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MMO Reference: DCO/2017/00002
Planning Inspectorate Reference: EN010087
Identification Number: 20022925

29 April 2020

Dear Sir or Madam,

Planning Act 2008, Norfolk Boreas Limited, Proposed Norfolk Boreas Offshore Wind Farm

Comments on Responses to the Examining Authority's (ExA) Third Round of Written Questions

The Marine Management Organisation (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 17 letter containing the ExA's second round of written questions on 23 March 2020 for the proposed Norfolk Boreas Offshore Wind Farm (Ref EN010087). The Applicant and Interested Parties responded at Deadline 5. Please find the MMO's comments on the responses to the ExA's second round of questions below for your consideration.

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

This written representation is submitted without prejudice to any future representation the MMO may make about the DCO Application throughout the examination process. This representation is also submitted without prejudice to any decision the MMO may make on any associated application for consent, permission, approval or any other type of authorisation submitted to the MMO either for the works in the marine area or for any other authorisation relevant to the proposed development.

Yours faithfully

[redacted]

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Marine Management Organisation

EN010087 – Norfolk Boreas – Comment on responses to the Examining Authority's third written questions

ExQ3	Question to:	Question:	MMO Response:	Applicant or Interested Party Response:	MMO response (Deadline 9)
2. Biodiversity, Biological Environment and Ecology					
2.0 Offshore benthic and marine mammals					
Q3.2.0.1	The Applicant	Marine Mammal Monitoring: The Applicant to comment on NE's wording in [REP6-050] to be included in the Generation DMLs Schedules 9 and 10, which would link with the marine mammal monitoring requirements within the IPMP.	The MMO has discussed this further with the Applicant and understands their position is that a condition is not required. The MMO understands the Applicant is still willing to review and discuss the possibility of adding a condition. The MMO believes that the condition provided by Natural England (NE) in REP6-050 is not suitable. The MMO is continuing discussions with the Applicant and NE to work together to see if an agreement can be reached on this point.	**Applicant's response:** As stated in the IPMP's Guiding principles [document 8.12, REP5-031] "*All consent conditions, which would include those for monitoring, should be "necessary, relevant to planning, relevant to the permitted development, enforceable, precise and reasonable in all other respects" as set out in Paragraph 206 of the National Planning Policy Framework and referred to as the 'six tests' (Department for Communities and Local Government, 2018)."* The Applicant does not consider that the conditions which Natural England have suggested are precise and reasonable, relevant to planning, or indeed necessary. For the following reasons: • The conditions are not precise and reasonable, in particular the following wording:	The MMO, NE and the Applicant have agreed on the following changes to Conditions 18 and 20 in Schedules 9 and 10: **Pre-construction monitoring and surveys** *Condition 18* *(2) The pre-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to ~~undertake~~—* *(a) undertake appropriate surveys to determine the location and extent of any benthic communities/benthos constituting Annex 1 reef habitats of principal importance in whole or in part inside the area(s) within the Order limits in which it is proposed to carry out construction works;*

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				"*required to test predictions in the environmental statement*". There are many predictions made within the ES and therefore the Applicant is unclear to which predictions this statement refers. In addition, compliance with this wording could be used to place an unreasonable burden on the Applicant to undertake very extensive monitoring without a clear need to do so. • The wording of the two conditions does not focus on any specific aspect of marine mammal monitoring and therefore its open-ended nature would mean that it is not enforceable. • Most importantly the proposed conditions are not necessary. The guiding principles within the IPMP state that: "*monitoring should be targeted to address significant evidence gaps or uncertainty, where there is potential for a significant environmental impact*." Chapter 12 of the Environmental Statement Marine Mammals [APP-212] concluded no significant impacts on marine mammals and Natural England, through the Statement of Common Ground [AS-028] has agreed with these conclusions. As recognised by Natural England in their Relevant Representation [RR-099] marine mammal assessment issues are likely to be very similar across projects and it	*(b) undertake a full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a, and side scan sonar, of the area(s) within the Order limits in which it is proposed to carry out construction works; ~~and~~* *(c) undertake any ornithological monitoring required by the ornithological monitoring plan submitted in accordance with condition 14(1)(l); and* *(d) undertake or contribute to any marine mammal monitoring referred to in the in principle monitoring plan submitted in accordance with condition 14(1)(b).* **Post construction** *Condition 20* *(2) The post-construction surveys referred to in sub-paragraph (1) must, unless otherwise agreed with the MMO, have due regard to, but not be limited to, the need to ~~undertake~~* *(a) undertake an appropriate survey to determine any change in the location, extent and*

