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The Planning Inspectorate
National Infrastructure Directorate
[By email only]

Your reference: EN010053
Our reference:
DCO/2013/00013

15 July 2015

Dear Sir/Madam,

**PROPOSED HORNSEA PROJECT TWO OFFSHORE WIND FARM
RESPONSE TO EXAMINING AUTHORITY'S RULE 8 LETTER OF WRITTEN QUESTIONS**

The MMO is an interested party for the examination of Development Consent Order (DCO) applications for Nationally Significant Infrastructure Projects (NSIPs) in the marine area. Should consent be granted for the project, the MMO will be responsible for monitoring, compliance and enforcement of Deemed Marine Licence (DML) conditions.

The MMO received a Rule 8 letter on 22 June 2015 for the proposed Hornsea Offshore Wind Farm (Ref EN010033). Please find the MMO's response to the Examining Authority's (ExA) first round of questions below for your consideration. Please note that the MMO reserves the right to make further comment on this application throughout the examination process based upon new information, other interested parties responses and any proposed monitoring or mitigation. The MMO's response incorporates comments received from technical advisers at the Centre for Environment, Fisheries and Aquaculture Science (Cefas).

In order to ensure clarity, the question to which the answer has been provided has been incorporated in this response.

Reference	Question to	Section	Question	MMO response
GE3	Applicant	General Ecological issues.	<p>Has the applicant considered possible specific implications arising from the application of:</p> <ul style="list-style-type: none"> a) The European Marine Strategy Framework; b) The National Parks and Access to the Countryside Act 1949, the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006; c) The United Nations Environment Programme (UNEP) Convention on Biological Diversity, with particular reference to Articles 8, 9 and 10? 	<p>a) This question was not directed at the MMO; however the MMO wishes to point out that the UK's Noise Registry, related to the Marine Strategy Framework Directive (MSFD), has been raised with the applicant. The MMO will forward further information to the applicant as it becomes available from the Joint Nature Conservation Committee (JNCC).</p>
EOO12	Applicant, NE, Marine Management Organisation (MMO) and local authorities (LAs)	General Ecological issues.	<p>Para 2.6.71 of NPS EN-3 supports ecological monitoring to mitigate where appropriate any adverse ecological impacts of the project under consideration, and to enable further useful information to be provided for future projects.</p> <ul style="list-style-type: none"> a) Can the applicant please clarify the nature of the intended offshore ornithological monitoring programme for the full life cycle of the Hornsea Project 2? b) How will monitoring of the Hornsea Project 1 be built into the development 	<p>a) This is a question for the applicant to clarify. The MMO is unable to offer comment at this stage, but is happy to review any information that the applicant may provide in response to this question.</p> <p>b) The MMO has raised this issue and is currently awaiting clarification from the applicant. Please see the Statement of Common Ground (SoCG) for the full update.</p> <p>c-d) The proposed monitoring in the Deemed Marine Licences (DMLS) is</p>

			<p>of the Hornsea Project 2?</p> <p>c) Are the MMO and NE content with the proposed approach to monitoring for Hornsea Project 2?</p> <p>d) Do the conditions in the DML provide sufficient certainty about the delivery of mitigation and monitoring measures (as specified in the ES)</p>	<p>indicative and all proposals would require approval from the MMO. The MMO considers there is sufficient flexibility within the DMLs to ensure that appropriate monitoring will be agreed and approved through the submission of:</p> <ul style="list-style-type: none"> - Project Environmental Management and Monitoring Plan (PEMMP) required under condition 10(2)(c); - Construction and Monitoring programme required under condition 10(2)(a); and - In-Principle Monitoring Plan, which is not presently in the DML, but is under discussion with Natural England (NE) and the applicant.
EL15	Applicant, NE and MMO	Ecology - onshore and inter-tidal	<p>Is the applicant planning to use trailer suction hopper dredgers (TSHD) for cable laying, affecting the Humber Estuary SAC? If so, what effects might this have on the destabilisation and redistribution of sediments on the features of the Humber Estuary SAC?</p>	<p>The applicant plans to install the export cable within the Humber Estuary SAC in shallow water. It is not clear what methodology the applicant intends to use for the cable installation within the SAC; likely options are either cable burial or installation of cable protection in the form of frond mattressing.</p> <p>If the applicant uses cable protection within the SAC the cable would not be buried and no trailer suction hopper dredgers (TSHD) would be used for cable laying. However, cable protection would affect sediment transport and sediment transport pathways as the frond mattressing will act as an obstacle to the free circulation of sediment.</p>

