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(Email only)

MMO Reference: DCO/2022/00007 Planning Inspectorate Reference: EN010125 Identification Number: 20050160

23 May 2025

Dear Sir or Madam,

Planning Act 2008, RWE Renewables UK Dogger Bank South (West) Ltd and RWE Renewables UK Dogger Bank South (East) Ltd Proposed Dogger Bank South Offshore Wind Farms Order

Deadline 5

On 10 July 2024, the Marine Management Organisation (the MMO) received notice under section 56 of the Planning Act 2008 (the PA 2008) that the Planning Inspectorate (PINS) had accepted an application made by RWE Renewables UK Dogger Bank South (West) Ltd and RWE Renewables UK Dogger Bank South (East) Ltd (the Applicant) for determination of a development consent order for the construction, maintenance and operation of the proposed Dogger Bank South Offshore Wind Farms (the DCO Application) (MMO ref: DCO/2022/00007; PINS ref: EN010125).

The DCO Application seeks authorisation for the construction, operation and maintenance of Dogger Bank South (DBS) Offshore Wind Farm (OWF), comprising of up to 100 wind turbine generators in DBS East and up to 100 wind turbine generators in DBS West together with associated onshore and offshore infrastructure and all associated development (the Project).

The DCO Application includes a draft development consent order (the DCO) and an Environmental Statement (the ES). The draft DCO includes, Marine Licence 1 (Schedule 10), Marine Licence 2 (Schedule 11), Marine Licence 3 (Schedule 12), Marine Licence 4 (Schedule 13) and Marine Licence 5 (Schedule 14) which are draft Deemed Consent (DML) under Part 4 (Marine Licensing) of Marine and Coastal Access Act 2009 (MCAA 2009).

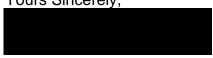
This document comprises of the MMO's Deadline 5 response.

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 Sincerely,



Marine Licencing Case Officer

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1. Comments on Doc Reference Applicant's Draft DCO Tracked Changes

1.1 DCO and DML Major Comments

1.1.1 In response to REP3-045:1.1, the MMO requested an update to include the maximum pile numbers, maximum dredge depth and maximum dredge volumes. The MMO agree with the Applicant that it is not possible to specify at this time and will be assessed at the post consent stage. The MMO considers this matter to be agreed.

1.2 Decommissioning

- 1.2.1 The Applicants note that 'it is the explicit position of Government in the Guidance that the 'Energy Act' (2008) process should form a "one-stop shop" for decommissioning of offshore windfarms. The decommissioning programme which will be required under that Act includes the timing of the decommissioning to be undertaken, securing a limit on the operational life of the windfarm from before construction'. The Applicant accordingly maintains that the DCO does not need to duplicate this regime and should not seek to do so given the clear position of Government that the Energy Act (2008) is the appropriate mechanism for securing and controlling decommissioning.
- 1.2.2 The MMO believes an outline decommissioning plan should be submitted prior to construction.

1.3 Disposal

1.3.1 The MMO are awaiting changes as per previous advice before designating the disposal sites.

1.4 Chemicals

1.4.1 The MMO note that the Applicants have queried "Submissions for approval must take place no later than ten weeks prior to use" as 'The oil and gas standard request is eight weeks', The MMO have requested our standard 10 weeks to allow time for consultation and response.

1.5 Coastal Processes

- 1.5.1 The MMO notes that Applicants disagree with the need to monitor beach recovery due to the removal of the short trenchless crossing at landfall from the ES. The trenchless bore exit pits will not be located on the beach and therefore won't need monitoring. The MMO is currently reviewing this and will provide a response in Deadline 4
- 1.5.2 1.5.2 The MMO welcome changes to the modelling report and will provide comments at Deadline 6

1.6 Repowering

1.6.1 The MMO welcomes the Applicant's agreement on this subject and has no further comments.

1.7 Fisheries

Comments from REP2-061

- 1.7.1 The MMO thanks the Applicants for clarifying that the vessel monitoring system (VMS) data included in the sandeel habitat suitability 'heat' map actually represents 5 years of VMS data (2016-2020), rather than a single year as indicated by the original figure legend. This is appropriate.
- 1.7.2 With regard to REP2-061:19 which relates to the Applicants lack of acknowledgement of the North Sea Sandeel Survey (NSSS) data in the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES). The Applicant's response appears to confuse previous MMO comment that NSSS data should be included in the sandeel habitat suitability 'heat' map. To be clear, the NSSS data should not be included in the 'heat' map as it is not a layer described and assessed within the Kyle-Henney et al., (2024) methodology. Sandeel records in the OneBenthic database are included in the 'heat' mapping methodology but these records present anecdotal evidence of sandeel presence without abundance information. In comparison, the NSSS is a targeted sandeel dredge survey that has been carried out since December 2004 and includes a number of stations in and around the DBS OWFs. This survey represents the best source of abundance data for sandeel in the Dogger Bank region, which is an area of known high importance for sandeel as acknowledged by the Applicant throughout the ES. It was requested early in the application process that the Applicant should consult and present the NSSS data as part of the characterisation of the area around the DBS OWF array for sandeel. Further, the Applicant's comment that the NSSS data are of limited relevance to the DBS OWF because "Three sampling stations are located >10km south of the Offshore Export Cable Corridor but no samples are located within the cable corridor beyond the boundary between the Array Areas and Offshore Export Cable Corridor." This misrepresents the sampling points presented in Figure 1.1 of Appendix A which clearly shows there are indeed three sampling points within 20 Kilometre (km) of the Export Cable Corridor (ECC), but that there are also six sampling points within the DBS OWF array boundary, one sampling point between the diverging ECC routes for the East and West arrays, and another four sampling points within 20km of the array area boundary. Sandeel abundance data for each of these sampling points would have greatly supported the Applicant's characterisation of the area for sandeel. Although the MMO do not believe the presentation of this data at this late stage in the application process will significantly change the outcomes of the assessment, it is disappointing that the Applicant has failed to present this data, despite it being requested several times

Herring and Underwater Noise (UWN) from piling (REP2-061:22- REP2-061:23)

1.7.3 The MMO disagrees with the Applicants statement in REP2-061:22 that "the majority of impact pathways for the Projects relating to Atlantic herring spawning grounds occur within the Offshore Export Cable Corridor". Whilst the MMO is content with the Applicants statement that that there is "some degree of overlap with the Temporary Threshold Shift (TTS) extent for piling activities occurring in the northeastern extent of the potential spawning habitat", as shown by Figure 2.1 in the previous Heat Mapping Report: Atlantic Herring and Sandeel, the UWN contour for behavioural effects in herring (as a result of piling noise) shows significant overlap with the Banks herring spawning ground, and the MMO therefore consider this a significant pathway for

impact. The MMO note that the Applicants have restated their opposition to the use of the 135dB SELss threshold for the purpose of modelling behavioural effects in herring in REP2-061:22. This opposition is noted, however this does not change the fact that the 135dB SELss threshold as defined by Hawkins *et al.*, (2014) represents a precautionary but appropriate threshold for the purpose of modelling behavioural responses in herring at their spawning ground. The MMO's position on this will not change unless the Applicant can produce a compelling and appropriate alternative behavioural response threshold for clupeid fish. Please see points 1.7.33-1.7.37 for further discussion.

- 1.7.4 In response to the Applicants assertion in REP2-061:22 that "for assessing the potential for a significant effect from TTS, the International Herring Larvae Survey (IHLS) data shows that the overlapping potential spawning habitat is not highly productive" as shown by Figure 2.7 of the Heat Mapping Report: Atlantic Herring and Sandeel, the MMO advised previously that the presentation of this figure should be amended so that the data can be more clearly interpreted. As outlined section 1.7 of REP4-115, the main issue with Figure 2.7 is that the Applicant has aggregated 15 years of IHLS data into a single plot which does not fully represent the spatial and temporal fluctuations in herring spawning intensity across the spawning ground over the time period. It is possible for areas of herring spawning grounds where spawning activity was previously low to be recolonised and so it is important to see these data presented as a separate map for each individual year of IHLS data, so that the relative importance of the spawning habitat which underlies the ECC can be clearly examined and assessed.
- 1.7.5 Regarding REP2-061:23, The MMO supports that the Applicants have asserted that "On a precautionary and without prejudice basis, the Applicant have included noise reduction systems, such as Noise Abatements Systems (NAS), within the Projects' procurement strategy as an optional element, allowing the Projects to consider the use of NAS at the earliest point during the procurement process". However, there are a number of issues to consider here. The first is that the Applicant has not provided any modelling indicating what NAS would be considered and what the achievable noise reduction of these systems would be. It is therefore not possible to determine whether the systems employed at the point of construction would be sufficient to minimise noise emissions to within an acceptable level. Currently, this does not provide any evidence to inform a decision to support the Applicant's request for the removal of the recommended piling restriction. In the absence of evidence that a piling restriction is not required, we must apply the precautionary principle and thus recommend piling restrictions are included as licence conditions when the Deemed Marine Licence (DML) is granted.
- 1.7.6 Mitigation measures in the form of licence conditions are recommended for implementation at the consenting stage and are based on the information provided in the Applicant's ES, which is based on the maximum design scenario (MDS). It is commonplace for project design parameters to be refined post-consent, and requests are often made to reconsider whether mitigation measures are still necessary when taking into account the changes that have been made to the project. When this happens, a variation to the marine licence may be requested and new evidence is presented for review, such as revised underwater noise modelling based on the refined project parameters.

1.7.7 Regarding references to under water noise (UWN)arising from UXO clearance activities in REP2-061:23, the MMO is content with the Applicants response.

Herring and habitat destruction from cable laying (REP2-061:24 – REP2-061:28)

- 1.7.8 The MMO note additional temperature data under Appendix A of the response document (Figures 2.1 2.4 and Figures 3.1 3.4) However, the MMO has a number of comments to make on the response provided in REP2-061:24 and REP2-061:27.
 - i. Firstly, it is acceptable to use the 'TempMaxSam' seabed temperature data collected by IHLS surveys in the pre-2017 data, however the Applicant should recognise that the true seabed temperature for these samples may well have been lower than the value recorded as the maximum sample temperature taken from repeated samples.
 - ii. Secondly, it cannot be clearly seen from Figures 2.1 2.4 and Figures 3.1 3.4 of Appendix A what the interannual variation in seabed temperature is as the Applicant has present four figures each for data collected between 2007-2017 and 2018-2023 by categorising the temperature data as being < 12°C (Fig 2.1 and 3.1), 12 12.8°C (Fig 2.2 and 3.2), 12.8 13°C (Fig 2.3 and 3.3), or as > 13°C (Fig 2.4 and 3.4). As explained in section 1.7 of REP4-115, it is not appropriate to present so many years of data in an amalgamated format (such as the Applicant has presented) as this prevents the spatial and temporal fluctuations in seabed temperature across the spawning ground from being examined across the time period. With this in mind, the MMO requests that the Applicant please present the data used to produce Figures 2.1 2.4 and Figures 3.1 3.4 of Appendix A as separate plots for each year of data, with the temperature of each sample point labelled. The current amalgamation of all seabed temperatures as either being < 12°C, between 12 13°C, or > 13°C does not offer enough resolution to support the Applicant's back calculation.
 - iii. It would be helpful for the Applicant to provide a technical note which presents all the data used to underpin the back-calculation referenced in REP2-061:24 so that the back-calculation steps can be checked for accuracy and transparency against the data used to inform their back-calculation.
- 1.7.9 Regarding REP2-061:26, The MMO recognise that a cumulative impact assessment has been undertaken by the Applicant, and that it is for the MMO and PINS as the competent authorities to ensure that significant degradation does not occur to sensitive marine features (in this case the Banks herring spawning ground at Flamborough Head). By implementing a temporal restriction on works which interact with the seabed within the Banks Herring spawning grounds (including seabed preparatory works, cable trenching etc.) during the Banks herring spawning season (1 August 31 October inclusive), uniformly for all projects which wish to deploy infrastructure through the spawning ground, the risk of disturbance to gravid herring engaged in spawning is negated. This would represent a tangible, meaningful step towards more strategic cumulative impact management by the responsible authorities.
- 1.7.10 Regarding REP2-061:28, please see point 1.7.3 on the use of the 135dB SELss threshold defined by Hawkins *et al.*, (2014) for the purpose of modelling behavioural responses in herring at their spawning ground.