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				may be that monitoring is best undertaken at or between several projects to address these issues and find answers to the original questions. The Applicant agrees with this statement and therefore considers that a contribution to strategic monitoring is likely to be more beneficial than anything undertaken at a project level. The inclusion of monitoring at a strategic level would be best enforced through agreement, with the MMO and Natural England, of the final, Southern North Sea Site Integrity Plan. In summary, the Applicant considers that the conditions proposed by Natural England are not necessary and furthermore, in their current form, they are not sufficiently precise to ensure that relevant data gaps are filled and would not be enforceable. As stated in the Applicant's response to further written questions [REP5-045] the Applicant's position is that given the low contribution of the project to marine mammal impacts any marine mammal monitoring should be undertaken at a strategic level. The wording provided within the IPMP allows for the participation of Norfolk Boreas in any strategic monitoring as required at the time of agreement of the final plans and therefore it is not necessary to include a specific condition within the DCO to	*composition of any benthic habitats of conservation, ecological and/or economic importance constituting Annex 1 reef habitats identified in the pre-construction survey in the parts of the Order limits in which construction works were carried out. The survey design must be informed by the results of the pre-construction benthic survey;* *(b) undertake, within twelve months of completion of the licensed activities, one full sea floor coverage swath-bathymetry survey that meets the requirements of IHO S44ed5 Order 1a across the area(s) within the Order limits in which construction works were carried out to assess any changes in bedform topography and such further monitoring or assessment as may be agreed to ensure that cables (including fibre optic cables) have been buried or protected;* *(c) undertake any ornithological monitoring required by the ornithological monitoring plan submitted in accordance with condition 14(1)(l);* ~~*and*~~ *(d) undertake post-construction traffic monitoring in accordance with the outline marine traffic*

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				commit the Applicant to marine mammal monitoring. Furthermore, due to the fact that the Norfolk Boreas project would make a relatively low contribution to any marine mammal impacts, it is not appropriate to include a condition within the DCO given similar conditions have not been included in DCOs for other wind farms to be constructed in the same area.	*monitoring strategy, including the provision of reports on the results of that monitoring periodically as requested by the MMO in consultation with the MCA and Trinity House; and* *(e) undertake or contribute to any marine mammal monitoring referred to in the in principle monitoring plan submitted in accordance with condition 14(1)(b).*
2.1 Offshore ornithology					
Q3.2.1.2	The Applicant IPs	Headroom: 1. The Applicant and IPs to state their final position on headroom, and whether agreement is possible within the Examination. 2. The Applicant and IPs to provide any additional information to assist the ExA in making its recommendation to the SoS.	1. The MMO has sought further advice from our internal legal team and on the basis of advice received is content that the consented figures can be used. The MMO does not agree that as built figures can be used. The MMO supports Natural England's response (REP6-049). The MMO believes that for Hornsea One Offshore Wind Farm, Triton Knoll and Race Bank the DCO/DMLs (and MLA in the case of Race Bank) do not have a specific requirement to provide confirmation of the completion of construction including the	1. The Applicant set out its position on Headroom in REP6-021. In summary, the Applicant considers there to be a considerable difference in the collision risk estimates for a number of wind farms due to the reduced risks posed by the built designs compared with the assessed or consented designs. Illustration of this headroom was provided for two wind farms in REP6-021 and the same considerations also apply to other wind farms included in the cumulative and in-combination collision assessments. The Applicant welcomes that Natural England has agreed that this is an issue which requires attention, and that there is likely to be headroom (for the above reasons), although the extent of it is currently uncertain (REP6-049). Therefore the Applicant considers that	The applicant further responded in RE8-015: *The Applicant notes the MMO's response on this matter and considers that it has already set out a detailed basis for the acceptance of headroom (which Natural England has agreed in principle) and this was summarised in the Applicant's response to this question submitted at Deadline 7, REP7-017).* *In the example provided by the Applicant, only the as-built figures for Hornsea One are referred to. The figures referred to in the case of Triton Knoll are the consented figures and the Applicant does not refer to any headroom created by*