				<p>The use of TSHD is associated with the formation of sediment plumes, the displacement of sediment, the deposition of dredging spoils on the seabed (if the sediment dredged is released back to the seabed), and potentially a change in topography/bathymetry if cable laying would require clearance of sandwave crests.</p> <p>Sediment plumes would form mostly due to the dispersion of fines and will have consequences on the benthic communities in the vicinity of the cable trench. The displacement of sediment as well as the dumping of dredged sediment and sandwave clearance would affect the distribution of sediment, so that sediments may become finer or coarser depending on the local conditions. The change of local topography may modify the hydrodynamics and sediment transport and pathways locally.</p> <p>The MMO is content to defer to Natural England for comment on the specific impacts of the processes outlined above on the interest features of the Humber SAC.</p>
CL9	NE, MMO and LAs	Construction – intertidal and onshore	a) Do NE, MMO and the local authorities consider that they have sufficient information on the principles and parameters to be used in drafting the Code of Construction Practice (CoCP) to be confident that the submitted plan will	<p>a) The MMO is content that the CoCP under condition 10 of the DMLs includes all of the parameters the MMO would expect.</p> <p>b) The sections relating to monitoring, as listed in the DMLs, provide the expected</p>

			<p>be capable of approval?</p> <p>b) Do NE, MMO and the local authorities consider that they have or will have sufficient information and assurances about monitoring to be confident that the submitted CoCP will be monitored adequately?</p> <p>c) Do NE, MMO and the local authorities consider that they have or will have sufficient information to be confident about the enforcement of the CoCP?</p>	<p>level of information required to ensure adequate monitoring will be carried out in line with the plans and documents that will be approved by the MMO.</p> <p>c) The MMO is comfortable that the documents are listed within the DML and require approval by the MMO, therefore come under same enforcement as any other conditions within the DML.</p>
CL10	NE, MMO and LAs	Construction – intertidal and onshore	<p>a) How will the flood defences, sand dunes and salt marsh be monitored and protected to avoid damage during construction?</p> <p>b) How is this to be secured through the ecological, construction practice or other plans or draft DCO Requirements?</p>	<p>a) Protection of flood defence comes under the remit of the Environment Agency and the MMO will defer comment to that body. However, the MMO considers that there is sufficient flexibility in indicative plans to ensure that adequate monitoring will be put in place.</p> <p>b) The MMO will take an appropriate steer from NE with regards to discharge of monitoring conditions within the MMO remit (below MHWS) which will be secured through the PEMMP, construction monitoring plan and in-principle monitoring plan as per question EOO12 above.</p>

CS8	Applicant and MMO	Construction – offshore	The MMO has concerns about the potential carrying capacity of disposal sites HU209 and HU210 from the cumulative amount of material arising from Hornsea Projects 1 and 2. What progress has been made to resolve this concern, including the MMO recommendations for a co-ordinated monitoring programme over multiple years?	The MMO is content; provided the applicant gives adequate assurances that co-ordinated monitoring will be carried out in conjunction with Hornsea Project 1. This has been discussed with the applicant; please see SoCG for full update.
CS16	MMO	Construction – offshore	Are you satisfied there will be no significant impacts from the dredged arisings being deposited in Areas 2A, 2B and Subzone 2?	<p>The MMO considered that due to the scale of the disposal it is difficult to predict the scale of the impacts with certainty.</p> <p>The MMO has agreed with the applicant that the Site Characterisation Report is sufficient at this stage to permit disposal at disposal site references HU209 (Disposal Area 2A), HU210 (Disposal Area 2B) and HU211 (Subzone 2) and for disposal at these sites to be permitted by the DMLs; this is, however, subject to a co-ordinated review with Hornsea Project One and a co-ordinated disposal and monitoring plan being put in place. Please see SoCG for full update.</p>
FNA1	MMO, NFFO, HCFIG, DFFO, Redercentrale, Visnedi	Fishing, Navigation and Aviation	As a stakeholder concerned with commercial fisheries do you have any outstanding concerns regarding the fisheries assessment?	<p>For commercial fisheries, data sources are up-to-date and an appropriate description of the fisheries carried out in and around the windfarm is given. A suitable impact assessment has been conducted.</p> <p>The MMO encourages the continuation of good communication and consultation with the local and foreign fishing industry</p>