1.7.11 Regarding REP2-061:29, the MMO support the Applicant's continued engagement with regards to these issues. It cannot be overstated that what the Applicant is trying to convey in their representations REP2-061:22 to REP2-061:28 is a complex approach to spatial and temporal refinement of the recommended restrictions which requires careful presentation and interpretation of multiple pieces of evidence to ensure that the data has been correctly interpreted and that the various risks to spawning herring, which in the MMO opinion remains at an unacceptable level, have been appropriately managed and suitably mitigated.

Concerns

- 1.7.12 There are several points of concern with the Applicant's response that the recommended herring spawning restrictions are not necessary. Firstly, The Applicant has referenced some seabed temperature data in their responses provided in REP3-028, however these responses are not comprehensive enough for the period of the recommended herring spawning restrictions to be temporally refined at this stage. If the Applicant wishes to carry out a back-calculation approach to accurately temporally refine the recommended restrictions in a way which is supported by appropriate evidence and literature, then they should provide a dedicated technical note which details their calculations. The MMO have provided instructions on how to appropriately carry out the back-calculation approach in points 1.7.14-1.7.28.
- 1.7.13 Secondly, presentation of separate maps for individual years of IHLS larval abundance data for the Banks herring spawning ground are yet to be provided. The MMO have also requested in point 1.7.8ii above that the Applicant should present individual years of seabed bottom temperature data because the current, amalgamated presentations of this data are not fully representative of the spatial and temporal variation in the data. For example, it is possible for areas of herring spawning grounds where spawning activity was previously low to be recolonised and so it is important to see these data presented as separate maps for each individual year of IHLS data so that the relative importance of the spawning habitat which underlies the ECC can be clearly examined and assessed (See point 1.7.29 for detail). As outlined in point 1.7.8 above, the same is true for the seabed bottom temperature data presented in support of the Applicant's request to temporally refine the recommended restrictions for herring. These data will be crucial, along with Particle Size Analysis (PSA) data quantifying the seabed sediment composition along the ECC, if the Applicant wishes to have the recommended restriction on cable laying works in the herring spawning ground spatially refined.

<u>Instructions on the Herring spawning period back-calculation approach</u>

- 1.7.14 Below the MMO have outlined an acceptable approach to determining the 'peak' of herring spawning for the Banks population using a back-calculation approach and have provided an example of my workings. These instructions highlight some key points of understanding concerning North Sea autumn spawning herring reproduction and the IHLS and the Applicant will need to interrogate the data for themselves using a larger temporal dataset (see point 1.7.6), following the steps outlined below.
- 1.7.15 Key points of understanding on herring reproduction:

- i. The Banks herring spawning season is understood to take place from 1st August to 31st October (inclusive) (see Ellis *et al.*, 2012).
- ii. North Sea autumn spawning herring (including the Banks herring population) migrate from north to south during their spawning season and it is widely understood that spawning generally occurs earlier in the spawning season further north (see Cushing & Bridger, 1966; Burd, 1978 and Cushing, 2001), and later in the season further south, as the herring migrate southwards. This is also supported by IHLS data.
- iii. Herring do not arrive at their spawning grounds as one big shoal at the same time, but in 'waves' (Lambert, 1987), spawning across areas of suitable spawning habitat (gravel/coarse substrate).
- iv. The eggs develop for a period of days before hatching. The time taken for eggs to develop is dependent on sea bottom temperatures (see Russell, 1976).
- v. Larvae hatch with yolk-sacs attached which contain nutrients stored in the sac for survival. The newly hatched larvae remain on or close to seabed until their yolk-sacs are absorbed. The time taken for the yolk-sacs to be absorbed is also dependent on sea bottom temperatures (see Russell, 1976).
- vi. When the yolk-sacs have been absorbed, the larvae drift away from the spawning grounds.

1.7.16 Key points of understanding on the IHLS data:

- i. The IHLS is conducted every year across North Sea spawning grounds. The equipment used is a Gulf VII plankton sampler which is towed through the water and samples to a depth of approximately 5metres (m) above the seabed.
- ii. It is important to note that it does not touch the seabed so does not sample eggs, but 'newly hatched larvae'.
- iii. The International Council for the Exploration of the Sea (ICES) which conducts the IHLS classifies 'newly hatched larvae' as those <10-millimetre (mm) for Central North Sea (CNS; Banks) stocks (which is different to the <11m classified for Southern North Sea (Downs) stocks).
- iv. The timing of the IHLS is already clearly targeted to the 'peak' of when the herring larvae will be most abundant. The IHLS survey was originally comprised of three separate surveys which covered the full spawning period but has since been reduced; the full survey extent was originally 1st 15th September (discontinued from 1999), 16th 30th September (ongoing) and 1st 15th October (discontinued from 2004). The survey has been reduced in duration not because the 'peak' period of spawning activity has reduced, but due to temporal and budgetary constraints.
- v. Hence, when attempting to determine the 'peak' of herring spawning activity, we can use IHLS data to establish the period when the newly hatched larvae are most abundant and work backwards from this to establish the period prior to this when spawning would have been most prolific, and the majority of eggs would have been laid.
- vi. Taking this approach requires an element of conservatism, especially given ICES latest advice on North Sea autumn spawning herring (which includes the Banks population) which the MMO have summarised in point 1.7.3 and considering that the most recently available IHLS data for the Banks spawning ground already represented a significantly reduced temporal period.
- 1.7.17 ICES' 2024 advice for herring in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, and eastern English Channel) notes

that a continuous decline in the spawning population of North Sea herring has been observed over recent years. Given their concerns, ICES has proposed a reduction in the fishing quota of 22.5% for North Sea herring (to 412,383 tons in 2025). ICES further advises that no activities that might have a negative impact on the spawning habitat of herring (e.g., extraction of gravel and offshore renewable energy) should occur unless the effects of these activities have been assessed and shown to be non-detrimental. At present, ICES is not fully able to quantify the level and relative impact of cumulative non-fisheries anthropogenic factors on the reproductive capacity of the stock. However, the recommendation highlights the important link between habitat protection and population recovery ICES, 2024).

1.7.18 Key points of understanding on the limitations of performing a back-calculation:

- i. See points 1.7.15i and 1.7.15ii whilst a 'peak' in spawning can be established, it must be remembered that spawning may occur at any time between 1st August and 31st October.
- ii. See points 1.7.15iii and 1.7.15iv egg development and yolk-sac absorption are temperature dependent. Sea bottom temperature data used in the back-calculation is taken from previous years' IHLS surveys so may not necessarily represent sea bottom temperatures for future years.
- iii. See point 1.7.31iv. The central North Sea (CNS) IHLS survey period has already been refined to target the 'peak' of larval abundance (not for biological reasons) so further refinement of a 'peak' period requires careful consideration of an extended IHLS dataset to ensure that any identifiable trends in larval abundance throughout the whole survey period can be identified. For this reason, the Applicant should consider a timeseries of data much longer than the 10 years of data consulted thus far.

1.7.19 Approach to back-calculation:

- i. Start of 'peak' spawning period = start date of the peak of high larval abundance (growth days + no. of days for yolk-sac absorption + no. of days for egg development)
- ii. End of peak spawning period = end of peak larval abundance.
- iii. IHLS data for the years 2003 present should be used following the above approach, as these data are the best available evidence on herring larvae in the CNS.
- 1.7.20 The MMO have outlined the parameters that should be used in the back-calculation below and provided comments on the Applicant's use and interpretation of data under each of these headings:
 - i. IHLS survey timings
 - ii. Larval length in survey sample data
 - iii. Larval length at hatching
 - iv. Duration of egg development
 - v. Duration of yolk-sac absorption
 - vi. Growth rate

1.7.21 IHLS Survey Timings

i. Thus far, the Applicant has consulted IHLS data for the Banks stock for the years 2007-2016 to reflect inter-annual variations in larval abundances in their characterisation. Given the limitation highlighted in point 1.7.18iii, the MMO recommend using a larger temporal range of IHLS data 2003 – present (noting that data for some years during this period may be absent e.g. due to Covid-19). The Applicant can focus on data from survey sample stations relevant to the project area, rather than the entire survey area.

ii. The Applicant will need to interrogate data for this extended period (2003 – present) to determine the full extent of egg laying dates in the CNS.

1.7.22 Larval length in survey sample data

i. For the Banks herring stock, ICES classify newly hatched larvae as those <10mm. We consider it acceptable to use a larval length of 9mm for use in the back-calculation, only on the basis that the majority of larvae caught in IHLS surveys are equal to or less than 9mm in length.

1.7.23 Larval length at hatching

i. IHLS data show hatch sizes of 5mm (minimum) and 6mm in significant quantities. A conservative approach should use the minimum (5mm), though the data should be interrogated by the Applicant independently of this example.

1.7.24 Duration of egg development

ii. The MMO have maintained that using the egg development periods cited in Russell (1976) is appropriate (despite the age of the data which informed this study) because it allows for a range of days to account for variations in egg development periods found in various studies and allowed for variations in parameters such as environmental conditions, the timing of spawning (e.g. spring or autumn), and the anatomical differences between spawning stocks used in the various studies. Thus, the egg <u>development periods in Russell (1976) are suitably conservative – see Table 1.</u> The MMO maintain that the periods specified in Russell (1976) are applicable and should be used in conjunction with sea bottom temperatures from the IHLS data for the nearest sampling locations to the project. The MMO have reviewed the IHLS seabottom temperature presented by the Applicant in Appendix A of their response document and have requested that the seabed bottom temperature data be presented annually in order to be fully examined (points 1.7.13 and 1.7.29). For the purposes of this worked example; assuming that temperatures at sampling stations within herring spawning habitat were between 12 - 13°C and in order to be conservative, we recommend that the maximum number of days is used, in this case 9 days based on the lower temperature of 12°C.

Table 1 Egg development periods periods

Table 2 Yolk absorption

iii. Average temperature	iv. Days	v. Average temperature	vi. Days
vii. 12 - 13° C xi. 10 - 11° C	viii.7-9 xii. 10-12	ix. 12.8° C xiii.12.0° C	x. 3 & 9 xiv.5 & 14
xv. 7 - 8° C	xvi.14-18	xvii. 10.7° C	xviii. 7 &
xix.3 -4° C	xx. 49	xxi.10.3° C	xxii. 7 &

From Russell 1976.

1.7.25 Duration of yolk-sac absorption

i. The duration of yolk-sac absorption was also the subject of the previous discussions. As with the egg development periods, using a range of days to account for variations in yolk-sac absorption development periods is more appropriate and conservative to allow for variations in environmental conditions, the timing of spawning, anatomical differences between spring vs autumn spawning stocks etc, and we maintain that the periods specified in Russell (1976) (Table 2) are applicable and should be used in conjunction with sea bottom temperatures from the IHLS data for the nearest sampling locations to the project (the OWF Array and the ECC). Again, in order to be conservative, we recommend that the maximum number of days is used, in this case 14 days based on a temperature of 12°C.

1.7.26 Growth rate

- i. There are a number of literature sources which provide data on growth rates in herring larvae, however, to the best of my knowledge, only one study contains growth rates based on <u>field observations</u> of <u>North Sea herring</u> larvae. Heath (1993) notes that growth rates estimated from field investigations of North Sea herring larvae have been approximately 0.2 to 0.3 mm d⁻¹. On this basis, I would recommend an assumed larval growth rate of 0.25mm d⁻¹.
- ii. The MMO have provided a worked back-calculation example below, based on the recommended process. The parameters used are considered sufficiently conservative, but not overly conservative, especially given the current state of the stock and ICES' latest advice.
- 1.7.27 Start of 'peak' spawning period = start date of the peak of high larval abundance (growth days + no. of days yolk absorption + no. of days egg development)
 - iii. Start date of peak high larval abundance: *16th September
 - iv. No. of days to grow from hatch length (5mm) to length in survey sample (9mm) at growth rate of 0.25mm d⁻¹: 16 days
 - v. Duration of yolk-sac absorption: 14 days
 - vi. Duration of egg development: 9 days

Start of 'peak' spawning period = 16^{th} September – $(16 + 14 + 9) = 8^{th}$ August.