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			confirmation of the final as-built parameters. 2. The MMO believes the decision lies with the SoS and does not have any further information to assist the ExA.	the principles of precaution in headroom are agreed with Natural England, albeit that the precise details relating to how this affects collision risk modelling is not yet agreed. Whilst it is unlikely that agreement on the extent of available headroom will be reached during the examination, the Applicant's assessment of no AEoI is in no way reliant on available headroom. Available headroom has been presented by the Applicant as just one example of the inherent over precaution in Natural England's requirements for collision risk assessment, which gives further confidence to the reliability of the Applicant's predictions and conclusions that there is no AEoI. 2. The Applicant notes the following from 'Natural England's comments on Norfolk Boreas approach to as-built vs consented turbine numbers and headroom in cumulative/ in-combination collision assessments' [REP6-049] dated 5 March 2020 and submitted at Deadline 6: • Whilst Natural England 'recognise that there is likely to be some headroom for the general reasons set out by the Applicant, the exact extent of any potential headroom is not agreed' (section 1). Therefore, the principle that headroom exists is accepted by Natural England;	*Race Bank in its calculations. The MMO has not explained why, in the particular case of Hornsea One Offshore Wind Farm, which has been built out to its maximum consented capacity of 1218MW, the MMO is unwilling or unable to acknowledge that the as-built figures can be used. Given that the maximum consented capacity has been built and was fully commissioned in January 2020 it is surely not necessary to rely on a notification from the undertaker that construction of this development has been completed, and the MMO will be aware of the final as-built parameters having approved these under the DML conditions. If the undertaker wished to alter the generating station for Hornsea One Offshore Wind Farm in the future, surely a separate consent would be required. In these particular circumstances, it is not clear why the MMO does not agree that the specific as built figures for Hornsea One Offshore Wind Farm can be used, especially given that Natural England appears to have accepted that the Applicant has demonstrated available headroom using these figures (albeit*

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				• Natural England agree that 'the use of collision risk estimates calculated based on WCS may lead to a potential over-estimate of the total cumulative or in-combination assessments in terms of both EIA and HRA' (section 2). Therefore it is accepted by Natural England that headroom may lead to over-estimates in cumulative and in-combination totals; • Natural England also make the point in section 2 that 'it is also possible that the predicted impacts from 'as-built' designs are greater than those predicted in the ES e.g. the collision mortalities at Lincs OWF increased after application of the correction factor used when calculating the impacts of 'as-built' development.' The Applicant acknowledges this point, however in The Crown Estate wind farm headroom database1, using kittiwake as an example, this situation only applies to five wind farms (Greater Gabbard, Kentish Flats, Lincs, Lynn and Inner Dowsing and Ormonde) all of which had low existing collision risks (30 in total for all five), which overall were increased by two, to a total of 32, following adjustment. This contrasts with more than 20 wind farms for which collision risks are reduced, by an average of 37%. Thus, while Natural England's statement is correct, in reality the effect of this is very small and is far	*cautioning against applying this more generally to other projects) [REP6-049, see last paragraph of Section 6]. The Applicant is not seeking the MMO's confirmation that all as-built wind farm figures can be used, only that this is the case for Hornsea One Offshore Wind Farm given it has been built and fully commissioned to its maximum consented capacity of 1218MW.* The MMO has discussed this further internally specifically in relation to HOW1 figures. The MMO maintains the position that it believes this is a matter for the SoS to determine and does not have any further information to assist the ExA.

