From: Wilson, Joseph (MMO)
To: York Potash Harbour

Cc: Chumbley, Adam (MMO); Griffiths, Jayne (MMO); Morag Thomson; Matt Simpson

Subject: 151002 TR030002 MMO Response to ExA Q1

Date: 02 October 2015 13:14:30

Attachments: ExA deadline 3 Response MMO 021015.pdf

Good afternoon.

Please find attached the MMO's response to Examining Authorities questions for deadline 3.

Kind regards,

Joseph Wilson Marine Licensing Case Officer Her Majesty's Government – Marine Management Organisation Lancaster House, Hampshire Court, Newcastle upon Tyne NE4 7YH.

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Enabling sustainable growth in our marine area

The Marine Management Organisation (MMO)

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MMO – 8 June 2015	APP – 21 July 2015	ММО	APP	ммо
The draft DCO/DML relates only to the capital element of the dredging requirement. The MMO assume that there will be a requirement for periodic maintenance dredging of the berth pocket and the approaches to it? Should this be the case then a separate Marine Licence will be required along with an associated assessment of sediment quality before sea disposal can be considered an acceptable disposal route for this maintenance material. Alternatively the maintenance requirement may be included within PD Teesport's encompassing maintenance licence? However the MMO require clarification as to what the actual scenario for the maintenance activities are	It is anticipated that there will be a requirement for periodic maintenance of the berth pocket and approaches. It is expected that this will be incorporated into the campaign by PD Teesport and covered by their marine licence for Disposal of Dredged Material. Alternatively it could be covered under a separate marine licence. We require acknowledgement of the desired route for obtaining a marine licence.	Need clarification that either Teesport or Developer are taking on this role – the MMO can provide further information on disposal site allocation/sediment analysis should it be required, as no disposal activities are licensed under this DCO/DML.	In para 1.1.1 of your comments on the DCO you ask that dredging be secured under the DML and secured with this consent alone. Could you be more specific about what changes you want made to the Order/DML? The DML does control the capital dredging and, as we confirmed the maintenance dredging will be undertaken either by PD Ports (most likely) or under a separate licence. What specifically are you wanting to be altered in, or added to, the DCO/DML?	MMO are happy that no changes are required to the DCO/DML regarding this point. It is acknowledged that a new application would be sought for any maintenance dredging and disposal required.
MMO consultation comments (Table 11-1) stated "the potential impacts on marine sediment and water quality must be assessed with relation to sensitive receptors such as shellfisheries, spawning and nursery areas and migratory routes." The ES does not explicitly state (Section 11.5) that Atlantic herring and lemon sole spawning grounds and Atlantic herring, lemon sole, cod, whiting, European plaice, European sprat, anglerfish Lophius piscatorius and spurdog nursery grounds are found in the vicinity of the River Tees estuary (Coull et al., 1998 and Ellis et al., 2012). This should be addressed within the ES.	Species referred to are listed in section 11.4 of ES, which defines the baseline against which impacts of proposed scheme are assessed (Sections 11.5 and 11.6)	MMO are now content this has been dealt with.		
Section 8.3.10 and 8.3.11: It is stated that all underwater measurements were undertaken using a Brüel and Kjær Type 8106 hydrophone. However, the calibration certificate provided is for a Brüel and Kjær Type 4220 hydrophone, not the model specified in this report. The MMO request the applicant provides the calibration reports on the actual model of hydrophone used.	The Bruel & Kjaer certificate is for the calibrator. Relevant certificate attached to this response.	Certificate was not originally provided but since obtained - no further comments required.		
Section 4 – Modelling confidence - Fig. 4.1. The fit to the measured data presented here appears to have been done by eye, which leaves the estimates of source level open to interpretation. The applicant should apply squares fit analysis or other appropriate statistical fitting methods to avoid the guesswork employed here.	"No Fit" to the data has taken place or been claimed. Fig 4.1 (in Appendix 8.2 of the ES) is a direct comparison between two different noise propagation models.	MMO are now content this has been dealt with.		

