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VIA WEBSITE ONLY

Dear Elizabeth

RE: MMO/EIA/2015/00023 Goodwin Sands Aggregate Extraction

Thank you for your consultation dated 13 August 2015 requesting our advice on the Environmental Impact Assessment (EIA) Scoping Report for the dredging of marine aggregates from Goodwin Sands extraction area (Crown Estate area 521). This report has been provided by Royal Haskoning on behalf of the Dover Harbour Board (DHB).

Please note that this response is provided by Natural England, which is the statutory nature conservation agency within English territorial waters (0-12 nautical miles). The Joint Nature Conservation Committee (JNCC) has an advisory role for nature conservation issues in UK offshore (continental shelf) waters beyond 12 nautical miles. As licence area 521 is located wholly within English territorial waters then no response will be provided by JNCC.

Natural England's advice is provided to inform the Marine Management Organisations (MMO) and the applicant as to the suitability of the proposed scope of the EIA. The following constitutes Natural England's formal statutory response.

1. Environment Impact Assessment Methodology

Determinations of impact significance within the Environment Statement (ES) should follow a transparent and robust methodology. This methodology should be clearly presented within the ES in order to give the reader confidence in the validity of the determinations.

Statements and conclusions included in the ES should be supported by recent empirical evidence or scientific publications. If it is necessary to make conclusions based on expert judgements this should be clearly described and discussed in the text.. Furthermore, the level of uncertainty/confidence associated with each significance assessment should clearly present the type of evidence used and state how it was incorporated into the assessment

2. Specific comments in relation to the Scoping Report

Proposed Scheme

DHB are applying for a Marine Licence to extract a maximum annual tonnage of 2.5 million tonnes of aggregate over an un-defined period, however according to Section 2.5, it is likely to be 6 years.

2.1 Section 2.7.1 outlines DHB's proposal to zone the dredging works in a way which minimises environmental impact. Natural England recommend that the dredge locations, zoning and intensity levels are managed to ensure that changes in seabed topography are minimised as significant changes in seabed topography have the potential to;

- reduce slope stability potentially causing slippage of the bank and a reduction in intertidal area (which would have effects on seal haul out behaviour);
- alter localised water movements affecting the activity and location of local fish populations;
- change physical conditions at the seabed increasing sediment disturbance levels and changing particle size distribution.

Nature Conservation Designations

2.2 Section 4.4.3 correctly identifies that the application area is wholly within Goodwin sands recommend Marine Conservation Zone (rMCZ). This site has been put forward for designation of the following features:

- Broad-scale habitats:
  - A3.2 moderate energy infralittoral rock
  - A4.2 moderate energy circalittoral rock
  - A5.1 Subtidal coarse sediment
  - A5.2 Subtidal sand

- Habitat FOCI
  - Blue mussel beds
  - Rossworm (*Sabellaria spinulosa) reef*

- Geology
  - Eastern English Channel outburst flood features.

2.3 Section 4.4.3 also outlines that because the site falls within Tranche 3 of the designation process, it is not currently deemed a designated site or subject to public consultation. Consequently the marine licence application would currently not require an MCZ assessment. There is the strong possibility that the site may be considered for designation in the future under Tranche 3 of Defra's MCZ designation programme. It is therefore at the MMOs discretion as to how they consider impacts to the rMCZ and the level of protection they deem appropriate. Whilst not currently designated as an MCZ it is worth noting that the features identified as part of the MCZ are listed as habitats and species of importance under OSPAR convention and section 41 of the NERC act and should be given due regard by the MMO when discharging their duties.

2.4 It is also important to note that the timeline for Tranche 3 designation is not clear meaning there is the potential that the MCZ may be subject to public consultation and (liable for an MCZ assessment) before the granting of the licence. However due to the fact that dredging is proposed to start on August 2016, the likelihood of this is small.

2.5 Section 5.5 identifies Sites of Special Scientific Interest (SSSI) within the study area. It is noted that details such as location and approximate distance to the exploration area are provided for Thanet Coast SSSI within the text. However further information such as this will need to be provided in the ES for the remaining SSSI's (Sandwich Bay to Hacklinge Marshes, Dover to Kingsdown Cliffs and Folkestone Warren SSSI's) where this detail is not currently identified.

Coastal Processes

2.6 Section 6.1.1 states that any induced changes in hydrodynamics will be considered as environmental effects, and will only be considered impacts where these effects cause changes to a receptor such as benthic ecology. Natural England agree that this approach is appropriate.

2.7 Section 6.4.2 outlines that DHB are undertaking a numerical hydrodynamic modelling study to understand how dredging will affect waves, tidal flows, sediment transport and sediment release from dredging. However it is not clear on the extraction scenario that will be used in the modelling study; for example, details of where in the application area the dredging will take place, the depth of sediment that will be removed and over what spatial area are not currently identified. DHB are not likely to know the details of the above until following the results of the geo technical survey analysis. If the exact location and depth dredged is not known prior to the modelling work being undertaken we recommend that the EIA uses the realistic worst case scenario with regard to seabed lowering i.e. the extraction scenario that is likely to result in the biggest changes to waves, tidal currents, sediment transport and morphology.

2.8 It is important that the numerical outputs of the hydrodynamic model are discussed with respect to the environmental receptors being assessed and what the likely ecological significance of any changes in hydrodynamics will be. For example if the model predicts a 5% change in significant wave height at a location, it is important to be clear what will this mean for sediment stability, particle size distribution and morphology.