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				outweighed by the reductions for other sites. • 'Natural England agrees in principle that if a non-material change or section 36 variation has indeed reduced the parameters which are consented within/ under the DCO or under the DCO as changed/varied, in such instances this could be considered "legally secured"' (section 4.1). This principle would therefore apply to the Applicant's submission in relation to Triton Knoll. Similarly, the MMO has also agreed the principle that consented (as opposed to assessed) parameters are legally secured. • Whilst Natural England state that it remains 'too ambiguous to definitively state the 'as-built' projects are legally secured' (section 4.2), this does not address the point where the project has been fully built out to the maximum installed capacity consented – as is clearly the case with Hornsea One, to which the Applicant has specifically referred. Neither Natural England or the MMO has submitted any evidence as to why specifically Hornsea One's as-built parameters should not be considered as legally secured. There is no need for a condition that specifies the project becomes fixed for its lifetime because any changes to the as-built parameters would require a variation to the consent. Phased builds would be	

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				irrelevant where the project has been fully built out (as in the case of Hornsea One); and the provision of as-built information goes to the question of the extent of the headroom, not whether there is headroom which is legally secured. In fact, Natural England notes (Section 6) that 'consultation with the MMO may be required to obtain the parameters from the construction management plan of each project'. • Natural England has also misunderstood the Applicant's comments in relation to 'age of the data'. The Applicant is not questioning the approach to cumulative or in-combination assessment, which relies on the use of data previously agreed with Natural England for individual projects. The Applicant's point is that new environmental information may be required, to support a variation of a consent, if an undertaker sought to change its as-built or WCS parameters beyond those which were originally consented. • Natural England state that 'if the Applicant successfully identifies headroom this does not necessarily mean that headroom is the project's to utilise, as there are currently multiple projects ahead of Norfolk Boreas in the Examination process that are not yet consented'. The only projects to which	

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				headroom could be applied before Norfolk Boreas are Norfolk Vanguard and Hornsea Project Three. The Applicant has demonstrated that Triton Knoll and Hornsea One alone create sufficient headroom for both Norfolk Vanguard and Norfolk Boreas. In any event, Triton Knoll and Hornsea One are not the only projects where headroom exists. • Natural England appear to accept that the calculation method used for Hornsea One is valid and has demonstrated the available headroom. Section 6 states, '..in principle Natural England is of the view that the calculation method is valid', and goes on to state, 'Whilst the Applicant may have demonstrated in Appendix 4 of REP4-014 that taking the approach developed in Trinder (2017) produces the same predicted collision figure as that obtained through recalculation from the original dataset (using the Band spreadsheets) for HOW01, we note that this has only been demonstrated for one project and given the issues noted above, it is likely that this would be the case for every project. The Applicant has only sought to demonstrate that there is available headroom taking two specific projects into account – Triton Knoll and Hornsea One, and only Triton Knoll relies on the Trinder (2017) approach. Therefore, it appears from	

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				Natural England's recent submission (as quoted above) that Natural England accept that both these projects create headroom to the extent demonstrated by the Applicant, i.e. which is sufficient headroom to account for impacts from both Norfolk Vanguard and Norfolk Boreas. • Notwithstanding the above, the Applicant's assessment of no AEoI is in no way reliant on available headroom. Available headroom has been presented by the Applicant as just one example of the inherent over precaution in Natural England's requirements for collision risk assessment, which gives further confidence to the reliability of the Applicant's predictions and conclusions that there is no AEoI.	
Q3.2.1.3	The Applicant MMO Natural England	Turbine Parameters: 1. In [REP6-024] the Applicant bases its CRM assessment on either 158 x 11.55 MW turbines or 124 x 14.7MW turbines. There is no explicit commitment to a minimum turbine size in the DCO [REP5-003],	2. The MMO will discuss this point further with the applicant and Natural England and comment at Deadline 8. 3. The MMO defers to Natural England in relation to mortality rates.	**Applicant's Response:** 1. It is important to state that whichever turbine model is installed, the maximum number of turbines is 158 and the number of turbines is constrained by the total generating capacity of 1,800MW. The two design options which have been modelled for collision risk, 158 x 11.55MW and 124 x 14.7MW (REP5-059 and REP6-024) represent the highest collision risks for turbines with generating capacities of up to 14.6MW and more than 14.7MW, respectively. In other words, if turbines with a capacity up to 14.6MW are installed, the collision risks will be lower	The MMO acknowledges the Applicants response and has no further comments to assist the ExA.