Section 4 – Modelling confidence - Fig. 4.2/4.3. The applicant claims 'relatively good agreement' between the models – this is subjective and should be quantified. For example, what is the difference in estimated source level introduced by using a simplistic model (INSPIRE) rather than RAMSGeo? This would be clearer if the range axis of these plots were extended to 1 m, the distance at which source level is defined.	Quantification of agreement between the 2 models – clarified the data sets.	MMO are now content this has been dealt with.	
Section 5 – Analysis of Environmental Effects. Three noise metrics have been selected to help interpret the outputs of the INSPIRE model;	Clarified the data sets.	MMO are now content this has been dealt with.	
 Unweighted metrics (Parvin et al. 2007) (these levels are 240 dB re 1 µPa (SPLpeak)) for lethal effect, and 220 dB re 1 µPa (SPLpeak)) for physical injury). Additional unweighted criteria have also been considered for assessing the impact of noise on 			
published interim fish injury by the Fisheries Hydroacoustic Working Group (FHWG, 2008), which includes a peak sound pressure level of 206 dB re 1 μ Pa and an accumulated SEL over a period of time of 187 dB re 1 μ 1Pa2s.			
dBht(Species) and;			
M-Weighted SELs (Southall et al. 2007).			
It should be noted that dBht is a proprietary metric used (and developed) by Subacoustech. According to other leaders in the field its validity is questionable, including in relation to marine mammals (Southall et al., 2007), and fish (Popper et al., 2014: 'although the general concept of dBht may have some values in the context of behavioural responses in fish, its application and adoption requires far more scientific validation and the inclusion of those species that primarily respond to particle motion').			
In terms of unweighted levels, the reference to Parvin et al. (2007) is outdated. Furthermore, it is not an accepted reference. For marine mammals, the report should refer to Southall et al. (2007) or to the U.S. National Oceanic and Atmospheric Administration (NOAA) marine mammal noise exposure criteria, which has been updated to reflect recent advances in the field (NOAA, 2013),including the Southall et al. (2007) paper and more recent studies. These regulations are currently in draft form and the subject of public consultation.			
Consideration has been given to Southall et al. in			

section 5.3.3 with regards to M-Weighted SELs (for injury criteria).			
In keeping up to date with the latest scientific literature, for fish, the report should also refer to the recently published sound exposure guidelines by Popper et al. (2014) rather than/or in addition to the FHWG (2008).			
The potential behavioural responses to impact piling and dredging for marine mammals have not been assessed in relation to unweighted metrics. Behavioural responses have been discussed in relation to dBht(Species) only. The applicant should identify relevant literature on the impacts on key species of concern (as detailed in section 5.2) for similar noise sources and make reference to these			
within the report given in Section 6.4.			
Section 6.2 – Interpretation of Results. It is not clear how the estimated source levels for impact piling operations (i.e. 223.5 and 232.8 dB re 1 µPa (SPLpeak)) and dredging operations (165 and 183 dB re 1 µPa @ 1 m (SPLRMS)) have been derived. The MMO require clarifications as to how these figures were derived.	Source levels derived from numerous measurements by subacoustic – different dredgers etc etc	MMO are now content this has been dealt with.	
The MMO acknowledge that the applicant has committed to piling restrictions (ie timing restrictions to mitigate potential impacts to marine mammals and migratory fish). The MMO request that any percussive piling is implemented using a "soft-start" procedure and that this is conditioned within the DML.	Point noted – to be included in next DML.	MMO are content that this has now been included	
The source and timelines of the bathymetry data used for the modelling presented Appendix 5.1 should be specified (e.g. Figures 3.1, 3.2 and 3.3). The MMO also request clarification as to whether the bathymetry sources are those presented in section 2.2 of Appendix 5-2? If this is the case then the information should be referenced in Section 5. This is important to demonstrate the adequacy of the data and that the seabed levels considered are appropriate to represent the baseline conditions.	Confirmation of bathy sources given.	MMO are now content this has been dealt with.	
Appendix 5.2 presents calibration of the TELEMAC 3D flow model with ADCP data from 2005 (2.3, Appendix 5.2) and it is noted by the applicant in Table 5-2 (pages 141 and 142). It is noted that validated models have been updated and refined to predict effects of the proposed harbour facilities, however there is no evidence presented of calibration and validation of sediment regime models i.e. SEDPLUME. This information is important to demonstrate the capability	Clarifications provided	MMO are now content this has been dealt with.	