				throughout the process.
FNA2	MMO, NFFO, HCFIG, DFFO, Redercentrale, Visned	Fishing, Navigation and Aviation	As a key stakeholder are you satisfied with the allocation of magnitude and sensitivity throughout the assessment and with the mitigation measures that are proposed?	<p>The MMO is broadly content that the magnitude and sensitivity of potential impacts have been appropriately assessed.</p> <p>The only concern as per MMO's relevant representation was that piling of the HVAC offshore substation within the cable route overlaps with a known herring spawning area. The MMO recommended that the impact to the herring spawning be mitigated through the adoption of temporal restrictions for peak spawning periods or the use of alternative construction methods which emit less noise. This has been discussed with the applicant, who has agreed to make best efforts to avoid piling for substation during peak herring spawning as agreed in SoCG.</p>
FNA4	MMO, MCA, NE	Fishing, Navigation and Aviation	<p>Do you agree with the plans and projects which have been included in the cumulative assessment of fishing?</p> <p>Do you agree with the plans and projects which have been included in the cumulative assessment of fishing?</p>	<p>According to the Environmental Statement 'there are no plans/projects within a 50 km buffer which are on the PINS Programme of Projects that have yet submitted an application for consent, as such, there is no Tier 2 assessment for this (cumulative EMF-export cable) impact'.</p> <p>The only observation from the MMO was to check whether the cable route for Dogger Bank Creyke Beck was more than 50km away - the location of all other marine projects and activities which would be considered for cumulative impact appears to be further than</p>

				<p>50km away from the windfarm site. The MMO considers that cumulative impacts within the area of the export cable have been appropriately assessed.</p> <p>With the plans and projects considered in the cumulative assessment of fishing, the MMO notes that locations of active dredge disposal sites are missing from table 6.16. The following known dredge disposal sites do fall within 50km of Hornsea Project Two and the cable route:</p> <ul style="list-style-type: none"> - Babbage (HU203); - Triton Knoll (HU204); - Westernmost Rough (HU207); - Bridlington A (HU015); and - As well as numerous beneficial use sites within the Humber Estuary. <p>Whilst these areas are not actively closed to fishing vessels, the level of activity within these areas is unknown and could be actively avoided by fishing vessels.</p> <p>The MMO advises garnering further information from fleet representatives to ascertain fishing activity in these areas.</p>
FNA10	Applicant and MMO	Fishing, Navigation and Aviation	What is the applicant's response to MMO concern [RR-018] about the impact of piling on herring spawning in the vicinity of the offshore HVAC substation, and MMO proposed approaches to resolve the issue?	The MMO has discussed this with the applicant and agreed that best efforts should be made to avoid piling for substation during peak herring spawning. Please see the SoCG for the full update.