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		which states “Up to and including 14.6 MW”. In theory, the Applicant could implement the maximum number of smaller turbines. The Applicant to confirm whether this would invalidate the CRM. 2. Should the DCO refer to a minimum turbine size of 11.55MW as this is the design basis? 3. Similarly, the Applicant could currently, in theory, implement a lower number of higher output turbines, if technology allows it. The Applicant states 14.7MW option results in a higher collision mortality than the 11.5MW option.		than those for the 11.55MW model (but note that the number of turbines (with a higher capacity than 11.55MW) will be less than 158 as the number of turbines is constrained by the total generating capacity of 1,800MW). And if turbine models with a higher capacity than 14.7MW are installed these will also result in lower collision risks than the 14.7MW turbine (again noting that the number of turbines installed is constrained by the total generating capacity of 1,800MW). The two design options (up to 14.6MW and 14,7MW and higher) have been defined by the minimum draught heights for these two options, 35m from Mean High Water Springs (MHWS), and 30m from MHWS, respectively. Within these two draught heights, the 11.55MW and 14.7MW are the worst case design options, and the 14.7MW option is the worst of the two. Hence the 14.7MW is the overall worst case and the model on which the revised assessment has been based. If the wind farm is built with turbines with a lower capacity than14.6MW then the collision risk will be lower than those for the 14.7MW and therefore the collision risk modelling in REP5-059 and REP6-024 will not be invalidated. 2. For the purpose of collision risk modelling, the Applicant has modelled turbines of 11.55MW and above.	

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		Without stipulating a maximum turbine output in the DCO, is there a risk of higher mortality than has been predicted? Can the Applicant provide assurance that this is not the case? 4. Given the rate at which technology advances - is it sensible to apply a given draught height to a given WTG generating capacity? On what assumptions are these draught heights and capacities made?		However, it is not necessary to restrict the project to the precise turbine capacities modelled. The purpose of the Rochdale envelope is to assess and secure relevant parameters (of a particular turbine model in this case) which allow flexibility for the final design, provided that those parameters can still be observed. A minimum turbine capacity has never been included as a parameter in the dDCO for the project, and to the Applicant's knowledge has never been included in any other offshore wind farm DCO. This is because the relevant parameters for the project, and which form part of the Rochdale envelope, do not include individual turbine capacity. All relevant parameters are already secured in the dDCO as follows: • The maximum export capacity of 1,800MW is referred to in the dDCO at Schedule 1, Part 1, 1(a); Paragraph 2(1)(a) of Part 3 of the Generation DMLs (Schedule 9-10), and Condition 8(1)(a) of the Generation DMLs (Schedule 9-10, Part 4). As the Explanatory Memorandum explains, all other parameters are in effect subordinate to this description. • The maximum number of turbines (158) is referred to in the dDCO at Schedule 1, Part 1, 1(a), Schedule 1, Part 3, Requirement 3(1), Paragraph 2(1)(a) of Part 3 of the	

