAC. The role of Dogger Bank SAC as a foraging area for the seabird features of the Flamborough and Filey Coast SPA is clearly documented. Reductions in sandeel availability (exacerbated by fishing mortality) are adversely affecting the breeding success (and thus possibly the overall condition status) of these seabird conservation features.

MMO response regarding the sandeel fishery

In response to point 1, MMO is aware that management for sandeel stock 1r (which includes Dogger Bank SAC) is already in place in the form of annual ICES assessments and TACs set according to annual fluctuations in stock parameters. However, assessing sustainable management of fish stocks is not equivalent to assessing the impacts of fishing activities on the conservation objectives of an MPA. Furthermore, TACs do not take into account local depletion. Sandeels have a key functional role linked to the nutrition attribute of Dogger Bank. Fishing the stock at maximum sustainable yield is therefore not necessarily consistent with ensuring sufficient numbers of sandeels are retained to maintain (and restore) the function of the sandbank feature. Local depletion of sandeels within the site could cause adverse impacts on site integrity, particularly restoring the structure and function of the sandbank feature⁴.

In response to points 2 and 3, a key concern for sandeel fishing is the impacts of this fishery on the sandbank feature via the pressures of abrasion and penetration. Although semi-pelagic sandeel fishing gear may have reduced impacts relative to traditional bottom otter trawls, these gears may still impact the biological structure of the sandbank feature (see Annex 1 section 1.2). Zoning the site for sandeel fishing would likely result in effort displacement to open areas, causing increased abrasion and penetration pressure, which in turn could cause adverse impacts on site integrity (particularly to restore the sandbank feature) in open areas.

The limited number of UK sandeel fishing vessels alone may have a lower risk of adversely affecting the site. However, management measures must be non-discriminatory and apply equally to all vessels from all countries. MMO must therefore consider the impacts from all fishing vessels within the site and sandeel fishing activity is much higher for non-UK vessels compared to UK vessels (Dogger Bank SAC Fisheries Assessment, section 4.1.4.6).

Although the sandeel fishery in Dogger Bank SAC may be seasonal and the nets may be able to discriminate between sandeel sizes, local depletion of sandeels could still occur and, critically, abrasion and penetration impacts cannot be ruled out. MMO

is committed to review the fisheries assessment every five years or sooner if significant new information is received. If information is received that semi-pelagic sandeel fishing gear does not pose a risk to site integrity, the assessment and suitable management would be updated accordingly.

In response to point 4, MMO agrees that ICES assessments and TACs are at a stock level and therefore do not necessarily account for areas closures within stock boundaries. Whereas ICES assessments aim to provide information at a stock level, MMO MPA fisheries assessments aim to identify adverse effects from fishing pressures on designated features of MPAs, in accordance with MMO's duties to protect European marine sites.

In response to points 5 to 7, MMO would like to thank all respondents for providing information on the location and levels of sandeel fishing within the site and for the offer of possible work towards data collection. MMO MPA fisheries assessments aim to use the best available evidence to assess the impacts of fishing activity against the conservation objectives and any new and relevant data will be taken into account in future assessments.

In response to point 8, please see Annex 1 section 1.1 (response to point 3). It should also be noted that the Marine Stewardship Council have now re-certified sandeels in stocks SA 1r and SA 2r.

In response to point 9, please see Annex 1 section 1.8 and Annex 2 section 1.1

1.15 Offshore windfarms

The following points were raised by respondents regarding offshore windfarms:

- 1) With the expansion of offshore wind, a strategic approach across multiple sectors is required for managing marine activities. Industries and regulators need to work together to better understand the impacts of fisheries on the environment, as well as the socio-economic and displacement impacts of the proposed management.
- 2) Increased development of offshore windfarms, plus a concentration of large MPAs, in the North Sea is reducing fishing grounds, and having socio-economic impacts on fishermen.
- 3) The UK intends to develop the world's largest offshore windfarm inside the Dogger Bank SAC. Responder(s) seek clarification on the possible impacts (particularly during construction and operation) of such offshore windfarms, as they may have adverse impacts on the Dogger Bank SAC and other adjacent Natura 2000 sites, as well as the UK's obligations under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹. Responders seek clarification on whether a comprehensive scientific assessment of impacts, including cumulative ones, of the planned offshore windfarm project has been undertaken and whether it indicates that the project will have significant impacts on other Dogger Bank protected areas.

- 4) A responder asked if the conservation benefit of the proposed management will be used to offset damage / disturbance created by other developments (e.g. windfarms).

MMO response regarding offshore windfarms

In response to point 1, MMO supports UK economic growth by enabling sustainable marine activities and development. To this end, MMO is responsible for preparing marine plans in England¹⁷, supporting a strategic approach to utilisation and development of the marine environment across multiple sectors.