- *End of peak spawning period = end of peak larval abundance = 1st October.
- * Start and end of peak spawning period assumed for Demonstration Purposes ONLY, the

Applicant should determine these dates from their independent interrogation of the CNS IHLS data for the years 2003 – present*

1.7.28 If the Applicant wishes to carry out a back-calculation approach to <u>temporally</u> refining the recommended herring spawning periods, then they should provide a dedicated technical note which details their calculations following the steps outlined above in the

described sequence. This technical note should be accompanied by a spreadsheet with the raw data the Applicant has drawn on so that their working can be sense-checked for accuracy.

Presentation of the Herring larval data presented annually

- 1.7.29 It was raised in REP2-061 that the Applicant's presentation of 15-years of Banks IHLS data in one plot was not acceptable as it is not easy to determine the relative IHLS larval abundances with the sampling points for different years laid on top of each other. These data would be better presented as separate maps for individual years of data so that the relative importance of the area of spawning habitat which underlies the ECC can be clearly seen. Further clarification of the presentation that was expected was provided in a consultation response query email¹, and provision of this evidence by the Applicant is pending.
- 1.7.30 Please see points 1.7.14-1.7.28 regarding the Applicant's responses to temporally refining the recommended herring spawning restrictions and details of the appropriate back-calculation approach which the Applicant should follow if they wish to use this method. If the Applicant wants to go down the route carrying out of a spawning back-calculation to temporally refine the recommended piling and cable laying restrictions, they should carefully follow the steps outlined under points 1.7.14-1.7.28 and present the evidence requested in full in a dedicated technical note for the MMO to review.
- 1.7.31 The back-calculation approach cannot be used to spatially refine the recommended restrictions. Spatial refinement is only possible for the recommended restriction on cable laying activities in the herring spawning ground, as due to the dispersive nature of impulsive UWN effects it is not possible to spatially refine the recommended piling restriction, unless the Applicant wishes to pursue a spatial zoning approach in their piling programme which will be more labour-intensive during this Examination period than simply committing to implementing noise abatement systems and providing supporting modelling of the mitigated UWN impact ranges. In order to reduce the range of effect from UWN as a result of piling, the Applicant should explore noise abatement options as the current modelled range of UWN-related impacts (physiological and behavioural) relative to the Banks herring spawning ground presented at present is not acceptable.
- 1.7.32 To spatially refine the recommended restriction on cable works along the ECC during the herring spawning season, the Applicant needs to present the requested annual heatmaps of IHLS larval abundance data, along with PSA data quantifying the seabed sediment composition along the ECC with the Kilometre Points (KP) points for the ECC indicated. Mapped PSA data for the ECC should be overlaid over the British Geological Survey (BGS) broadscale sediment data map and can be further supplemented by the addition of PSA data from the Cefas OneBenthic Grab/Core data extraction tool².

	MMO	position of	on 135db	threshold
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- 1.7.33 A key aspect of the UWN modelling for the DBS OWF will be whether the range of noise impact from piling is likely to overlap the herring spawning ground at Flamborough Head and cause disturbance to herring during their spawning season. In this context, the term 'Disturbance' describes the ecological response of herring when affected by UWN pressure arising from piling) and is inherently linked to the physiology and behaviour of herring. In this instance, 'disturbance' of herring as a result of UWN arising from piling produces physiological (TTS etc.,) responses which then influence survivability (e.g., ability to detect predators) as well as behavioural responses (e.g., avoidance of migratory routes due to acoustic barriers) which then influence reproductive success (e.g., ability to reach spawning grounds at the appropriate time and successfully carry out spawning).
- 1.7.34 The criteria for behavioural responses in fish included in the Popper *et al.*, (2014) guidelines are qualitative and broad by nature, owing to the inherent difficulties in quantifying the various ecological and behavioural responses of different fish species to underwater noise at varying distances. As a result, given that these criteria can only be broadly defined, they can neither be considered conservative or unconservative. Furthermore, qualitative behavioural criteria cannot be easily mathematically modelled to illustrate a range of impact. Accordingly, quantitative modelling of UWN impact ranges cannot be done appropriately with qualitative criteria. Determination of the maximum spatial extent of likely behavioural impacts can only be achieved by modelling a quantitative threshold, based on the best available evidence.
- 1.7.35 For the purpose of modelling behavioural responses in herring at their spawning ground, a threshold of 135dB (SELss) is recommended by Cefas Fisheries advisors as a conservative indicator of the risk of a behavioural response, especially for clupeid fishes such as herring. This 135-dB threshold is based on research by Hawkins et al., (2014), who exposed wild schooling sprat to short sequences of repeated impulsive playback sounds at different sound pressure levels, to resemble that of a percussive pile driver. Observed behavioural responses included the break up of fish schools. The sound pressure levels to which the fish schools responded on 50% of the presentations were 163.2 and 163 dB re 1 µPa (peak-to-peak), and as a result the concluded single strike sound exposure level was 135 dB re 1 µPa² ·s. The MMO recognise that this may be a conservative threshold as the Hawkins study was carried out in Lough Hyne, which is an enclosed, quiet coastal sea loch, where fish were not accustomed to heavy disturbance from shipping and other sounds (Hawkins et al., 2014). However, the study species, sprat, are a clupeid species meaning sprat are closely related and anatomically similar to herring, and similarly sensitive to underwater sound (sprats also possess a swim bladder involved in hearing). Given an absence of other peer-reviewed empirical evidence of behavioural responses in clupeid fishes to support an alternative threshold for quantitatively modelling the impact ranges for impulsive noise. Hawkins et al., (2014) is currently considered the best available scientific evidence by Cefas Fisheries and Underwater Noise specialists, and as such 135dB is deemed an appropriate threshold for modelling behavioural responses. Notwithstanding, the MMO would be willing to consider the use of an alternative quantitative threshold for modelling behavioural responses in herring (or a similar clupeid fish), should the Applicant be able to provide one which is based on suitable, peer-reviewed literature.
- 1.7.36 The MMO nonetheless recognise the limitations of this study, for example it is accurate that the 135dB SELss threshold was determined based on sprat schooling in the water

column rather than sprat (or herring) engaged in spawning. However, there is little empirical evidence to indicate how herring (or sprat) engaged in spawning activity may respond to impulsive piling noise. For example, herring *may* display a biological drive to spawn regardless of the UWN disturbance, *however*, it is equally possible that such disturbance may cause herring to abandon necessary migrations to the gravel beds on which they need to spawn in order to escape the disturbance, potentially resulting in reduced spawning success and limited recruitment of herring larvae into the North Sea stock. Limited available research into the behaviour of herring engaged in spawning, has indicated that spawning aggregations gather in high densities over a smaller area of seabed than schooling fish involved in migration or feeding (Nøttestad *et al.*, 1996), and during the period of spawning, herring which have spawned do not disperse but remain in the water column above the demersal spawning aggregation (Axelsen *et al.*, 2000).

1.7.37 In response to the Applicant's comment that the 135dB threshold should not be incorporated into MMO advice for the purposes of EIA as a behavioural threshold based on the cautions provided by (Hawkins and Popper, 2014; Hawkins et al., 2014), The MMO must restate that in the absence of appropriate, empirical evidence indicating that herring will continue to spawn when subject to UWN disturbance, or the production of an alternative threshold or a more sophisticated approach (such as the "distance of effect" reported for in-situ behavioural studies), which is based on suitable, peer-reviewed literature, a precautionary approach, based on the best available, peer-reviewed evidence, should be adopted (ICES, 2003, 2015, 2018). For the reasons given above, we consider that the 135dB (as per Hawkins et al., 2014), although not explicitly perfect, represents a precautionary but appropriate threshold for the purpose of modelling behavioural responses in herring at their spawning ground. Our position will not change unless the Applicant can produce a compelling and appropriate alternative behavioural response threshold for clupeid fish.

1.8 Benthic

- 1.8.1 The nearshore Zone of influence (ZoI) for changes in suspended sediment concentrations due to cable installation has been updated from 14 km to 28 km as modelling work indicated 28 km was the maximum plume extent close to the coast. The maximum plume size in the array area was modelled as 2 km. Therefore, the Applicant considers the application of an offshore 14 km ZoI to be an appropriate approach. While the MMO defer to the relevant specialist advisor regarding the calculation of maximum plume sizes at different levels in the water column and at the different locations (nearshore through to offshore), the MMO consider the approach sound. The MMO note the Applicant proposes no change to the assessment as no further receptors were identified due to the increase in nearshore ZoI (Section 1.1. of the benthic ecology technical note document referenced in paragraph 6).
- 1.8.2 Regarding the Benthic Ecology Technical Note (document referenced in paragraph 6), the MMO defer to the expertise and response of the relevant SNCB regarding potential effects of the project on protected features within designated areas. The MMO note that there is no impact pathway for direct effects on the Holderness Inshore and Holderness Offshore Marine Conservation Zones (MCZs) and the Flamborough Head SAC because of cable installation works. The Applicant predicts that increased suspended sediment concentrations could arise during cable installation, and operation and maintenance activities. However, the increase in ZoI, from 14 km to

- 28 km, did not alter the conclusions of the assessment and the Applicant has confirmed that all subtidal features of the SAC and MCZs "were considered irrespective of their mapped location within the site".
- 1.8.3 The MMO agree with the Applicant's assessment regarding the magnitude of the impact from increased suspended sediment concentrations (SSCs) and that the maximum deposition resulting from trenching is likely to occur in the region immediately adjacent to the activity and outside the MCZs and SAC. The MMO also agree with the Applicant's determination of the significance and magnitude of the effect of SSC on benthic receptors. However, The MMO defer to the relevant SNCB regarding the potential impact of increased SSC on the conservation objectives at the Holderness Inshore and Holderness Offshore MCZs and Flamborough Head SAC.
- 1.8.4 The MMO have no further comments regarding the high-level proposals for benthic sampling in response to Section 1.4 BE.1.12 (document referenced in paragraph 7). The proposal includes relevant grab sampling and seabed imagery acquisition to provide suitable data for comparison with the post-construction condition of the seabed at a subset of locations within the array and export cable corridor. It is the MMO's understanding that details of the proposed post-consent monitoring will be provided for review in advance of survey and the Applicant will consider all relevant guidance, including the MMO post-consent monitoring standards document, due in 2025.

1.9 Coastal processes

- 1.9.1 The Coastal Erosion Technical Note has been updated due to the comments made by Natural England (NE); which requested that the National Coastal Erosion Risk Mapping project (NCERM₂) is added to this document. In summary, concerns were that the beach elevation change data presented was out of date (2008 2015), the use of UK Climate Projections (UKCP18) emission scenario at 50% confidence level was not consistent with the NCERM₂'s use of 70th and 95th percentile confidence levels.
- 1.9.2 Updated erosion rates have been provided (up to 2024) by the applicant and the applicant has included data from the 70th and 95th percentile for emission scenarios. These emission scenarios have been included when predicting cliff erosion rates and the maximum erosion distance for the cliffs. The inclusion of this data does not affect the original assessment due to the commitment to trenchless techniques for cable installation means there should be no significant effect to the Holderness cliffs.
- 1.9.3 The use of the NCERM₂ model has provided erosion estimates that are smaller than the previous methodology of the Leatherman equation (1990) and reported on in Chapter 8 Marine Physical Environment. The MMO agree with this conclusion.