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				Generation DMLs (Schedule 9-10), and Condition 8(1)(b) of the Generation DMLs (Schedule 9-10, Part 4). If the maximum export capacity is divided by the maximum number of turbines, it can be seen that in order to reach full export capacity, each individual turbine would need to have an installed capacity which exceeds 11MW (hence the 11.55MW turbine has been modelled). This parameter was changed in the dDCO at Deadline 5 to reflect the change in the turbine modelled. • The spacing of turbines are referred to in the dDCO at Condition 1(1)(g) of the Generation DMLs (Schedule 9-10, Part 4). This requires spacing of at least 800m (increased from the previous spacing of 760m) to reflect the reduction in the maximum number of turbines referred to above. As with the maximum number of turbines, this parameter was changed in the dDCO at Deadline 5 to reflect the change in the turbine modelled. • The maximum wind turbine generator parameters, on which the collision risk modelling is based, are referred to in the dDCO at Schedule 1, Part 3 Requirement 2(1) and in Condition 1(1) of the Generation DMLs (Schedule 9-10, Part 4). For example, the maximum height and rotor diameter for the turbines.	

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				• The minimum draught heights referred to in the dDCO at Schedule 1, Part 3, Requirement 2(1)(e), and Condition 1(1)(e) of the Generation DMLs (Schedule 9-10). This was introduced as further mitigation at Deadline 5, and specifically avoids referring to a minimum or maximum individual turbine capacity because this is not a parameter which is otherwise secured. Provided that all of these parameters are observed, collision risk will not exceed the worst case modelled in the collision risk assessment. If, for commercial reasons, the Applicant chooses to rely on the flexibility of the Rochdale envelope to construct less than 1,800MW, potentially using turbines of less than 11.55MW (or a mix of turbine sizes) then the Applicant should be entitled to do so, as this would not invalidate the collision risk assessment. 3. At the scale of a single turbine, models with larger dimensions (e.g. rotor radius) typically have higher collision risks, although because collision risk is also related to RPM (revolutions per minute); which is slower for larger diameter rotors) the increases are usually small. Furthermore, the small increase in risk for each individual turbine, with larger	

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				dimensions, is more than offset by the reduction in overall numbers of turbines as they also have higher generating capacity and therefore fewer are required to meet the total generating capacity. Therefore the Applicant is confident based on currently available information that a design based on a smaller number (than 124) of turbines with individual generating capacity of more than 14.7MW would not result in higher collision risks. Indeed, in this respect the collision risk modelling in REP5-059 and REP6-024 has been conducted along the same lines as that in previous offshore wind farm impact assessments, which present the collision risks for the worst case design, which results in the highest mortality estimates. 4. The draught heights secured in the dDCO (as noted above) relate to ranges of turbine capacity, rather than a specific turbine model (i.e. 35m from MHWS for up to 14.6MW and 30m for the 14.7MW or above, REP5-003). Furthermore, these are the minimum values (i.e. the actual draught heights will be these values or greater). The basis for these draught heights is the maximum operating height of the vessels which are currently available for construction, the maximum height to which the hub and length of rotor blades which can both be installed. The	

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				Applicant acknowledges that there may be technology developments which change the turbine models available by the time construction commences and it is likely that vessel capacity will increase to meet demands associated with larger turbines. However, it is also necessary for the Applicant to commit to certain design parameters in order to reach agreement on potential impact magnitudes on which a consent decision can be based. Hence, the Applicant has committed in the DCO to these worst case minimum draught heights and the wind farm will be constructed within these defined limits	
Q3.2.1.3	The Applicant MMO Natural England	Turbine Parameters: 1. In [REP6-024] the Applicant bases its CRM assessment on either 158 x 11.55 MW turbines or 124 x 14.7MW turbines. There is no explicit commitment to a minimum turbine size in the DCO [REP5-003], which states "Up to and including 14.6 MW". In	2. The MMO will discuss this point further with the applicant and Natural England and comment at Deadline 8. 3. The MMO defers to Natural England in relation to mortality rates.	**Natural England's Response:** As noted in our Deadline 7 response to the Applicant's updated collision risk modelling (CRM) assessment for the project alone [REP5-059], as Norfolk Boreas are in REP5-059 committing to removing the 9MW, 10MW and 11MW options from their design envelope, Natural England again suggests that the DCO needs to clearly indicate that turbines smaller than 11.55MW turbines cannot be installed. Therefore, as per our comments on the updated DCO at deadline 7, the minimum turbine size should also be captured within the DCO.	The MMO acknowledges the Natural England's response and has no further comments to assist the ExA.