Benthic and Fish Ecology

2.9 As part of the Regional Seabed Monitoring Programme (RSMP), the aggregate industry have developed a methodology, which is outlined in Cooper (2012), that sets limits for acceptable change in sediment particle size composition following marine aggregate dredging. Using the pre dredge baseline benthic dataset the different seabed types found in the application area (defined by their faunal assemblage) are given thresholds or limits with respect to their particle size curves. Any change beyond these limits would likely result in a differing faunal community colonising that area at the cessation of dredging. This method whilst still subject to continuing development is a quantifiable way to monitor and manage seabed condition so that it supports full seabed recovery (to pre dredge conditions). The scoping document does not state any commitment to employ this methodology however the benthic baseline survey plan outlined in the scoping report (section 9.4) has been designed to allow its use. We would recommend that the methodology outlined in Cooper (2012) is employed as license condition and referenced in the EIA.

2.10 It is unclear from section 9.4 whether the benthic impact assessment will be based on sensitivity assessments undertaken for each biotope in the exploration area or whether it will use a single representative biotope for the whole area. Whichever methodology is chosen it is important that the assessment fully represents the most sensitive biotopes, specifically those with higher levels of intolerance to abrasion and substratum removal.

2.11 Section 10.4 identifies that further trawls and surveys will be undertaken. Natural England would recommend also referring to Cefas for discussions surrounding herring methodologies.

Marine Mammals

2.12 Section 11, Table 11.2 identifies that a large proportion of the grey seals observed in the Thames Estuary during the August 2014 survey appeared to be hauling out at S Kellet Gut, specifically 308 individuals from a Thames estuary total of 449 (approx. 69%). S Kellet Gut is identified in table 11.2 as 2.5km from the exploration area. It is not clear in the Scoping

Report exactly where within the S Kellet Gut area these seals are hauling out, however the admiralty chart displayed in Figure 1.3 shows Kellet Gut to be directly adjacent to the exploration area and at some points extends into the application area meaning dredging may take place close to important haul out sites. The scoping document identifies that some grey seals display high site fidelity increasing the likelihood of any persistent impacts to the South Kellet area being disruptive to the seal population.

2.13 The Scoping Report states that the admiralty chart data shows there to be very little sandbank exposed at low water in the application area, inferring that there are unlikely to be any haul out sites in the application area. However the morphology of the bank is dynamic and the local bathymetry of the sand bank may have changed by the time dredging commences, meaning more areas of intertidal sand may be present. This will need to be considered.

2.14 Table 11.4 outlines that the EIA will address the correct range of potential impacts to marine mammals. However, as part of the EIA we would like to see potential mitigation or avoidance measures proposed which reduce the risk of these impacts reaching significant levels. For example, whilst the size of dredgers used will make it unlikely to occur, we would like to see a commitment not to dredge intertidal areas thus preventing direct loss of intertidal extent. We would also request that they do not actively dredge close to exposed sandbanks at low tide to prevent disturbing seals on the sand.

Ornithology

2.15 It is noted from Section 12 that a number of internationally and nationally designated coastal sites within the study area have ornithological interest, however it is unclear how it has been defined which SPAs to screen into the EIA. It is common practice to use the mean max foraging ranges presented in Thaxter et al. (2012[1]) to identify whether the dredge areas are within the foraging range of any bird species connected to a SPA. We deem the presence of an extraction area within the foraging range of an SPA bird as justification for screening that SPA into a test of likely significant effect (LSE). A sensitivity assessment of the pathways between dredging activity and bird function and condition is then used to determine whether there is likely to be a significant effect on the SPA conservation objectives. Therefore whilst we agree that the application area does appear to be distant from any SPA, it is important that the screening process is undertaken robustly and transparently and therefore we recommend using this methodology.

Habitats Regulations Assessment

2.16 Section 19 identifies a number of designated sites to be considered in the Habitats Regulation Assessment section of the EIA. The potential pressures and sites do appear correct but as mentioned above in 2.1.2 there is still a need to improve the screening methodology used to identify relevant SPAs. We agree with the authors that the risk to sites designated under the Habitats Directive appears to be very small but we cannot form an opinion on the significance of any impact until we have reviewed the EIA.

Cumulative Impact Assessment

2.17 Section 20.2 identifies other plans or projects taking place in the vicinity of the application area which the EIA will consider as part of cumulative impact assessment. It is important that fishing impacts are also properly assessed in-combination with other offshore development (the impacts are not provided for background information or as part of the baseline), however we acknowledge that the initial results of the fisheries assessment indicate that commercial fishing activity in the application area is limited.

[1] Thaxter, C.B., Lascelles, B., Sugar, K., Cook, A.S.C.P., Roos, S., Bolton, M., Langston, R.H.W. and Burton, N.H.K. (2012). Seabird foraging ranges as a preliminary tool for identifying candidate Marine Protected Areas. Biological Conservation. Available online 09 January 2012

Overall, the Scoping Report provided is clearly presented, well-structured and includes a large amount of useful detail and maps. The Scoping report outlines the correct range of potential impacts that need to be assessed for a robust EIA.

For any queries relating to the content of this letter please contact me using the details provided below.

Yours sincerely,

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