Dogger Bank SAC lies within the East Marine Plan Area and as detailed in the RTA, the management outlined has been assessed against the East Marine Plan and is compliant with the marine policies held within.

In response to point 2, regarding development of offshore windfarms, their consenting and development are assessed and require compliance with the appropriate regional marine plan. Marine planning supports a strategic approach to the utilisation and development of the marine environment across multiple sectors and considers socio-economic factors. All management decisions for MPAs will be compliant and made in accordance with relevant policies of the Marine Plan for that area and while a number of MPAs are situated in the North Sea, their designation does not imply a requirement for fisheries management. Where MMO can conclude that fishing is not having an adverse effect on the integrity of the site (EMS) or not significantly risk hindering the conservation objectives of the site (MCZ) the fishing activity can continue.

The socio-economic impacts of the development of offshore windfarms are given consideration in the Marine License Application by MMO or by the Development Consent Order granted by the Planning Inspectorate, depending on whether the development is deemed a Nationally Significant Infrastructure Project (NSIP). Statutory duties under the Marine and Coastal Access Act 2009 or the Planning Act 2008¹⁸ will be discharged by the regulatory body accordingly.

MMO strives to avoid any unnecessary costs to the fishing industry, financial or otherwise in the development of management measures. However, MMO has a duty under the Conservation of Offshore Marine Habitats and Species Regulations 2017⁹ to exercise all relevant functions to ensure compliance with the requirements of the Habitats Directive¹. The potential for management to have certain socio-economic impacts does not override this duty.

In response to point 3, all windfarm developments since 2008 of more than 100mW capacity have been consented as NSIP. The Planning Inspectorate (PINS) examine these applications and provide recommendations to the Secretary of State¹⁹. Windfarm developments within Dogger Bank SAC are considered NSIPs and are consented through the Planning Act 2008⁸. The regulator for this is the Planning

¹⁷ <https://www.gov.uk/government/collections/marine-planning-in-england>

¹⁸ <https://www.legislation.gov.uk/ukpga/2008/29/contents>

¹⁹ <https://www.gov.uk/government/collections/marine-licensing-nationally-significant-infrastructure-projects>

Inspectorate, who would therefore be responsible for ensuring the appropriate level of environmental assessment in line with current legislation when determining consent for windfarm developments. If a development consent order (DCO) is granted, this may include provision deeming a marine licence to have been issued under Part 4 of the Marine and Coastal Access Act 2009²⁰. MMO is responsible for enforcing and discharging post-consent monitoring documents, varying, suspending, and revoking any deemed marine licence(s)²¹ as part of the DCO.

It is not in the scope of the Dogger Bank SAC fisheries assessment to undertake a comprehensive scientific assessment of impacts of offshore wind farm developments within the Dogger Bank SAC or indeed other Dogger Bank protected areas. However, part C of MMO MPA fisheries assessments investigates the effects of fishing activities, which alone are considered compatible with the conservation objectives of an MPA, in-combination with other relevant activities within that marine protected area to ensure cumulative impacts of fishing and non- fishing activities do not result in an adverse effect on site integrity.

In response to point 4, MMO will not be using conservation benefit arising from the proposed management to offset disturbance from other marine activities. MMO is legally obligated to protect SACs, which the proposed management measure adheres to.

1.16 Assessment and consultation critique

The following points were raised by respondents regarding assessment and consultation critique:

- 1) No new analysis of fishing impacts is presented. The assessment does not reflect a structured and methodical analysis in relation to a defined risk of not furthering the conservation objectives that, for example, the EIFCA has conducted in the Wash. The assessment is predominately a literature review supporting a view of impact or a counter narrative, using site-specific and generic literature. If MMO requires additional evidence and is unwilling or unable to assemble it itself, either to inform the assessment or to shape management proposals that are consistent with furthering the site's conservation objectives, then it should give the opportunity for others to do so beyond an eight week consultation period.
- 2) For future assessments it would be beneficial to assess the following knowledge gaps: 1) could the remineralisation of nutrients and oxygen in the upper benthos be reduced as a result of trawling pressures occurring in this area, and how do those processes change over time after the application of the proposed byelaw?; and 2) what is the total bioturbation potential (Queirós *et al.*, 2013) that the sandeels contribute as a proportion of the infaunal benthic community at Dogger Bank?

²⁰ <https://www.legislation.gov.uk/ukpga/2009/23/part/4>

²¹ <https://www.legislation.gov.uk/ukpga/2008/29/section/149A>

- 3) The consultation is taking responses from those directly involved in fishing in these areas and does not directly seek view of members of the public.
- 4) Buffer extent not defined.

MMO response regarding assessment and consultation critique

In response to point 1, see the MMO response in Annex 2 section 1.6.