1.10 UWN

1.10.1 The MMO have no further comments to make on Appendix 11-6 Unexploded Ordnance Clearance Information and Assessment (Revision 3) [REP3-012]

1.11 Dropped Objects

1.11.1 The MMO welcome the updates to Condition 13 (10), (11) and (12) and has no further comments.

2. Comments on Applicant's amended application Documents

2.1 General Comments

- i. REP2-018 7.8.8.3 Environmental Statement Appendix 8-3 Marine Physical Processes Modelling Technical Report (Revision 3) (Tracked)
- ii. REP2-026 8.6 Commitments Register (Revision 2) (Tracked)
- iii. REP2-036 8.18 Disposal Site Characterisation Report (Revision 2) (Tracked)
- iv. REP2-040 8.20 Cable Statement (Revision 3) (Tracked)
- v. REP2-042 8.21 Outline Project Environmental Management Plan (Revision 2) (Tracked)
- vi. REP2-044 8.23 In Principle Monitoring Plan (Revision 2) (Tracked)
- vii. REP2-046 8.24 Outline Offshore Operations and Maintenance Plan (Revision 3) (Tracked)
- viii.REP2-048 8.25 Outline Marine Mammal Mitigation Protocol (Revision 3) (Tracked)
- ix. REP2-050 8.26 In Principle Site Integrity Plan for the Southern North Sea Special Area of Conservation (Revision 3) (Tracked)
- x. REP2-052 8.27 Outline Scour Protection Plan (Revision 3) (Tracked)
- xi. REP2-054 8.28 Outline Fisheries Liaison and Co-existence Plan (Revision 3) (Tracked)

2.2 REP2-040 - 8.20 Cable Statement (Revision 3) (Tracked)

2.2.1 The MMO welcomes the updates to this document and has no further comments to add

2.3 REP2-044 - 8.23 In Principle Monitoring Plan (Revision 2) (Tracked)

- 2.3.1 With regard to REP3- 045:2.4 which the MMO have requested:
- 2.3.2 The MMO's current position is that at least two of the first four piles should be the worst-case piles This has changed from previous OWF examinations due to the monitoring being provided on projects in the construction stage highlighting concerns in the predictions made, along with issues raised by the Statutory Nature Conservation Body's (SNCBs). The MMO understands that the Applicant's require flexibility as usually the first four piles are softer sediment to ensure the equipment is working as expected. However, the MMO requires commitment that two of the worst-case piles will be monitored, this may be after the first four piles, but this would allow the predictions to be validated. Or if this is not possible how the ES predictions can be validated fully at the post consent stage. This commitment should be updated within the condition
- 2.3.3 The MMO is currently reviewing the condition wording with SNCBs including the submission date of the data and may suggest updated wording in due course. The MMO welcomes further discussions with the App on this request and how it can be captured within the DML.

3. Remaining DCO/DML comments not agreed with applicant

- 3.1.1 The MMO and the applicant are not in agreement with the following topics: (amend as required)
 - Decommissioning

- Chemicals
- Definitions
- Force Majeure
- 3.1.2 Please see Annex 1 Table 1 for details of all outstanding issues.

4. Response to the Examining Authority's Written Questions (ExQ2) – PD-022

Benthic and intertidal ecology

4.1 BE.2.3:

Report to Inform Appropriate Assessment (RIAA) Habitats Regulations Assessment (HRA) Part 2 of 4 - Annex 1 Offshore Habitats and Annex II Migratory Fish Revision 4

The applicants have submitted an updated RIAA HRA Part 2 of 4 - Annex I Offshore Habitats and Annex II Migratory Fish Revision 4 into the examination at deadline (DL) 4 [REP4-014]. There were considerable updates to section 6.4.2.6.1 physical change (to another seabed / sediment type) of the Dogger Bank Special Area of Conservation (SAC). Please provide any comments you have on this updated section or any other parts of this document.

4.1.1 The MMO welcomes these changes and will defer to Natural England (NE) on matters relating to the HRA.

Commercial Fisheries

4.2 CF.2.1:

The ExA notes your position to not fulfil an arbitration role for commercial fishing receptors commercial negotiations. To provide certainty that the proposed mitigation of adverse effects could be achieved, would you agree to receiving evidence that an agreement has been reached?

- 4.2.1 This would form part of the Fisheries Liaison and Coexistence Plan (FLCP), and agreement would be sought through the discharge process of the FLCP.
- 4.2.2 Where MMO are referenced as an "arbitrator" for the FCLP: The MMO strongly maintains its position that it is made clear within the document that "the MMO will not act as arbitrator and will not be involved in discussions on the need for, or amount of, compensation being issued".

Fish and Shellfish ecology

5.1 FSE.2.4:

Please provide the MMO's opinion on the applicants' use and comparison of Figure 1-2 and Figure 2-2 described above and their relevance to areas of medium and high potential herring spawning areas.

5.1.1 The MMO would like to refer the applicants to point 1.7.8 for further details on figures

5.2 FSE.2.5

Atlantic herring heat map The applicants state in their summary of representations at ISH5 [REP4-086], that the 135dB disturbance threshold is inappropriate to the assessment of herring and dispute the claim that the 135dB limit establishes the best available scientific evidence but rather that it represents preliminary findings to inform a more comprehensive behavioural disturbance metric in future studies and that the greatest range at which an impact should be considered for herring is 186dB. The applicants state further in the same reference that there is no evidence in Hawkins et al. (2014) or Popper et al. (2014) that shows that 135db would have an impact on herring spawning behaviour, going on to state that they do not consider that relying on Hawkins et al. (2014) is appropriate or justified as the authors note themselves that it should not be used in the way purported by the MMO or NE. Please explain the MMO's view of the relevance of the 135dB disturbance threshold and the 186dB TTS threshold. Justify your response explaining what types of behavioural disturbance would likely be experienced over 135dB and how this could impact the existing herring population and spawning rates.

5.2.1 Section 1.7.33 to 1.7.37 of this response explains in detail the MMO's stance on the 135dB threshold.

5.3 FSE.2.7

Worst-case piling locations for herring in responses to questions on this topic at ISH5 [EV10-006] the applicants stated moving the worst-case location modelling location to the south-west corner might move the noise contours further south, so they overlapped less with the preferred substrates to the north on Figure 2-2 [AS-105]. This is based on the assumption that the worst-case noise modelling to produce contours for Figure 2-1 and Figure 2-2 is restricted to two locations only. Should the worst-case noise contour envelopes not be derived from all three locations, the two locations originally modelled and the additional modelling using the south-west location of the array area to produce the worst-case noise envelope contours?

5.3.1 The MMO are currently reviewing this and will provide a response in deadline 6. The Worst-case piling scenario is still based on 2 locations.

5.4 FSE.2.9

Export cable proposed through the Flamborough Head herring spawning ground The ExA is aware of the questions and responses between the applicants and the MMO regarding herring larval abundance mapping and presentation of the density data.

- a) Can you confirm if this issue has now been resolved and if it is satisfied with the quality and presentation of the data regarding herring larval abundance and density submitted into the examination by the applicants at DL4 [REP4-098]. If not, please explain why not.
- b) If so, what is your position on potential impacts of the construction and

installation of the export cable corridor on spawning herring?

- c) What is your opinion on whether the applicants have fully adhered to the mitigation hierarchy on this issue?
- d) Are the applicants' proposed mitigations sufficient and are you satisfied with the way they are secured in the DMLs?
- 5.4.1 The MMO do not believe that this has been resolved, please see points 1.7.8 to 1.7.11 in this response for further details
- 5.4.2 The MMO are currently reviewing questions B, C and D and will provide a response at deadline 6.

5.5 FSE.2.10

The MMO: Please provide your position on the applicants' statements in paragraph 10 on page 8 of the applicants' Fish and Shellfish Response to the MMO [REP4-098] and [paragraph 39 page 26 of the Heat Mapping Report: Atlantic Herring and Sandeel [AS-105]. Please state whether you are in agreement or not with these statements and what impact the export cable construction and installation could have on drifting, developing herring larvae

5.5.1 The MMO are currently reviewing this response and will provide an update at Deadline 6

5.6 FSE.2.12

Potential effects on sandeel and herring populations The ExA would welcome a brief, high level summary of the MMO's, NE's and the applicants' latest positions on the following issues including positions on whether proposed mitigation from the applicants is adequate. Cross references to other documentation submitted into the examination which give the detail would also be helpful.

- a) Potential impacts on fish from underwater noise from piling in the array areas for: i) Herring ii) Sandeel
- b) Potential impacts on fish from construction activity along the export cable corridor through the Flamborough Head spawning ground for: i) Herring ii) Sandeel
- c) Potential impacts on fish from underwater noise from UXO clearance in the array areas and along the export cable corridor through the Flamborough Head spawning ground for: i) Herring ii) Sandeel
- d) Potential effects on fish spawning areas from benthic ecological halo effects associated with above ground structures including cable protection installed on the seabed for: i) Herring ii) Sandeel
- e) Potential effects on fish spawning areas from EMF effects and the localised heating of sediment within the array areas and along the export cable corridor for: i) Herring ii) Sandeel
- f) Potential cumulative effects from the proposed development in combination with other planned projects on: i) Herring ii) Sandeel
- g) Potential long term or permanent effects if cable protection was not removed from the export cable corridor post decommissioning within areas of high very

high potential spawning habitat for: i) Herring ii) Sandeel

5.6.1 The MMO are currently reviewing this response and will provide an update at Deadline 6

5.7 FSE.2.14

Seasonal restrictions for piling in the array areas in relation to potential impacts on herring and sandeel NE has maintained its advice at DL4 that as the behavioural threshold of 135dB SELss (decibel sound exposure level single strike) overlaps a significant area of the high and very high spawning habitat potential sites when piling in the array areas a seasonal restriction on piling may be required and defers to the Centre for Environment, Fisheries and Aquaculture Science (Cefas) for advice on timing on any such restriction. The MMO's DL4 submission states on page 15 that it agrees with NE's conclusions and agrees that a seasonal restriction is needed to reduce population impacts on the Banks Herring population.

- a) What is Cefas's advice on the timing of a potential seasonal restriction for piling in the array areas to reduce the potential impacts on herring and sandeel?
- b) Please update the examination on the latest discussions with the applicants regarding any seasonal piling restrictions if discussions have taken place since ISH5 and DL4 submissions.
- c) During ISH5 the ExA suggested [EV10-006] the applicants and the MMO discuss the herring piling restriction in condition 26 of the Rampion 2 made Order to see whether a similar condition could be used for the DMLs for the proposed development as a way to resolve this issue. Have discussions taken place? Are there any further data you require from the applicants in order to move forward this issue? If so, please specify.
- 5.7.1 The MMO has a requested that within the Banks Herring Spawning ground that there should be a temporal restriction. Please see point 1.7.9 for more information as well as sections 2.2.8 and 2.2.9 in REP2-061
- 5.7.2 Discussions were undertaken on 13 May 2025, The MMO are open to the addition of a herring piling restriction similar to Schedule 11, Condition 26 in Rampion 2:
- 26.— (1) No piling activity can commence within the eastern array area during the herring spawning season until a spawning herring piling restriction plan (in accordance with the outline spawning herring piling restriction plan) containing updated underwater noise modelling has been submitted to and approved by the MMO. The updated underwater noise model must be based on final project parameters to be used to install piles in the eastern array area and must include details of any verified mitigation measures to be employed.
- (2) If the herring spawning plan demonstrates that noise levels associated with piling activity in the eastern array area during the herring spawning season will exceed the levels shown on the spawning herring piling restriction plan then no piling activity may be undertaken within the eastern array area during the herring spawning season without the written approval of the MMO.
- (3) All piling activity within the eastern array area during the herring spawning season must

be undertaken in accordance with the details approved under sub-paragraph (1) or as required as a condition of approval under sub-paragraph (2).

(4) In this condition—

"eastern array area" means the area identified as the eastern array area within the spawning herring piling restriction plan;

"outline spawning herring piling restriction plan" means the plan certified as the outline spawning herring piling restriction plan by the Secretary of State for the purposes of the Order under article 49 (certification of plans and documents etc); and

"herring spawning season" means 1 November to 31 January inclusive.

Marine and Coastal processes

5.8 MCP.2.10

Cable protection licensing Noting the applicants' response in relation to cable protection licensing at ISH5 [REP4-086, paragraph 257], do you consider a change in the lengths to the proposed licensing period from the applicants' proposed 10 years for new cable protection on designated sites could be more appropriate? If yes, explain the suggested lengths and why? In addition, the response states that 'any replenishment would occur on 'lost' habitat so there is no real risk of new harm to licence in this scenario'. However, if there is a period of up to 10 years of no or limited interaction, what are the possibilities of the habitat being restored during that time?

- 5.8.1 It is the MMO's view that the longevity of these projects coupled with the dynamic nature of the marine environment means that it is generally only appropriate to licence at the outset of the project, the scour and cable protection that will be employed during the construction of the wind farm. Any scour and cable protection employed during the construction of the wind farm can be maintained through the Operation and Maintenance plan which is required under the requirements of the DCO/DML.
- 5.8.2 The MMO's view is that any new scour or cable protection which is to be used in areas where no such protection was employed during construction of the wind farm is new scour or cable protection which cannot properly be considered to be the maintenance of the cable and scour protection employed in the construction phase. As a result, any new scour or cable protection must generally be consented through a separate marine licence and not through the O&M plan
- 5.8.3 The licence, if granted, would ordinarily use the same methodology as an Operation and Maintenance plan in that the licence will generally include conditions which will require:
 - i. The MMO's approval for campaigns of protection to be sought 2 months before the anticipated commencement of the works and will require the submission of a report confirming justification for the amounts of protection required as well as details of the location for where, and the method by which, the scour and cable protection will be

employed.