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		theory, the Applicant could implement the maximum number of smaller turbines. The Applicant to confirm whether this would invalidate the CRM. 2. Should the DCO refer to a minimum turbine size of 11.55MW as this is the design basis? 3. Similarly, the Applicant could currently, in theory, implement a lower number of higher output turbines, if technology allows it. The Applicant states 14.7MW option results in a higher collision mortality than the 11.5MW option. Without stipulating a maximum turbine		Natural England notes that the 14.7MW option results in a higher collision mortality prediction than the 11.55MW turbine option largely due to the larger turbines having a lower minimum draught height. Whilst in theory, it is possible that the Applicant could implement a lower number of larger turbines than the revised WCS in REP5-059 of 124 14.7MW if technology allows. If the minimum clearance of the blades of such turbines above the water is maintained (i.e. the 30m minimum clearance stated by the Applicant in REP5-059), Natural England considers it likely that fewer larger turbines would be likely to have a smaller environmental impact than the WCS smaller turbines. However, if turbines larger than 14.7MW were to be installed and were to have a lower minimum clearance of blades above the water than 30m, then there would be the potential for a higher collision mortality prediction.	

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		output in the DCO, is there a risk of higher mortality than has been predicted? Can the Applicant provide assurance that this is not the case? 4. Given the rate at which technology advances - is it sensible to apply a given draught height to a given WTG generating capacity? On what assumptions are these draught heights and capacities made?			
5. Development Consent Order and Deemed Marine Licences					
5.5 SCHEDULES 9 to 13: Deemed Marine Licences					
Q3.5.5.1	The Applicant MMO Natural England	Prospects for agreement on DML Schedule 9/10/13 Part 4 Condition 15 (4):	Please see the response to Q3.5.5.21. The MMO provided detailed comments in RR-069 section 2.1.13 – 2.1.32 along with the Joint position Statement	**Applicants Response:** WQ2.5.5.1 at Deadline 5, contained in the Applicant's Responses to the Examining Authority's Further Written Questions [REP5-045]. The positions are also outlined in the SoCG with the	The MMO is content that it is up to the Secretary of State to decide whether to impose a four month or a six month timeframe for discharge. Other than reiterating its position which has been clearly

ExQ3	Question to:	Question:	MMO Response:	Applicant or Interested Party Response:	MMO response (Deadline 9)
		It appears unlikely that agreement will be reached between the Applicant, NE and MMO regarding four- or six-month submission periods in Schedule 9/10/13 Part 4 Condition 15 (4). The Applicant, MMO and NE to provide any additional information to assist the ExA in making its recommendation to the Secretary of State.	submitted by the MMO as part of RR-069. The Applicant submitted the joint position paper in Appendix 3 of AS-025. The MMO believes that there is no need for an appeals process to be included, therefore the condition does not need to include the wording in red below: *Condition 15 (4)* *No licensed activity may commence until for that licensed activity the MMO has approved in writing any relevant programme, statement, plan, protocol or scheme required to be approved under condition 14 or approval has been given following an appeal in accordance with subparagraph (6).* In addition to the removal of this wording the MMO believes that Condition 15(6) should be removed and Condition 15(7) should be amended to remove wording relating to the appeal process. Part 5 – Appeals	MMO at Table 8 [REP6-029] and at Table 7 of the SoCG with NE [REP6-033]. In summary, the Applicant has followed existing precedent, and has sought to maintain consistency with the approach taken in the East Anglia Three DCO, the Hornsea Project Three draft DCO, the Thanet Extension draft DCO, and the Norfolk Vanguard draft DCO. In addition, the plans to be submitted under the Norfolk Boreas project are likely to benefit from efficiency savings and lessons learned from the Norfolk Vanguard process. Equally, the stakeholders would be familiar with the general content and structure of the plans for discharge, following the Norfolk Vanguard process. The Applicant considers that these are persuasive points (in addition to those put forward previously) to justify a 4 month period for this particular project, even if other projects have a 6 month period. The Applicant is content to let the Secretary of State decide whether to impose a four month or a six month timeframe for discharge; and the Applicant would have nothing further to add on this matter following the close of examination. The Applicant also understands that the MMO are in support of this approach.	set out in RR-069 sections 2.1.13 – 2.1.32, the joint position paper for Norfolk Vanguard (RR-069 Appendix 1) and throughout previous hearings for other recent OWF applications, the MMO has nothing further to add on this matter following the close of examination.