of the model and add high level of confidence to the assessment, and the MMO request that this is included. Page 6 – Part 1 – Preliminary – (3). States that "All	Additional wording will be	This may be adequate but	The MMO are content that	
distances, directions and lengths referred to in this Order are approximate". It must be noted that due to the parameters of the assessment undertaken in the ES, the maximum values presented in Schedule 1 and 5 cannot be exceeded or taken as "approximate". For this reason the MMO suggest a re-wording of the statement to clearly identify that the parameters as stated in the DCO/DML and referenced to the ES can't be exceeded.	included in the next drafting of the DCO/DML to qualify that the parameters are within the boundaries set within the ES	will need to see the drafting, an alternative would be to	the definitions have now been updated in the DML	
Page 29 - Schedule 5 – Part 1 – Introductory – Article 1 (2). The MMO advise that any electronic communications should now be submitted to marineconsents@marinemanagement.org.uk and additionally (if consent is granted) to northshields@marinemanagement.org.uk	Next drafting of the DCO will be updated.	The MMO are content that the definitions have now been updated in the DML		
Page 29 - Schedule 5 – Part 1 – Introductory – Article 1 (3). There appears to be a typo "includes any agent or contractor or acting on the undertaker's behalf", should this be read "includes any agent, contractor or person/s acting on the undertaker's behalf"?	Next drafting of the DCO will be updated.	The MMO are content that the definitions have now been updated in the DML		
Page 30 – Part 2 – Licensed Activities – Article 4(a) and carried forward throughout the "Licensed Activities" section. The MMO do not agree to the use of the word "approximate". It must be noted that due to the parameters of the assessment undertaken in the Environmental Statement (ES) that the values presented should be given as the measurements stipulated within the ES. The use of the word "approximate" could potentially lead to deposits being made that are greater than those assessed and agreed within the ES.	Additional wording will be included in the next drafting of the DCO/DML to qualify that the parameters are within the boundaries set within the ES	This may be adequate but will need to see the drafting, an alternative would be to define the word "approximate".		MMO are now content this has been dealt with.
Page 34 – Schedule 5 – Part 4 – Conditions – 38. The MMO would request that the condition is amended to read;	Next drafting of the DCO will be updated.	MMO are now content this has been dealt with.		
The undertaker must ensure that any man-made material is separated from the dredged material and disposed of at a registered onshore disposal site.				
The MMO request that the following be added to the DML: Force Majeure - If by reason of force majeure any substances or articles are deposited otherwise than at the Disposal Sites specified in this Licence, then the	Accepted, but to be included in the DCO	Query – should be in the DML, Force Majeure is a vessel related response.		MMO are now content this has been dealt with.