- ii. A requirement to review the suitability of the licence every 5 years which will require the provision of further up to date survey data. Where a marine licence is granted which authorises new scour and cable protection to be employed for up to 10 years, any further marine licences that will be required to authorise scour and cable protection beyond 10 years should be applied for at least 6 months before the current licence expires so as to ensure a smooth transition from one marine licence to another.
- 5.8.4 Where new scour and cable protection is to be employed within a marine protected area in which the marine protected features include benthic habitats, the MMO will generally require a separate marine licence to be in place for each, and every individual campaign of scour and cable protection employed throughout the lifetime of the project.
- 5.8.5 The MMO may in some circumstances consent scour and cable protection in these protected areas where the applicant can show that there is no alternative method available to it to protect the infrastructure in these areas. The MMO generally expects each such application to be supported by a report which sets out a comprehensive assessment of the impacts and which details the justification for no alternative to scour and cable protection.
- 5.8.6 Regarding the possibilities of the habitat being restored the MMO would defer to NE

5.9 MCP.2.11

Flamborough Front The applicants have submitted the 'Review of Flamborough Front Technical Note' [REP4-092] at DL4. a) Do you consider the updated assessment of significance to be appropriate? If not, why not? b) Do you consider the detailed monitoring proposals as explained in the updated In Principle Monitoring Plan (IPMP) [REP4-052] in relation to near-field and far-field monitoring to be sufficient? If not, explain any outstanding requirements. c) Do you agree with the conclusions of the document? If you have any outstanding concerns, explain what they are and how they could be addressed.

5.9.1 The MMO is currently reviewing this document and will provide a response at deadline 6.

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6. Annex 1: Table of DCO/DML comments between MMO and the Applicant. Responding to REP4

	Main DCO		MMO Comments	Applicant Comments	Deadline 5 Comments
1	Part 1 – Preliminary Interpretation (2)(1)	erection or any part of a building, structure or	Please can the Applicant confirm that 'building' does not include any offshore structures, and therefore that the protective works to building schedule does not apply to offshore structures.	The Applicants previously	The MMO welcomes the Applicant's updates and has no further comments.

2	""DBS East Project offshore works" means Work Nos. 1A to 9A and any other authorised development and ancillary works associated with those works. "DBS West Project offshore works" means Work Nos. 1B to 9B and any other authorised development and ancillary works associated with those works.	works 9A and 9B have been included in the offshore works. The works are to provide means of emergency access along the existing beach between Work No. [] to allow for access in the event of accidents and / or environmental incidents. Can the Applicant clarify when these activities will be undertaken (when is it an emergency?), if these works include any marine licensable activities or if the works will impact the environment e.g. abrasion/disturbance to	any marine licensable activities. These elements of the works have been included to afford vehicular access to the intertidal area to allow the clean-up of any drilling fluids which could escape from the bores drilled beneath the beach as part of the trenchless crossing works (e.g. Horizontal Directional Drilling works) at	It is not MMO standard to include areas of non-licensable activities within a marine licence. The MMO understands why these works are included and are reviewing how to capture these. The MMO and the Applicant discussed this on 13 May 2025 and there are ongoing discussions in relation to how this is connected to an activity within the DML. The MMO is hopefully this can be resolved prior to Deadline 7.
6	"MHWS" or "mean high water springs"	a priority habitat. The MMO request the definition is updated to:	This definition is well precedented and commonly	The MMO welcomes the Applicant's update to this definition and have no
	means the highest level that spring		included in DCOs. No change to the Draft DCO	further comments
	tides reach on	(MHWS) is the average	[APP-027] is proposed.	
	average over a	throughout the year, of		
	period of time;	two successive high		
		waters, during a 24-hour period in each month		
		when the range of the		
		when the range of the		

		d to to a fifth or a first		
		tide is at its greatest		
		(Spring tides).		
7	· ·		The Applicants disagree that	Two points still exist:
	,	•	transfers of the DMLs should be	
			regulated by the provisions of	ToB including the DML
	` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '		section 72 of the Marine and	
	of constructing,			The MMO acknowledges the
	maintaining and	Bank South (East)		Applicants comments however still
	operating the DBS	Limited, company	DML is proposed, the SoS would	maintains that reference to the DMLs
	East works and any	reference number	be looking at that in the context	in Article 5 should be removed and
	related ancillary	13656240 and RWE	of all the provisions of the DCO.	therefore the definition updated.
	works, DBSEL; (b)	Renewables UK Dogger	There are some Articles and	Please see section 1.2 in REP2-061
	for the purposes of	Bank South (West)	Requirements relating to	for more information.
	constructing,	Limited, company	offshore matters within the DCO	
	maintaining and	reference number	which overlap with the DMLs. In	2) Company Reference Number
	operating the DBS	13656525,).	that context, it is entirely	(CRN)
	West works and any	In addition, the Applicant	appropriate that the SoS has the	To ensure all parties are aware of who
	related ancillary	should remove 'subject	ability to approve the transfer of	the undertaker is within compliance
	works, DBSWL; and	to article 5' (benefit of	a DML. Article 5(14) confirms	activities the CRN must be included
	(c) in any other	the order).	that section 72(7) and (8)	within this. This is standard on marine
	case, DBSEL and		(variation, suspension,	licences and there is no justification
	DBSWL;	The above updates	revocation and transfer) of the	provided to date why this cannot be
		should also be made to	2009 Act does not apply to a	included.
		the DBSEL and DBSWL	transfer of the DMLs falling	
		definitions.	within Article	
			5. Section 72(7) permits the	
			licensing authority to transfer a	
			marine licence to another	
			person. Section 72(8) provides	
			that "a licence may not be	
			transferred except in	
			accordance with subsection 7".	
			Article 5 however provides for a	
			transfer to take place	
L	<u> </u>	1		<u> </u>

in a different way to section 72(7). Since Article 5 is different from the precise wording of section 72(7) of the 2009 Act it is necessary to specify that section 72(7) only applies to a transfer not falling within Article 5 in order to enable Article 5 to operate. Without specifying this, Article 5 might be claimed to be inoperative because of adopting a different wording from section 72(7).

The Applicants also note that this approach is aligned with "good practice point 11" in the Planning Inspectorate Advice Note 15: drafting Development Consent Orders (2018), which states that "Applicants should give careful consideration to the terms of the transfer Article they include in their draft DCO so as to ensure that it reflects how they envisage the NSIP being operated post-consent and, if possible, avoid potential inconsistencies between how DCO and DML transfer arrangements would operate." The Applicants' approach is intended to ensure that

	T	T	T		T 7
				inconsistencies in the transfer	
				arrangements do not arise.	
8		(7) In this Order	The MMO are discussing	It is noted that the MMO are	The MMO is content with the current
		"includes" must be	this section internally	discussing this sub- paragraph.	wording and has nothing to add at this
		construed without	and will provide further		stage.
			comments in due	wording is well precedented	
			course.	and commonly included in	
		appears.		DCOs.	
		арросто.		200.	
				To address the MMO's request,	
				examples of other offshore wind	
				DCOs where this wording has	
				been included include Hornsea	
				Four, East Anglia One North,	
				East Anglia Two, Norfolk	
				Vanguard and Norfolk Boreas.	
				The Applicants confirm that this	
				wording is included in Article 2 of	
				the Draft DCO (Revision 7)	
				[document reference 3.1] and	
				not in the individual DMLs.	
11	Part 1 –	Please see section	Please see section 3.3 in	For the reasons set out below,	The MMO still maintains that reference
''	Preliminary			_	to the DMLs Article 5 should be
		document for further		the removal of the parts of	removed. Please see Section 1.2 of
	interpretation (3)	information		•	REP2-061 for more information.
		IIIIOIIIIalioii		•	REP2-001 for more information.
				027] requested by the MMO.	
				Paragraph (14) of Article 5	
				disapplies sections 72(7) and	
				(8) of the Marine and Coastal	
				Access Act 2009 in relation to a	
				transfer or grant of the benefit	
				of a Deemed Marine Licence	
				(DML). The drafting is based on	

the Model Provisions and
reflects a long- established
precedent regarding the
transfer of DCO powers and
DMLs that has been endorsed
by the Secretary of State (SoS)
many times, including most
recently in the Sheringham
Shoal and Dudgeon Extensions
DCO. Where a transfer of the
DML is sought under Article 5,
the SoS would consider the
appropriateness of the party to
whom the transfer or grant is
proposed and would also take
into account any
representations made by the
MMO before determining
whether to grant consent,
noting that Article 5
(paragraphs (6) and (9))
includes provisions requiring
notification and consultation
with the MMO where a transfer
or grant of the benefit of a DML
is proposed.
From a procedural perspective,
it is important that the DCO and
any DML can be transferred
together using the process set
out in Article 5. It is considered
important that the timing of any
transfer or grant of powers/
authorisations under the DCO

and a DML be aligned, as there is considerable overlap between the authorisations and the requirements/conditions. This justifies a departure from the procedure under the Marine and Coastal Access Act 2009. Having deemed the marine licence in the DCO, it is also appropriate that any transfer under the Order include the DML as part of the wider transfer- it is one element of the wider order powers and should not be separated out from the authority to construct, operate and maintain the Nationally Significant Infrastructure Project (NSIP) granted by the Order. The PA 2008 is clear that marine licences may be deemed in a DCO in appropriate areas (s149A) and that a DCO may include such further provisions ancillary to the operation of that DML (s122(3)), including transfer of the benefit. Section 122(5)(a) and (c) set out that a DCO may "apply, modify or exclude a statutory provision which relates to any matter for which provision may be made

in the order" or "include any	
provision that appears to the	
Secretary of State to be	
necessary or expedient for	
giving full effect to any other	
provision of the order". The	
ability to transfer a DML is	
related to the deeming, and it is	
therefore a sensible, expedient	
part of the wider power to	
transfer the benefit of the	
order.	
Overall, the drafting of this article	
reflects the equivalent provision	
in recent offshore wind DCOs	
including Hornsea Three, Norfolk	
Boreas, Norfolk Vanguard, East	
Anglia One North, East Anglia	
Two, Awel y Mor, Hornsea Four	
and Sheringham Shoal and	
Dudgeon Extensions. As noted	
above, this article is necessary	
to provide the Applicants with	
the appropriate commercial	
freedom to sell or lease the	
authorised projects while	
ensuring that the SoS can	
control such sale or lease	
through the need to obtain their	
consent.	
15 Part 4 – 36. Please confirm this is for This wording is well The MMO are conto	ent with the
Interpretation —(1) This article onshore works only. precedented and commonly Applicant's explana	ition and is content
applies to— (a) any included in DCOs. that there are no ch	
agreement for	5

leasing to any	As stated in The Applicants'
person the whole or	Reponses to Deadline 2
any part of the	Documents (Revision 1) [REP3-
authorised project or	028] (ID REP2-061:A15): "The
the right to operate	Applicants acknowledge the
the same; and (b)	MMO's comments. The intention
any agreement	of Article 36 is that it would apply
entered into by the	to the onshore elements of the
undertaker with any	Projects. It is not thought that it
person for the	would be necessary for Article
construction,	36 to apply to offshore elements
maintenance, use or	i.e. to an agreement for lease or
operation of the	lease from the Crown Estate.
authorised project,	However, given that the current
or any part of it; so	wording is based on the model
far as the agreement	provisions and well precedented
relates to the terms	in DCOs, the Applicants do not
on which any land	propose to update the drafting.
that is the subject of	
a lease granted by	
or under that	
agreement is to be	
provided for that	
person's use. (2) No	
enactment or rule of	
law regulating the	
rights and	
obligations of	
landlords and	
tenants prejudices	
the operation of any	
agreement to which	
this article applies.	
(3) Accordingly, no	