MMO has conducted two consultations where stakeholders have been encouraged to submit evidence for both the fisheries assessment and proposed management of Dogger Bank SAC. The first call for evidence opened on the 28 October 2020 and closed on 15 December 2020. It was communicated at the time that following this, our assessments would be updated and, where necessary, formal fisheries management measures would be developed. The formal consultation on the management measures opened on 1 February 2021 and closed on 28 March 2021. In total, stakeholders were afforded five months in which to provide or develop additional evidence to inform management.

Similarly, should additional evidence become available in the future that would significantly alter the conclusions of our fisheries assessments MMO welcomes this evidence and will look to reassess management accordingly.

In response to point 2, MMO acknowledge the gaps in environmental evidence and welcome the suggestions for closing such gaps. However, MMO MPA fisheries assessment could not conclude that bottom towed fishing would not result in an adverse effect on site integrity through pressures such as abrasion and penetration of the seabed. Therefore, management of fishing activities is required to further the conservation objectives (including to restore the sandbank feature) of the SAC.

In response to point 3, the two consultations conducted by MMO concerning Dogger Bank SAC have sought views from all stakeholders including members of the public. To ensure maximum coverage and participation, MMO advertised the consultations across numerous digital formats and contacted a range of key stakeholders directly and encouraged wider sharing across their platforms and with their members where appropriate.

In response to point 4, MMO has followed SNCB guidance regarding the application of a management buffer zone to ensure appropriate protection of the sandbank feature in Dogger Bank SAC. This has followed a gear warp length/water depth ratio which advises, in water depths of 25-200 m, the buffer should extend to a distance of three times the water depth.

Generally, the water depth found at the boundary of Dogger Bank SAC is a maximum of 50 m and therefore a 150 m buffer has been applied. There are two exceptions to this:

Firstly, MMO is unable to implement management measures outside of the UK exclusive economic zone (EEZ) therefore where Dogger Bank SAC shares a

boundary with the UK EEZ, no buffer has been applied and the management area will instead follow the boundary of the SAC.

Secondly, in the South Western portion of the site some isolated areas have a maximum depth of 100 m and thus require a 300 m buffer zone. The management area extends further from the SAC boundary in this area to ensure all areas of 100 m water depth have the required 300 m buffer zone.

1.17 Control and monitoring

The following points were raised by respondents regarding control and monitoring:

- 1) No control and monitoring is detailed.
- 2) Rejecting a zoned approach (option 2) would severely hamper any future monitoring strategy. Site managers would be denied an informed assessment, as part of an ongoing adaptive approach, to verify the extent to which levels of activities would be consistent with the favourable conservation status. Closure of the site to bottom towed gears provides an opportunity to monitor fish and shellfish stocks to assess their suitability for sustainable fishing. As such, the proposed management could be seen as an interim measure enabling the development of longer-term management options, which allow some bottom-towed fishing within the site.
- 3) MMO has not demonstrated how monitoring will be coordinated with EU member states, particularly those responsible for the connected Dogger Bank SACs.
- 4) Regular monitoring of site integrity and recovery would strengthen the effectiveness of the proposed management.
- 5) If monitoring shows that bottom towed gear remains incompatible with the site's conservation objectives, managed access to the SAC buffer zones should be considered to enable sustainable exploitation of overspill effects.

MMO response regarding control and monitoring

In response to point 1, monitoring and control will be undertaken in line with the MMO Compliance and Enforcement Strategy²².

In response to point 2, the draft byelaw includes an exemption for scientific purposes. Therefore, subject to permission, bottom towed gear surveys for scientific purposes can still occur within Dogger Bank SAC. MMO will also regularly review its assessment for the site (as detailed in section 8 of the MPA fisheries assessment). At such points, MMO will fully consider impacts from gears at that time and any updated conservation advice regarding conservation status and conservation objectives of the site when considering appropriate measures.

²² <https://www.gov.uk/government/publications/compliance-and-enforcement-strategy>

In response to point 3, upon leaving the EU Common Fisheries Policy the UK is responsible for managing fishing activity in the UK's EEZ including MPAs. Where appropriate, the UK will seek to coordinate monitoring with adjoining EU member states.

In response to point 4, JNCC is responsible for monitoring and reporting on site integrity and recovery of offshore MPAs. MMO will work closely with JNCC, Defra and other partners to understand the impacts of our management measures.

In response to point 5, a depth-based buffer has been applied around the edge of the site in order to account for fishing gear warp length, so that fishing activities (taking place adjacent to the site) do not negatively impact the protected sandbank feature. If bottom towed fishing remains incompatible with furthering the site's conservation objectives, allowing bottom towed fishing gear within the buffer zone would likely not be consistent with MMO's duties to protect the site. Effects of spill-over are equally likely to occur outside of the buffer zone and can be exploited by the fishing industry.

2. General formal consultation responses

MMO received consultation responses during formal consultation which do not relate to specific MPAs and concern fishing activity data or the general assessment process. Therefore, MMO has summarised these consultation responses in the below section together with MMO's response to the comments.