full details of the circumstances must be notified to the MMO within 48 hours of the incident occurring. Force majeure may be deemed to apply when, due to stress of weather or any other cause, the master of a vessel determines that it is necessary to deposit the substances or articles otherwise than at the specified Disposal Sites because the safety of human life or the vessel is threatened.			
The MMO request that a definition of "commence" be included in the DCO/DML and suggest the following wording:	Next drafting of the DCO will be updated.	MMO are now content this has been dealt with.	
"commencement" means beginning to carry out the activities authorised by the deemed marine licences at Schedule 5 (deemed licences under the Marine and Coastal Access Act 2009) other than preconstruction surveys or and monitoring and, in respect of any other works comprised in the authorised project, any Accepted as follows:			
material operation (as defined in Section 56(4) of the 1990 Act) forming part of the authorised project other than operations consisting of site clearance, demolition work, archaeological investigations, environmental surveys, removal of hedgerows, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements and "commencement" shall be construed accordingly.			
This is to ensure that the MMO are fully aware of any activities being undertaken within the DML and allows us to monitor the applicants compliance with the DML.			
A condition should be added to ensure that any percussion piling is preceded by a "soft start" procedure to minimise any potential impacts to marine mammals and/or migratory/spawning fish species.	Next drafting of the DCO will be updated.	MMO are now content this has been dealt with.	
The addition of a dropped objects procedure should be included within the DML. This is to ensure that procedures are in place in the event of objects being lost within the Order limits that fall outside of the scope of Force Majeure. Please refer to Appendix 2 for a suggested reporting method. A condition should also be added that will allow the MMO to review the items "dropped" and if necessary allow for the MMO to instruct the applicant to locate the object and recover it at the applicants expense. We suggest the following drafting:	Noted and the principle accepted, the detail of the drafting is subject to change.	MMO are now content this has been dealt with.	

In the event that any of the authorised undertakers of the activities discover that any materials on the audit sheet are unaccounted for, they will inform the MMO within 6 hours of that discovery having been made. The notification must include a description of the items unaccounted for and, where known, provide the coordinates that the items may be located. The MMO shall require the undertaker, where it is deemed appropriate to do so, to carry out a side scan survey to plot all the potential obstructions within the relevant areas of the offshore Order limits, this area may be extended at the discretion of the MMO. Any obstruction that the MMO believes to be associated with the licensed activities must be removed at the undertakers expense.			
The analytical results of the vibrocore sampling survey of the sediments reveal (Section 7.4.12 of the ES) exceedances of Cefas Action Level 2 at a number of sampling stations, most notably for chromium, copper and mercury and also for total PCB's at depth.	Noted and accepted	MMO are now content this has been dealt with.	
On the basis of these results a condition should be included within the DML that any of the contaminated, largely silt, sediments below 1m depth (excluding the underlying geological material) will not be disposed of at sea. This ensures that the potential contaminant risk to the marine environment is minimised.			
Re-iterated underwater noise	Previous clarifications apply	MMO are now content this has been dealt with.	
Mitigation with respect to ocean Quahog	Applicant clarifies	MMO are now content this has been dealt with.	
P6, Art 6(1) – "ancillary works" If over the water applicant should note that an additional marine licence is required unless works have been assessed within the ES		This should be included in our next response.	MMO are now content this has been dealt with.
P6, Art 6(2) – maintenance activities should be clearly identified and linked back to the ES, (3) states "won't give rise to any significant effects not assessed		This may be included in our next response, although ExA have requested applicant responds to this at Deadline 1.	MMO are now content this has been dealt with.
P9, Art 14(1) to (8) Outfall pipes are licensable via the MMO – have they been assessed in the ES? It is not satisfactory to say "reasonably practical"		This should be included in our next response.	MMO are now content this has been dealt with.