ExQ3	Question to:	Question:	MMO Response:	Applicant or Interested Party Response:	MMO response (Deadline 9)
			process should also be removed. The MMO also understands NE agrees that the timescale should be 6 months.		
8. Habitats Regulation Assessment					
8.3 Haisborough, Hammond and Winterton SAC					
Q3.8.3.1	The Applicant	**Alternative to the Site Integrity Plan:** The Applicant has proposed an alternative Cable Specification, Installation and Monitoring Plan (CSIMP) to the SIP [REP6-016] to address the concerns expressed by NE and MMO throughout the Examination. The Applicant to explain: 1. The Applicant has submitted the SAC position paper [REP6-016] which contains new mitigation		**Applicant's Response:** As explained in Section 6 of the HHW SAC position paper [REP5-057] an alternative condition 9(1) (m) would be included within the DCO: *(m) A cable specification, installation and monitoring plan for the installation and protection of cables within the Haisborough, Hammond and Winterton Special Area of Conservation which accords with the principles set out in the outline Norfolk Boreas Haisborough, Hammond and Winterton Special Area of Conservation Cable Specification, Installation and Monitoring Plan such plan to be submitted to the MMO (in consultation with the relevant statutory nature conservation body) at least six months prior to commencement of licensed activities."* The following amendment to condition 9(1)(g) is also proposed to clarify that the Cable Specification, Installation and Monitoring Plan referred to in condition	The MMO does not agree that the use of the SIP and the Grampian condition is a suitable mechanism to manage the uncertainty the Applicant has laid out on the cable route and location of Annex I habitat. Further comments are section 5.4 of the MMO Deadline 9 covering letter. The MMO welcomes the CSIMP plan and related condition as an alternative route to capture all information required at post consent stage and the MMO is content with the principle and the mechanism behind the CSIMP. Notwithstanding this the MMO has concerns that approval of the CSIMP could result in the need for further consideration of Adverse Effect on Integrity by the MMO post consent, leading to potential delay regarding the sign off of this document. The MMO

ExQ3	Question to:	Question:	MMO Response:	Applicant or Interested Party Response:	MMO response (Deadline 9)
		commitments and the CSIMP as an Appendix. The SAC position paper is referred to in the updated SIP [REP6-011], but not in the dDCO itself. How would the CSIMP therefore be certified and secured?		9(1)(g) applies outside of the HHW SAC only: *"9(1) The licensed activities or any part of those activities must not commence until the following (as relevant to that part) have been submitted to and approved in writing by the MMO (g) A cable specification, installation and monitoring plan for the installation and protection of cables outside of the Haisborough, Hammond and Winterton Special Area of Conservation, to include……* The two alternative conditions; one securing the Site Integrity Plan (SIP) and one securing the Cable Specification Installation and Monitoring Plan (CSIMP), will both be included within the next version of the draft DCO (to be submitted at Deadline 7), such that if the SoS determines that development consent can be granted, the SoS can also chose which condition and associated control document to secure in the DCO. Annex 1 of the Applicant's Additional information for the HHW SAC position paper contains the proposed Outline Norfolk Boreas HHW SAC CSIMP [REP6-017] and it would be this document which would be secured (and certified as document 8.20) if the SoS decides to include the alternative condition 9 (1)(m).	notes that this is a risk for the Applicant.