FNA11	MMO	Fishing, Navigation and Aviation	What is the effect on the seabed by trawling over time, particularly, on the benthic ecology?	<p>Long-term impacts of trawling largely depend on the relationship between trawling frequency and recovery time. If trawling frequency is high in relation to recovery time for a given sediment type then the seabed is likely to be held in a permanently modified state.</p> <p>The MMO provides some references below. The review by Kaiser (2006) is a useful reference as it attempts to predict recovery times of different seabed types. However, it can be difficult to interpret the results directly in terms of recovery. Collie et al (2000) (in particular Fig 5) may also be a useful resource. However, little data currently exists that discusses effects of gear penetration.</p> <p><u>References</u></p> <p>Collie, J.S. et al (2000) A quantitative analysis of fishing impacts on shelf-sea benthos. <i>Journal of Animal Ecology</i>, 69, pp 785-798.</p> <p>Foden, J. et al (2010) Recovery of UK seabed habitats from benthic fishing and aggregate extraction – towards a cumulative impacts assessment. <i>Marine Ecology Progress Series</i>, 411: 259–270.</p> <p>Kaiser, M.J. et al (2006) Global analysis of response and recovery of benthic biota to fishing. <i>Marine Ecology Progress Series</i>, Vol. 311, pp 1-14.</p>
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FNA12	MMO, Maritime Coastguard Agency (MCA) and applicant	Fishing, Navigation and Aviation	<p>a) Can you confirm that all the requirements of MGN 371 are being complied with as far as they can be at this stage of the consenting process?</p> <p>b) Will safety zones of 500m around HVAC, HVDC and accommodation platforms be applied for only when these are manned or for the life of the project?</p> <p>c) What is the 'consideration' that will be given to navigational safety when deciding the height and selecting the location of the bridge links?</p>	<p>a) The MMO is satisfied the requirements of MGN 371 are being complied with as far as possible at this stage, however will defer final comment to the MCA.</p> <p>b) This question is for the applicant to provide information on the circumstances under which they plan to apply for safety zones.</p> <p>c) This is for the applicant to consider in further detail. However, the MMO advises that the recommended minimum safe (air) clearance between sea level conditions at MHWS and wind turbine rotors is 22 metres.</p>
FNA13	MMO and MCA	Fishing, Navigation and Aviation	Do you agree that the baseline data in respect of navigational safety provides an accurate reflection of current conditions?	The MMO is content to defer comment to the MCA with regards to baseline data provided from the traffic survey.
FNA14	MMO, MCA, Chamber of Shipping (CoS), and Trinity House Lighthouse Service	Fishing, Navigation and Aviation	Do you agree that the methodology and parameters used in the assessment of navigation in the ES represents a worst case assessment of the potential impacts?	The MMO is content to defer comment to the MCA with regards to information provided in the Navigation Risk Assessment.

	(THLS)			
DC1	Applicant and MMO	Draft DCO	<p>Please respond to the following points in relation to Article 2, Interpretation:</p> <ul style="list-style-type: none"> a) What is meant by ancillary works, other than those in Schedule A, Pt 2? b) To clarify some issues around the definition of 'maintain' the MMO, in its [RR-018], suggests that a schedule of maintenance activities is produced, before the close of examination of the application that clearly indicates all types of proposed maintenance and whether or not it is assessed in the ES. c) The MMO in [RR-018], in relation to the definition of 'undertaker', would welcome the full company name and associated registration number to be incorporated into the definition. 	<ul style="list-style-type: none"> a) The MMO has reviewed the works listed in paragraph 2.1. of the DMLs and is content with the activities listed. Activities not listed in paragraph 2.1 will not be permitted to be undertaken below MHWS under the DML. b) The MMO is now content with definition of maintain which has been resolved through the SoCG. The applicant has agreed to include a maintenance schedule within the maintenance plan, which will be submitted to MMO for approval as a requirement under the DMLs. c) The definition of 'undertaker' has been addressed in the DCO. Please see SoCG for the full update.
DC15	Applicant, MMO and NE	Draft DCO	In Requirement 2 how are the figures for maximum area and volumes of cable protection arrived at?	This is a question for the applicant to provide further explanation, however the cable area and volumes can be found in the ES, Chapter 7.1.3. 'Project Description'.

Please note that the MMO reserves the right to make further comment on this application throughout the examination process based upon new information, responses from other interested parties and proposed monitoring or mitigation.

If you require further information on the above, please contact the undersigned.

Yours sincerely,



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