P12, Art 17 – This should also be done in consultation with the MMO		This should be included in our next response.		MMO are now content this has been dealt with.
P12, Art 18 – This should also be done in consultation with the MMO		This should be included in our next response.		MMO are now content this has been dealt with.
P26, Ecology – This should be submitted to the MMO and approved prior to works commencing.		This should be included in our next response.		MMO are now content this has been dealt with.
P31, Art 6(2) – "Approximate" quantities should be stated that they are no greater than what has been assessed in the ES OR a definition of approximate should be provided.		As previously stated		MMO are now content this has been dealt with.
P33, Pollution(27) – Numbers should be updated to reflect the new ones		This should be included in our next response.		MMO are now content this has been dealt with.
Schedule 11 – Multiple references to the Tees Port Authority, MMO are responsible upto MHWS & a clarity on the defining boundaries should be included here to delineate responsibilities.		This should be included in our next response.		MMO are now content this has been dealt with.
Page 4 - Part 1 – Preliminary – Interpretation of "maintain". The MMO do not agree that the definition for "maintain" should include the words adjust, alter, remove, clear, refurbish or reconstruct. Alterations are not necessarily maintenance and reference to this should, therefore, be excluded from the definition to ensure that only the works assessed in the ES are licensed. We would welcome the opportunity to discuss the definition and come to an agreement with the applicant during the pre-examination and examination process. The MMO would suggest the applicant produces a Schedule of Maintenance to allow for maintenance works and to define the activities assessed by the Environmental Statement (ES) and permitted by the DCO / DML. The MMO recommend looking at similar schedules submitted by the East Anglia One, Rampion and Dogger Bank Creyke Beck applicants to reference suitable examples. This is in order to adhere to the definition of "licensable marine activities" provided in the section 66(7) of the MCAA 2009. Furthermore, this definition of "maintain" should be included in the DML definitions as well as the DCO.	Agree to delete reconstruct and decommission. Have committed to producing a Post-construction monitoring plan to be agreed with MMO prior to completion of construction.	Fine – needs to be secured in the DML, along with any other "plans" for the project that are to be submitted at a later date. (EMP etc etc) We also require the definitions in the DML, for example "maintain" onshore can include the removal of shrubs/bushes stones etc, within the marine environment this would require a marine licence and the definitions are distinctly separate.	We will continue to work with the applicant on this	
Page 7 - Part 2 – Principle Powers – Article 8 – Consent to Transfer Benefit of Order. Please refer to Appendix 1.	Still wish to partial transfer	MMO are happy in principle with transfer of benefit. MMO see no reason for partial transfer; continue to review with applicant as		

		appropriate.	
Page 26 - Schedule 2 – Requirements – Decommissioning – Article 11. It should be noted that the MMO will also need to be consulted on the decommissioning plan and we suggest the wording be amended as follows: This licence does not permit the decommissioning of the authorised scheme. No authorised decommissioning activity shall commence until a written decommissioning programme in accordance with an approved programme under section 105(2) of the 2004 Act, has been submitted to the Secretary of State for approval. Furthermore, at least four months prior to carrying out any such works, the undertaker shall notify the MMO of the proposed decommissioning activity to establish whether a marine licence is required for such works.		MMO suggest: The Licence Holder must submit a decommissioning plan to the Licensing Authority for approval no less than 3 months prior to the planned decommissioning of the works. The works must be decommissioned according to the approved plan and works must not commence until written approval has been provided by the Licensing Authority. Reason: To ensure measures are in place to decommission the works to	
Page 32 – Schedule 5 – Part 4 – Conditions – 17. The MMO would request that the condition is amended to read: Prior to any works commencing below the level of mean high water springs, the undertaker must submit detailed method statements to the MMO for approval for each stage of the licensed activities at least 3 months prior to the commencement of such licensed activity. No works must commence until the method statements are approved by the MMO.	Applicant acknowledges – however they intend to include a "timescale" in which the MMO must approve of this and if we have not met it they can go ahead and construct anyway.	MMO raised this with the Inspector at the DCO specific hearing. Suggested wording: 17. (1)Prior to any works commencing below the level of mean high water springs, the undertaker must submit detailed method statements to the MMO for approval for each stage of the licensed activities at least 3 months prior to the commencement of such licensed activity. If Any requests for additional information should be made within 4 weeks of receipt of the method statements. Any such approval must not be unnecessarily withheld or delayed and is deemed to have been refused if it is neither given nor further information requested within three months of the specified day, or a request for further information or time to review is requested. (2) The undertaker must	