such enactment or		
rule of law applies i		
relation to the rights		
and obligations of		
the parties to any		
lease granted by or		
under any such		
agreement so as		
to— (a) exclude or		
in any respect		
modify any of the		
rights and		
obligations of those		
parties under the		
terms of the lease,		
whether with respec		
to the termination o		
the tenancy or any		
other matter; (b)		
confer or impose or		
any such party any		
right or obligation		
arising out of or		
connected with		
anything done or		
omitted on or in		
relation to land that		
is the subject of the		
lease, in addition to		
any such right or		
obligation provided		
for by the terms of		
the lease; or (c)		
restrict the		

		enforcement			
		(whether by action			
		for damages or			
		otherwise) by any			
		party to the lease of			
		any obligation of any			
		other party under			
		the lease.			
16	Part 7	43.—(1) Where the	The MMO advises this	This wording is well	The MMO does not agree that 'well
	Miscellaneous	DBS East Project	condition is updated to	precedented and commonly	precedented and commonly included
	and general	offshore works or	say the undertaker must	included in DCOs.	in DCOs' provides enough justification
		any part of them are	ensure they also obtain	Failure to obtain any necessary	for not updating the definition. The
	Abatement of	abandoned or	the necessary		MMO notes that previous DCOs may
	works	allowed to fall into	consents.	1	have similar definitions however the
	abandoned or	decay the Secretary		, ,	MMO believes this should be updated
	decayed	of State may,		•	to the following wording (and similar
		following		to obtain necessary consents	updates to sub-limb (2)):
		consultation with		would be superfluous.	
		DBSEL, by notice in		No change to the Draft DCO	Where the DBS East Project offshore
		writing require		[APP-027] is proposed.	works or any part of them are
		DBSEL at its own			abandoned or allowed to fall into
		expense either to		The Applicants do not believe	decay the Secretary of State may,
		repair, make safe			following consultation with DBSEL
		and restore one or		by the MMO changes the	issue a written notice requiring DBSEL
		any of those works,			at its own expense either to repair,
		or any relevant part		1	make safe and restore one or any of
		of them, or to			those works, or any relevant part of
		remove them and,		,	them, or to remove them and, without
		without prejudice to		[document reference 3.1].	prejudice to any notice served under
		any notice served			section 105(2) (requirement to prepare
		under section 105(2)			decommissioning programmes) of the
		of the 2004 Act,			2004 Act, restore the site to a safe and
		restore the site to a			proper condition, to such an extent and
		safe and proper			

condition, to such ar		within such limits as may be specified
extent and within		in the notice.
such limits as may		in the notice.
be specified in the		
notice.		
(2) Where the DBS		
West Project		
offshore works or		
any part of them are		
abandoned or		
allowed to fall into		
decay the Secretary		
of State may,		
following consultation with		
DBSWL, by notice in		
writing require		
DBSWL at its own		
expense either to		
repair, make safe		
and restore one or		
any of those works,		
or any relevant part		
of them, or to		
remove them and,		
without prejudice to		
any notice served		
under section 105(2)		
of the 2004 Act,		
restore the site to a		
safe and proper		
condition, to such ar		
extent and within		
such limits as may		

		be specified in the notice.			
25	Part 2 Approval of		3.11.1 The MMO has	3.11.1 The Applicants have responded to the MMO's	The MMO notes that this is in relation to Part 2 of Schedule 2 where the MMO is
		` '	comments in Table 1	·	
	matters specified		below. Please find a		not the discharging authority. However,
	•			• •	this is relevant in relation to Condition
	Further	, , ,	summary of the main	require certainty that the	15(5) and maintains their position that a
		discharging authority			determination date should not be
	Information	/	Determination dates:		included.
		further information	The MMO strongly	delay to the delivery of the	The NANAO contracts of the first of a common to contract
			considers that it is	, , , , , , , , , , , , , , , , , , , ,	The MMO welcomes that documents will
			inappropriate to put		be submitted six months before the
			timeframes on complex		intended commencement of licensed
			technical decisions of	,	activities.
			this nature. The time it	conditions for marine licenses	
			takes the MMO to make	issued by the MMO, the MMO	
			such determinations	does aim to make a decision on	
			depends on the quality	most marine licence applications	
		necessary, and the	of the application made,	within 13 weeks of an application	
		requirement	the complexity of the	being validated. It would	
		concerned	issues and the amount	therefore seem reasonable that	
		contained in Part 1	of consultation the MMO	the MMO is able to make a	
		of this Schedule	is required to undertake	decision on the discharge of	
		does not specify that	with other organisations	conditions within a period double	
		consultation with a	to seek resolutions.	that length. The Applicants	
		consultee is		therefore submit that six months	
		required, the	3.11.3 The MMO's	is a reasonable amount of time	
		•	position remains that it is	for the MMO to determine any	
		, , ,	inappropriate to apply a	approvals sought, noting that the	
		· · · · · · · · · · · · · · · · · · ·	strict timeframe to the	provisions of the DMLs	
			approvals the MMO is	(condition 8 on DML 1 and 2,	
			required to give under	condition 6 on DML 3 and 4 and	
		1	the conditions of the	condition 4 on DML 5) do allow	
			DML, given this would	for an alternative timeframe to be	

(3) If the requirement concerned contained in Part 1 of this Schedule specifies that consultation with a consultee is required, the discharging authority must issue the application to the consultee within five working days of receipt of the application and notify the undertaker in writing specifying any further information requested by the consultee within five working days of receipt of such a request. (4) If the discharging authority does not give the notification within the period specified in subparagraphs (2) or (3) it (and the consultee, as the case may be) is

licenses issued under the DCO process and those issued directly by the MMO, as marine licenses issued by the MMO is not subject to set determination the following conditions:

- 8 on DML 1 and 2. condition 6 on condition 4 on DML}
- Pre-construction plans and documentation (condition 15 on DML 1 and 2, condition 13 on
- condition 11 on DML s)
- Site integrity plans (condition 2 and condition 4)

information required. create disparity between agreed between the MMO and the undertaker, which could be utilised in the unlikely event that six months was not sufficient in individual cases.

> 3.11.4 The Applicants welcome the MMO's confirmation that it periods. This applies for does not delay determining whether to grant or refuse such Extension of time approvals unnecessarily. This Periods (condition supports the Applicants' position that six months should be a sufficient amount of time for such DML 3 and 4 and approvals to be considered, noting that an alternative timeframe can be agreed in the unlikely event that six months was not sufficient in individual cases.

> > 3.11.2, 3.11.5 and 3.11.6 The Applicants' position is that the DML 3 and 4 and submission of certain plans for approval at least four months prior to commencement of operation of licensed activities is appropriate and precedented (for 16 on DML 1 and example Hornsea Four and East Anglia One North OWFs). 14 on DML 3 and Notwithstanding that, the Applicants welcome that the MMO is open to discussion on this point and will therefore seek

		T	
deemed to have		to agree the relevant timescales	
		with the MMO and update the	
to consider the	Applicant may wish to	Examining Authority (ExA) once	
application and is	create some certainty	those discussions have taken	
not entitled to	around when it can	place	
request further	expect the MMO to		
information without	·	The Applicants maintain the	
the prior agreement	,	position previously set out in	
of the undertaker.		response to this point (as	
		contained in the column entitled	
	licence, and whilst the	"Applicant Comments" in this row	
	1	25), noting also that the Draft	
		DCO (Revision 7) [document	
		reference 3.1] has been	
		previously updated so that	
		documents will be submitted 6	
	•	months in advance, rather than	
	stresses that it does not	the original 4 months.	
	delay determining		
	whether to grant or		
	refuse such approvals		
	unnecessarily. The MMO		
	makes these		
	determinations in as		
	timely a manner as it is		
	able to do so.		
	3.11.5 The MMO's view		
	is that it is for the		
	developer to ensure that		
	it applies for any such		
	approval (with all		
	information required) in		
	sufficient time as to allow		

1		1	T	,	
			the MMO to properly		
			determine whether to		
			grant or refuse the		
			application. The MMO		
			believes that if time		
			scales are included		
			within the DML for plans,		
			then these should be 6		
			months and not 4		
			months.		
			3.11.6 However, without		
			prejudice to this position,		
			the MMO is open to		
			discussions on which		
			documents should be 6		
			months, and which		
			documents could be 4		
			months, in order to take		
			into account the		
			concerns that the		
			Applicant may have		
0.1.1.1	. 40 0	D IM I .			
	e 10 Schedule 14 -	 Deemed Marine Lic 	ences		
Part 1					
31	Part 1	"authorised			The MMO welcome the Applicant's
			is updated to clarify that		updates.
				Applicants will update paragraph	
	Interpretation				It is for the MMO to designate the
		,	•		disposal sites in conjunction with our
	DML1 - DML5	1 of this marine		the disposal sites once these are	
		licence;		available.	Environment Fisheries and Aquaculture
					Science (Cefas).

					The MMO has received shape files from the Applicants and will work on designating these and provide the reference numbers to be included in Paragraph 4 and Condition 13 (5) as soon as possible.
32	Part 1	"cable protection"	The MMO requests the		The MMO is on this occasion content
			condition wording is	· · · · · · · · · · · · · · · · · · ·	with the Applicant's wording and has no
		protect cables	updated to the below to		further comments on this matter.
	•	3	ensure that the reason	considered that the additional	
				wording proposed by the MMO	
		. ,	being used is clear.	is not appropriate or necessary	
		damage and	•	for the purposes of defining the	
		•	measures for offshore	meaning of "cable protection".	
		of seabed sediment	•	No change to the Draft DCO	
		<u> </u>	where cable burial is not	[APP-027] is proposed.	
		1	possible due to ground	The definition of "achle proceing"	
		placement, concrete mattresses with or	approaching offshore	The definition of "cable crossing" includes "physical protection	
			structures, to protect	measures including cable	
			cables forming part of	protection" and therefore it would	
			the authorised scheme	not work to also include "cable	
		1 0 /	from physical damage	crossing" in the definition of	
			and exposure due to	"cable protection". No updates to	
		,	<u> </u>	the Draft DCO (Revision 7)	
				[document reference 3.1] are	
			to, rock placement,	therefore proposed.	
		p. 3.330.170 0110110,	concrete mattresses with	· · ·	
			or without frond devices.		
			protective aprons or		
			coverings, bagged		
			solutions filled with sand,		
			rock, grout or other		

	1				T
			materials and protective		
			shells;"		
33	activities	of vessels, jacking up of vessels, temporary deposits and temporary wet storage areas;	The MMO would like to remind the Applicant that temporary deposits are still licensable. The Applicant should not undertake temporary deposits that are not licensed under a DML. The MMO request the phrase 'temporary	a discussion with the MMO	The MMO welcome the Applicant's updates and have no further comments.
36	Part 1 Licensed marine activities Interpretation DML1 - DML 5	"MHWS" or "mean high water springs" means the highest level that spring tides reach on	The MMO request the definition is updated to: 'The height of Mean High Water Springs (MHWS) is the average throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest (Spring tides).	This wording is well precedented, and commonly included in DCOs. No change to the Draft DCO [APP-027] is proposed.	Please see row 6 for more information.

39	Part 1 Licensed marine activities Interpretation DML1 - DML 5	"undertaker" means DBSEL and DBSWL;	The MMO request this is updated. Only one company can own the marine licence and be the undertaker. Please also include the company name and registration number.	in the definition of DBSEL and DBSWL. Marine Licence 5 relates to cabling inter-linking the two Projects and would be owned jointly by DBSEL and DBSWL. A separate DML has been included in order to allow for the transfer of these transmission assets to an Offshore Transmission Owner in due course. The Applicants are not aware of any legal restriction preventing a DML being granted to joint undertakers. No change to the Draft DCO	The MMO discussed this with the Applicant on 13/05 and understand that another DML to separate the companies will be included at a later deadline to ensure all other comments on the DML are taking into account for ease. The MMO is content with this approach and will provide confirmation at the final deadline.
47	Drill arisings	DML 1 – Schedule 10 – Works No. 7a (f) DML 2 - Schedule 11 - Works No. 7b (f) DML 3 – Schedule 12 – Works No 7a (f) DML 4 – Schedule 13 – Works No 7b (f)	maximum drill arisings per foundation and maximum volume of		The MMO welcomes the Applicant's comments and has nothing further to add on the matter.