2.1 Respondent data: One respondent provided fishing activity data including landings figures for ICES rectangles which intersect the management areas.

MMO response – MMO have estimated impacts to UK and non-UK fishing fleets in the regulatory triage assessment (RTA) provided for each site. The data submitted has been considered in the development of these assessments

2.2 Respondent comment: One respondent commented it was insensitive to impose management on fisheries activities when activities such as anchoring over sensitive areas is unmanaged.

MMO response – MMO is currently considering management options for the first site for marine non-licensable activities. MMO appreciate that activities such as anchoring of large vessels can damage sensitive habitats and is fully considering appropriate action regarding such activities within MPAs.

2.3 Respondent comment: One respondent commented that the timing of the formal consultation on proposed management could be giving weight to recent unlicensed boulder deposits within MPAs.

MMO response – The unlicensed boulder deposits in MPAs occurred between the call for evidence and formal consultation periods, the proposed management of the four sites assessed is coincidental to this occurrence.

2.4 Respondent comment: Some respondents commented that proposing management following EU exit and COVID-19 was unfair when impacts of both on the fishing industry are not yet fully understood.

MMO response – MMO must consider appropriate management in MPAs to achieve conservation goals in accordance with its legal obligations in relation to MCZs and European marine sites (EMS) under the Conservation of Habitats Regulations 2017, Conservation of Offshore Marine Habitats and Species Regulations 2017 and Marine and Coastal Access Act 2009. The RTA provided for each site fully explore the impacts of management within these sites on the UK fishing industry.

2.5 Respondent comment: Some respondents commented that the scope of proposed management is insufficient and the speed of MPA management processes is too slow for the Government to reach its conservation goals.

MMO response – MMO has followed the process as detailed in section 8 of each assessment to fully consider appropriate management in accordance with the site's conservation objectives. Whilst MMO has followed this process for these sites, MMO will continue to review procedures and processes in order to aim to reach its conservation goals.

2.6 Respondent comment: Some respondents commented that in proposing management in the English offshore waters for four MPAs, MMO has acted against the principles of the Trade and Cooperation Agreement following EU exit. The respondent also commented the development of any proposed management should be done so in consultation with EU member states with mutual interest within the site.

MMO response – MMO has followed article FISH.4(3) of the UK-EU Trade and Cooperation Agreement and has notified the EU of new measures that are likely to affect the vessels from the EU. By running the call for evidence and formal consultation periods as detailed above we have allowed additional opportunities for EU bodies and stakeholders to provide comments or seek clarification.

2.7 Respondent comment: One respondent commented that 'supertrawlers' should be banned from all MPAs.

MMO response – MMO has presented management options in relation to four MPAs, which show considerations of gear feature interactions in accordance with the conservation objectives of the sites. Pelagic gear has minimal impact on the benthos. MMO will continue to assess activities within MPAs under MMO's remit on this basis and consider appropriate management in due course.

2.8 Respondent comment: One respondent commented on the importance of a well-established network of MPAs in its importance to protection and recovery of marine ecosystems, as detailed in the Benyon Review for the introduction of highly protected marine areas.

MMO response – MMO acknowledge the importance of a well-protected network of MPAs and welcomes further information on the introduction of highly protected marine areas and the benefits these may bring to the delivery of government's ambitions.

2.9 Respondent comment: One respondent commented to give support to proposed management whilst providing additional information in the form of AIS data for each of the sites.

MMO response – MMO welcome the additional evidence provided, however we have used VMS as the principal source of data for vessel activity within each of the sites. This is because not all fishing vessels currently use AIS, therefore it does not provide full insight to the activity levels occurring to assess interactions with site features.

2.10 Respondent comment: One respondent commented to say it was regrettable that MMO had chosen to implement management without consideration of technological advancements. The respondent suggested areas of the sites should remain open to allow for use of modified gear to monitor impacts on protected habitats.

MMO response – MMO has concluded that bottom towed gears are required to be managed within the four sites, this is based on the evidence currently provided, in accordance with the conservation objectives of the sites. MMO will review its assessments for the sites as detailed in section 8 of the assessments provided, at such points we will fully consider impacts from gears at that time including technological advancement when considering appropriate measures for the sites at that time.

2.11 Respondent comment: One respondent commented that although they supported the proposed management, they felt that the use of gill nets should also be managed due to the impacts of bycatch on cetaceans.

MMO response – MMO has fully considered the fishing activities taking place in accordance with the conservation objectives of the site. Although bycatch of such species remains a concern, cetaceans are not a feature of the sites assessed and therefore management of gillnets due to bycatch has not been considered further as it is deemed to be compatible with the site's conservation objectives. Where cetaceans are not a feature of an MPA, consideration of bycatch of fishing activities will be considered separately to MPA management.

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