		provide the MMO with such		
		provide the MMO with such further details as the MMO may reasonably require following submission of the detailed method statement.		
		(3) In this paragraph the "specified day" means— (a) the day on which the MMO have received the detailed method statement covered under subparagraph (1); or (b) the day on which the undertaker provides the MMO with such further particulars as have been reasonably requested by the MMO under sub-paragraph (2).		
An additional condition should be included within the DML stating that only one vessel can carry out piling activities at any one time. This is to ensure that any potential impacts to local wildlife is minimised.	Next drafting of the DCO will be updated.	Does not appear to be included		
The DML has no reference to any maintenance activities we therefore advise that a condition be added to the DML to allow the applicant to submit, for approval, by the MMO, a post-construction maintenance plan, based upon any maintenance assessed within the Environmental Statement. It must be noted that other than "maintenance dredging" that no other maintenance activities are licensed under the	Have committed to producing a Post-construction monitoring plan to be agreed with MMO prior to completion of construction.	Fine – needs to be secured in the DML, along with any other "plans" for the project that are to be submitted at a later date. MMO also require the	We will continue to work with the applicant on this	
DML contained within this order. We recommend that the DML is updated to include the maintenance of all assets during the operational stage of this project.		definitions in the DML, for example "maintain" onshore can include the removal of shrubs/bushes stones etc, within the marine environment this would require a marine licence and the definitions are distinctly separate.		
A condition should be added to the DML to ensure that upon "completion" of each "phase" of the works activities are notifiable to the MMO, UK Hydrographic Office, Maritime and Coastguard Agency and Trinity House to ensure navigational safety is maintained and that the relevant maritime charts can be updated. The notice should be received no more than 5 working days after completion of construction of each of the authorised "phases" of development.	This is accepted, a provision will be added to next drafting to provide notification at the end of Phase 1 and 2.	Does not appear to be included		
Supplementary Navigational Conditions	Noted – applicant currently	Request included in DML	Does not appear to be	

	reviewing updated navigation conditions agreed between MMO/MCA and TH – will be included in next drafting of DCO	and NOT DCO – MMO have greater enforcement powers than the LPA under the planning act and all marine conditions should be secured via the DML	included	
P6, Article 5 – MMO do not agree with "may at anytime maintain"		This should be included in our next response.	Does not appear to be included	
P11, Art 16 – Clarify meaning of land – also all definitions should be in the DML – for example maintain on shore can include the removal of bushes/rocks etc, offshore this would be a licensable activity.		This should be included in our next response.	Does not appear to be included	
P13, Art 19 & 21 – Lighting requirements are a requirement of Trinity House		This should be included in our next response.	Does not appear to be included	
P13, Art 20 – navigational requirements are a requirement of the MCA		This should be included in our next response.	Does not appear to be included	
P24, Schedules/requirements – At present only includes shore based works, if nothing is being undertaken in the marine environment then this can be removed.		This should be included in our next response.	Does not appear to be included	

Supplementary information:

P53, 40. Refers to 'licenced authorities' MMO believe this should read 'licenced activities'

Under OSPAR, sampling is valid for material to be disposed of to sea for between 3 to 5 years after the samples were taken. MMO expects the applicant to have disposed of any dredge material within that time period from date of sampling but if not, then further sampling would be required.

As stated above in the issues log, MMO has already discussed the timings to be imposed on MMO for approval of method statements. MMO remain uncomfortable with these restrictions and will continue to discuss with the applicant. MMO raised this as an extensive point with the Inspector at the hearing.

Written response to questions posed by examining authority.

MMO are content that the Marine mammal monitoring is not required to inform the assessment of the lagoon area. MMO are content with the Marine Mammal survey.

MMO consider all comments or activities relating to works below Mean High Water Springs should be included with the DML, this would include the lagoon.

MMO are content that maintenance dredge and disposal activities if required would be applied for separate by the applicant or PD ports if appropriate.

MMO are content that underwater on noise on fish has been assessed appropriately by the applicant and clarity that MMO sought from earlier representations have been addressed and are no longer outstanding.