5-9 of Chapter 5 Project turbines 20,106. Large Turbines 26,625 **Description** [APP-071) which are different because Table 5.7 DML 1: 37,917 DML 2: 35,086 relates to arisings generated by DML 3: 2,815 turbine monopile foundations DML 4: 2.815 only, whilst Table 5-9 relates to arisings generated by turbine Please ensure consistency across all jacket foundations only. Each type of foundation could create documentation. In addition, it needs to a different volume of arisings be clear within the DMLs as a worst case, hence different numbers are if the maximum parameters are across presented. all DMLs. The maximum Within the **Draft DCO** [APP-027] the numbers relating to parameters should be arisings presented in Schedule 1 conditioned to ensure the works are within the Part 1 are for each project taken parameters assessed in separately and include both the the ES. worst case or turbine foundation arisings combined with the worst case foundation arisings, plus the worst case foundation arisings from the platforms associated. The numbers relating to drill arisings presented within each DML relate to the worst case arising calculations associated with the infrastructure included within the given licence. For example, DML 1 covers the worst case values for drill arisings from all turbines, plus the worst case values for drill

	1	1	T	T	T
				arisings from the platforms	
				included within that licence	
Part 2 Co	onditions				
48	Design Parameters	DML 1: Condition 1 - Condition 5 DML 2: Condition 1 - Condition 5 DML 3: Condition 1 - Condition 3 DML 4: Condition 1 - Condition 3	The MMO requests the wording of these conditions are updated to ensure they are enforceable by changing 'may' to 'will' or by stating 'must not be higher' etc. for all conditions.	The Applicants acknowledge this comment and will make appropriate updates to the Draft DCO [APP-027] to address the point raised by the MMO and submit an updated Draft DCO [APP-027] for Deadline 1.	The MMO welcome the Applicant's updates however resolved 2 (3) still states "will" and not "must not" this needs to be amended prior to the MMO considering this matter.
51	Phases of the authorised Scheme	DML 1: Condition 6 DML 2: Condition 6 DML 3: Condition 4 DML 4: Condition 4 DML 5: Condition 2	scheme setting out the	The principle of a time period for submission of the written scheme is acceptable to the Applicants. However, the Applicants propose a four month time period is included in the new sub-paragraph (2). The Applicants will update the Draft DCO [APP-027] on this basis. The Applicants will also update the Draft DCO [APP-027] to refer to this scheme as the "Offshore Works Phasing Scheme" and submit an updated Draft DCO [APP-027] at Deadline 1.	

			(3) Any subsequent amendments to the written scheme submitted for approval under sub-paragraph (1) must be submitted to the MMO for approval in writing'.		
			(4) The written scheme submitted for approval under sub-paragraph (1) must be implemented as approved. The approved details shall be taken to include any amendment that may subsequently be approved by the MMO in accordance with sub-paragraph (2).		
			In addition, the MMO note that the Offshore Works Phasing Scheme will be submitted under the related return for this condition at the postconsent stage. This document should be clearly named in the condition.		
53	Extension of Time periods	DML 1: Condition 8 DML 2: Condition 8	The MMO requests this condition is removed	Please see response above. This condition is precedented,	The MMO welcomes the Applicant's updates and has no further comments.

	1	T	T-	T.	
		DML 3: Condition 6	from all the DMLs.	for example within the	
		DML 4: Condition 6	Please see comments	Sheringham Shoal and	
		DML 5: Condition 4	under 3.11.2-3.11.6	Dudgeon Extensions Offshore	
			determination dates.	Wind Farm Order 2024, and	
				the Hornsea Four Offshore	
				Wind Farm Order 2023.	
				No change to the Draft DCO	
				[APP-027] is proposed.	
				[
				The Applicants note that the	
				MMO previously responded to	
				confirm that it was content on the	
				condition remaining but	
				requested a minor amendment	
				to ensure any agreement is "in	
				writing". The Applicants	
				previously updated this wording	
				in the relevant conditions and	
				hope that this matter is now	
				resolved.	
55	Notifications and	DML 1: Condition 9	The MMO request this	This condition is well	The MMO welcomes the Applicant's
	Inspections	(1) (b)	section of the condition	precedented, and commonly	updates and has no further comments.
		DML 2: Condition 9	is removed. It is the	included in DCOs.	·
		(1) (b)	undertaker's	No change to the Draft DCO	
		DML 3: Condition 7	responsibility to notify	[APP-027] is proposed.	
		(1) (b)	the MMO. This is		
		DML 4: Condition 7	reflected in the updated	The Applicants note that	
		(1) (b)		amendments have been made to	
		DML 5: Condition 5	provided above.	the relevant conditions	
		(1) (b)		previously in order to seek to	
				address the MMO's concerns	
				and hope that this matter is now	
				resolved.	

I=0	D141 4 0 11/1 0		T. D. (1 D.C. 14 D.D. 00-1	
56	DML 1: Condition 9	The MMO should be	The Draft DCO [APP-027]	The MMO has requested that this
	(6)	notified upon	provides for five days prior	notification is 14 days to allow enough
	DML 2: Condition 9	commencement and	notice of commencement of	time for the MMO local office to prepare
	(6)	completion of any part of	licensed activities, rather than	for any compliance inspections. Anything
	DML 3: Condition 7	The state of the s	the 14 days requested by the	shorter would not allow the team enough
	(6)	particularly when works	MMO.	time to review the entire DM/.
	DML 4: Condition 7	are being undertaken in	Five days' notice is well	
	(6)	phases. The MMO	precedented, and no change to	The MMO does not agree with the five-
	DML 5: Condition 5	requests the condition is	the Draft DCO [APP-027] is	day time period and require the 14 as
	(6)	updated to:	proposed.	requested.
		(6) The undertaker must		
		inform the MMO Local		The MMO discussed this with the
		Office in writing at least		Applicants on 13 May and will continue
		14 days prior to the		to engage in this matter.
		commencement of the		
		licensed activities or any		
		part of them including		
		providing a programme		
		of works for future		
		activities and within five		
		days of the completion of	-	
		the licensed activities or		
		any part of them.		
58	DML 1: Condition 9	The MMO notes that the	This condition is well	On this occasion the MMO is content
	(8)	notice to mariners are	precedented, and commonly	to agree with the condition.
	DML 2: Condition 9	only for works numbers	included in DCOs. The	
	(8)	1A to 8A and 1B to 8B.	condition requires notification	
	DML 3: Condition 7	Can the Applicant	prior to the commencement of	
	(8)	confirm why this is not	the authorised scheme or any	
	DML 4: Condition 7	for the other works	part thereof.	
	(8)	undertaken under each	No change to the Draft DCO	
	DML 5: Condition 5	DML?	[APP-027] is proposed.	
	(8)			
	(8)			

59	DML 1: Condition 9	The MMO requests the	This condition is precedented	On this occasion the MMO is content
	(9)	words '(unless otherwise	within the Sheringham Shoal	with the condition and welcomes the
	DML 2: Condition 9	agreed)' is removed from	and Dudgeon Extensions	updates to date.
	(9)	this condition.	Offshore Wind Farm Order	
	DML 3: Condition 7		2024.	
	(9)		The Applicants consider this	
	DML 4: Condition 7		flexibility is helpful to allow the	
	(9)		option for the Applicants and	
	DML 5: Condition 5		the MMO to agree weekly	
	(9)		notifications are not required in	
			certain circumstances, such as	
			during period of the	
			construction period when the	
			on-going construction activities	
			are not changing from week to	
			week.	
			This wording requires	
			agreement with the MMO, and	
			therefore the default position is	
			that the undertaker will be	
			required to provide weekly,	
			unless the MMO is satisfied it is	
			unnecessary.	
			No change to the Draft DCO	
			[APP-027] is proposed.	
			The Applicants have previously	
			made the amendments	
			suggested at Deadline 2 by the	
			MMO and hope that this matter	
	DAM 4 O PH C		is now resolved.	T. 100
60	DML 1: Condition 9	This condition states the		The MMO welcomes the Applicant's
	(10)	1	precedented, and commonly	updates and has no further comments.
	DML 2: Condition 9	the UK Hydrographic	included in DCOs.	

	(4.0)	Office (1110110) of the	No shows to the Duett DOO	
	(10)	,	No change to the Draft DCO	
	DML 3: Condition 7	progress of construction.	[APP-027] is proposed.	
	(10)	The Applicant should		
	DML 4: Condition 7	clarify the reporting		
	(10)	timeframe and what		
	DML 5: Condition 5	progress (stages) will		
	(10)	require a notification. If		
		this is agreed in a plan,		
		this plan should be		
		referenced and the		
		condition the plan will be		
		approved under.		
		The MMO is reviewing is		
		content with this		
		remaining as the MMO		
		believes that the		
		progress will include		
		weekly updates.		
		, ,		
		The MMO requests that		
		the condition is updated		
		to change fourteen days		
		to ten days to ensure the		
		information is as up to		
		date as possible. This		
		has been agreed with		
		MCA		
62	DML 1: Condition 9	•	The Draft DCO [APP-027)	The MMO has requested that this
	(13)		provides for five days prior	notification is 14 days to allow enough
	DML 2: Condition 9	days prior to the	notice of commencement of	time for the MMO local office to prepare
	(13)	commencement'	cable repair, replacement, or	for any compliance inspections. Anything
	DML 3: Condition 7	In addition the condition	protection replenishment	shorter would not allow the team enough
	(13)	should clearly define	activity, rather than the 14 days	time to review the entire DML.
	DML 4: Condition 7	repair, replacement, and	requested by the MMO.	

		(40)		Fire develoption is non-contented	The MMO deep met assess with the five
			protection replacement.		The MMO does not agree with the five-
			This should be defined		day time period and require the 14 as
		\ /	under maintain and		requested.
			linked to the Outline	No change to the Draft DCO	
			Offshore Operations and	l-	The MMO discussed this with the
		must notify the MMO			Applicants on 13 May and will continue
		in writing a minimum	,		to engage in this matter.
		of 5 days in advance	assessed in the		
		of the	Environmental		
		commencement of	Statement. We consider		
		each discrete	that these works should		
		incident of cable	be restricted to those		
		repair, replacement,	that have been assessed		
			and consented and the		
		replenishment	definition should clearly		
			demonstrate this.		
63	Colouring of	DML 1: Condition	The MMO recommend	The Applicants acknowledge	The MMO welcome the Applicant's
	Structures		the wording is updated		updates to this condition which was
		DML 2: Condition	to:		agreed with Trinity House and has no
		11	The undertaker must		further comments to make.
		DML 3: Condition 9	paint all structures	raised by the MMO and submit	
			forming part of the	an updated Draft DCO [APP-	
			authorised scheme	027] for Deadline 1.	
				The Applicants have updated the	
			`	Draft DCO (Revision 7)	
			to the height agreed in	[document reference 3.1] with	
			writing with Trinity	the wording that has been	
			House. The undertaker	agreed between the MMO and	
				Trinity House and so hope that	
			of the structures grey	this matter is now resolved	
			(colour code RAL 7035).	and matter is now reserved	
			Requests to change the		
			colouring of the structure		
			must be submitted to the		
			musi de submilled lo lhe		

			MMO in writing and must		
			not be undertaken		
			unless approved in		
			writing by the MMO'.		
64	Aviation Safety		The MMO requests this		The MMO generally prefer this
				precedented, and commonly	condition to be removed as it relates to
		DML 2: Condition	included in the DCO as	included in DCOs.	different legislation and is usually
			the Defence	No change to the Draft DCO	covered within the DML however on
		DML 3: Condition	Infrastructure	[APP-027] is proposed.	this occasion the MMO are content to
		10	Organisation		leave it in.
		DML 4: Condition	Safeguarding and Civil		
		10	Aviation Authority can		
		DML 5: Condition 8	review this through the		
			DCO requirements.		
65	Chemicals,	DML 1: Condition 13	The MMO note the	The Applicants note that the	The MMO and the Applicant had a
	drilling and			MMO is considering this further.	meeting on 13 May to discuss this
	debris		for the Prevention of		matter in more detail including the
		` '	Pollution from Ships	The Applicants are considering	background and 10 week submission
					timeline requirement and will continue
			chemicals used by the	•	to discuss this to try to come to an
		DML 4: Condition 11	offshore wind industry.		agreement.
		(1)		meeting that has been arranged	
				for 13th May 2025, as the	
				Applicants have a query on the	
			will provide further	proposed wording for the MMO	
			comments in due	to clarify. The Applicants will	
			course.	provide a further update after the	
		the MMO, the		meeting has taken place.	
		carriage and use of			
		chemicals in the			
		construction of the			
		authorised scheme			
		must comply with			
		the International			

	Convention for the			
	Prevention of			
	Pollution from Ships			
	1973 as modified by			
	the Protocol of 1978			
	relating thereto and			
	by the Protocol of			
	1997."			
66	DML 1: Condition 13	The final design of the	l • •	The MMO provided comments in
	(2)	frond mattresses will be	stated in the Outline PEMP	section 1.4 of REP3-045.
	DML 2: Condition 13	detailed in the offshore	[APP-245] that all chemicals	
	(2)	construction method	used (including paints) would	The MMO and the Applicant had a
	DML 3: Condition 11	statement that will be	be certified for use in the	meeting on 13 May to discuss this
	(2)	submitted to and	marine environment (unless	matter in more detail including the
	DML 4: Condition 11	approved by the MMO	otherwise agreed with the	background and 10 week submission
	(2)	prior to commencement	MMO) to ensure that there	timeline requirement and will continue
	DML 5: Condition 9	of development. It	would be no risk anticipated to	to discuss this to try to come to an
	(2)	should also be noted	arise from normal operations of	agreement.
		that any paints coatings	the Projects. The Applicants	
	must ensure that	and chemicals with a	submit that the control afforded	
	any coatings and	pathway to the marine	to the MMO for the use of any	
	treatments are	environment should be	chemicals (including paints) not	
	suitable for use in	approved by the MMO	certified for use in the marine	
		prior to use. Part 2	environment through the	
	environment and are	section 7 also allows the	Outline PEMP [APP-245] and	
			any final PEMPs is sufficient.	
	with guidelines	maintain the authorised	As such no change to the Draft	
	approved by the	scheme at (c) allows for	DCO [APP-027] is proposed.	
	Health and Safety	"Painting and applying	The PEMPs will cover both the	
		other coatings to wind	construction and operational	
		_	phases of the Projects	
		offshore accommodation	ĺ	
			The Applicants are considering	
		ļ.	the wording suggested by the	

	Coatings and paints under OSPAR guidance should have their properties known and therefore should be notified to the MMO for approval prior to use. Therefore, the condition 13 (2) wording should be amended to reflect OSPAR guidance. MMO and plan to discuss it with the MMO at an upcoming meeting that has been arranged for 13th May 2025, as the Applicants have a query on the proposed wording for the MMO to clarify. The Applicants will provide a further update after the meeting has taken place.
68	DML 1: Condition 13 The Applicant should state the name of the DML 2: Condition 13 (5)

39	Force Majeure	DML 1: Condition	The MMO request that	This condition is well	The MMO notes this is likely to be not
39	roice majeure		•		The MMO notes this is likely to be not
		14 DML 2: Condition	,	precedented, and commonly included in DCOs.	agreed by the end of Examination. The
					MMO's position is detailed in REP2-
		14		The Applicants do not agree	061 Section 1.3
		DML 3: Condition		that this wording is not	
		12		necessary. Section 86 provides a	
		DML 4: Condition	_	defence for actions taken in an	
		12		emergency, whereas this	
		DML 5: Condition	-	condition is about notifying the	
		10		MMO of a deposit made in	
				those circumstances. It does	
			any licence conditions.	not overlap with Section 86,	
			The defence under	which will still apply.	
			Section 86 of MCAA has	No change to the Draft DCO	
			two limbs, and in the	[APP-027] is proposed.	
			event that the undertaker		
			fails to notify the		
			appropriate licensing		
			authority, in this case the		
			MMO, within a		
			reasonable time of their		
			actions (Section 86(2)		
			"matters") the defence		
			cannot be relied upon in		
			the event of any		
			enforcement action.		
77	Pre-construction	DML 1: Condition 15		As a variety of sediment types	Please see row 68 above for more
	plans and	(3)		are present on the Dagger	information regarding dredging and
		` '		Bank, the Applicants believe	disposal. The MMO is reviewing this
	documentation	(3)	•	that stipulating material to be	condition and is working on
		DML 3: Condition 13			designating the disposal sites and will
		(3)		same material type cannot be	provide more information in Deadline 6
			•	guaranteed and would be	provide more information in Deadline o
		(3)	•	difficult and onerous to apply in	
		(S)	piaie iliai uleuyeu	princuit and onerous to apply in	

DML 5: Condition 11 material is disposed on reality. Dredging, particularly the same material type. for the linear aspects of the 'Any sediment This is to prevent Projects such as the subsea removed from within dredged material being cable installations, may occur the Dogger Bank deposited on sensitive over a variety of sediment Special Area of habitats. types to allow installation to Conservation during occur. The resultant mixed construction of the 'Any sediment removed cargo could not be disposed of from within the Dogger on any single, specific material authorised scheme must be disposed of Bank Special Area of type. Hence, compliance Conservation during with such a condition would within that part of the Dogger Bank construction of the require the dredge, transit and Special Area of authorised scheme must deposition of very high Conservation which be disposed of within numbers of potentially very falls within the Order that part of the Dogger limited cargoes of specific limits'. Bank Special Area of sediment types for specific Conservation which falls disposal on patches of that within the Order limits. same sediment type. The dredge, transit and disposal Material to be disposed must be placed on the and the 'stop-start' nature of same material type'. dredging mean that this would This is so that all be highly time consuming and inefficient. Given the practical requirements regarding the location of the difficulties associated with this material to be disposed request, the Applicants do not is clearly written within agree that this should be added the same condition. The las conditions of the DMLs. disposal site must also be named within the condition. The MMO recommend a disposal site is designated for the disposal within the SAC

		to along the sine and the		
		to clearly signpost the		
		area.		
		TI - NANAO in a diamanta		
		The MMO is working to		
		designate the disposal		
		sites and will provide an		
		update in due course		
79	DML 1: Condition 15		• •	Please see comments in row 25 above.
	(5)	is removed. It is not	responded to the MMO's detailed	
	DML 2: Condition 15	appropriate for the	comments in Table 1 below and	
	(5)	determination times to	3.11.3 The Applicants require	
	DML 3: Condition 13	be conditioned. The	certainty that the discharge of	
	(5)	MMO set their own	conditions under the DMLs will	
	DML 4: Condition 13	timescales, and this is	not cause undue delay to the	
	(5)	dependent upon the	delivery of the Projects. The	
		quality of the submission	Applicants note that, whilst the	
	(5)	and the availability of	MMO is not subject to set	
	The MMO must	primary advisors, see	determination periods for the	
	determine an	comments 3.11.2-3.11.6	discharge of conditions for	
	application for	for determination dates.	marine licenses issued by the	
	approval made		MMO, the MMO does aim to	
	under condition 11	In addition, the Applicant	make a decision on most marine	
	within a period of six		licence applications within 13	
		wrong condition within	weeks of an application being	
	on the date the	the text.	validated. It would therefore	
	application is		seem reasonable that the MMO	
	received by the		is able to make a decision on the	
	MMO, unless		discharge of conditions within a	
	otherwise agreed in		period double that length. The	
	writing with the		Applicants therefore submit that	
	undertaker.		six months is a reasonable	
	diadian		amount of time for the MMO to	
			determine any approvals sought,	
			noting that the provisions of the	
			proung that the provisions of the	

	DMLs (condition 8 on DML 1 and
	2, condition 6 on DML 3 and 4
	and condition 4 on DML 5) do
	allow for an alternative timeframe
	to be agreed between the MMO
	and the undertaker, which could
	be utilised in the unlikely event
	that six months was not sufficient
	in individual cases.
	in individual cases.
	3.11.4 The Applicants welcome
	the MMO's confirmation that it
	does not delay determining
	whether to grant or refuse such
	approvals unnecessarily. This
	supports the Applicants' position
	that six months should be a
	sufficient amount of time for such
	approvals to be considered,
	noting that an alternative
	timeframe can be agreed in the
	unlikely event that six months
	was not sufficient in individual
	cases.
	3.11.2, 3.11.5 and 3.11.6 The
	Applicants' position is that the
	submission of certain plans for
	approval at least four months
	prior to commencement of
	operation of licensed activities is
	appropriate and precedented (for
	example Hornsea Four and East
	Anglia One North OWFs).
	Anglia One North Ovir 3).

			Notwithstanding that, the Applicants welcome that the MMO is open to discussion on this point and will therefore seek to agree the relevant timescales with the MMO and update the Examining Authority (ExA) once those discussions have taken place. The Applicants will amend cross-references within this sub-paragraph and submit an updated version of the Draft DCO [APP-027] at Deadline 1.	
82	DML 1: Condition 17 DML 2: Condition 17 DML 3: Condition 15 DML 4: Condition 15	and condition 17 (DML1) are combined, and this update is also reflected within the other DMLs listed. The MMO also request	The Applicants' preference is not to combine these two conditions, as changes to condition numbering would have an impact on cross-references to DML conditions in a number of other application documents. In relation to sub-paragraph (2), please see response to RR-030=3·11 above.	Please see comments in row 25 above.

89	Construction	DML 1: Condition 21	The MMO will keep a	The Applicants acknowledge the	The MMO discussed this point further
OS	monitoring and surveys	(4) DML 2: Condition 21	watching brief on this condition as there are ongoing internal discussions.	MMO's response.	with the Applicant on 13 May 2025 and advised that there was no update with the SNCBs. The MMO requested if it could not be updated within the condition on this occasion the MMO could accept a commitment to discuss the monitoring requirements post consent – specifically which piles to monitor once the design is finalised.
					The MMO would also add if noise reduction measures are used further monitoring may be required and this will be discussed through the IPMP.
90			•		The MMO position is always that the
					condition sets out a process for
		(8) DML 2: Condition 21		•	adaptive management as a standalone
		(8)	within this condition.	allow consideration of drafting.	condition.
		DML 3: Condition 19	The MMO is requesting	The need for further monitoring	Further discussions with the Applicant
					on 13 May 2025 led to a potential
		DML 4: Condition 19	more proactive process	section 1.4 of the In Principle	agreement with the IPMP being
		(8)	to manage issues, in	Monitoring Plan (Revision 3)	updated further with a process of what
		DML 5: Condition 15	the event that post	[document reference 8.23] which	·
		(5)		, ,	management is required. This is an
			shows a greater impact		ongoing area of discussion.
				monitoring work should be	
			the Environmental	finalised and agreed following	
				review of the results of any	
			, , ,	preceding survey and / or	
				monitoring work (i.e. an adaptive	
			offshore wind farms.	monitoring approach), including	
				those surveys conducted in	

The additional support of the EIA. This includes conditions ensure that the potential for survey all parties are clear requirements to be adapted based on the results of the what is required if the monitoring shows monitoring outlined in this higher impacts than document, including in the event predicted during the that unforeseen effects arise, assessment stage. It which may in turn give rise to the also allows the need for adaptive management Applicant themselves to measures to be considered. provide potential Where it has been agreed that solutions when there are no significant effects, reviewing the results of monitoring need not be monitoring, to then be conditioned through the DMLs." discussed with the The Applicants maintain that MMO and SNCBs. there is no need for any further provision in the Draft DCO The aim of the (Revision 7) [document condition is to provide a reference 3.1] in this regard. clear process to the Applicant, the MMO and any consultees if, in preparing the monitoring reports, the Applicant identifies greater impact that the Environmental Statement (ES) predicted rather than a report being submitted and then a discussion having to take place

upon

	T	T		<u>, </u>
		review/consultation of		
		the reports.		
		The MMO notes that if		
		impacts are higher than		
		predicted, the MMO		
		can utilise Section 72 of		
		2009 Act and vary the		
		marine licence to		
		request Adaptive		
		Management but		
		believes the addition of		
		this condition gives a		
		clear process to all and		
		allows for proactive		
		management by the		
		Applicant, rather than		
		reactive management		
		by the MMO.		
94	New subsection	The MMO requests that	The Applicants would request	Please see comments above in line
	DML 1: Condition 22		·	90.
	(6)		detail on this point, in order to	
		within this condition	allow consideration of drafting.	
	(6)			
	DML 3: Condition 20			
	(6)			
	DML 4: Condition 20			
	(6)			
	DML 5: Condition 16			
	(6)			