DBS Offshore Wind

RWE Renewables UK Dogger Bank South (West) Limited

RWE Renewables UK Dogger Bank South (East) Limited

Dogger Bank South Offshore Wind Farms

The Applicants' Written Summary of Oral Submissions made at ISH6

Submission for Deadline 6

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Company:	**RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited**	Asset:	**Development**
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Glossary

Term	Definition
Agricultural Land Classification (ALC)	Agricultural Land Classification is a grading system used to assess and compare the quality of agricultural land in England and Wales. A combination of climate, topography and soil characteristics and their unique interaction determines the grade of the land. The grades range from 1 to 5. Grade 1 being excellent, Grade 2 very good, Grade 3a and 3b good to moderate (no subdivide), Grade 4 poor and Grade 5 very poor.
Clay	Fine-grained sediment with a typical particle size of less than 0.002mm.
Development Consent Order (DCO)	An order made under the Planning Act 2008 granting development consent for one or more Nationally Significant Infrastructure Project (NSIP).
Dogger Bank South (DBS) Offshore Wind Farms	The collective name for the two Projects, DBS East and DBS West.
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the value, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Environmental Statement (ES)	A document reporting the findings of the EIA and produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations.
Gravel	Loose, rounded fragments of rock larger than sand but smaller than cobbles. Sediment larger than 2mm (as classified by the Wentworth scale used in sedimentology).
Haul Road	The track along the Onshore Export Cable Corridor used by traffic to access different sections of the onshore export cable route for construction.
Horizontal Directional Drill (HDD)	HDD is a trenchless technique to bring the offshore cables ashore at the landfall and can be used for crossing other obstacles such as roads, railways and watercourses onshore.
Impact	Used to describe a change resulting from an activity via the Projects, i.e. increased suspended sediments / increased noise.

Term	Definition
In Isolation Scenario (not In-Isolation)	A potential construction scenario for one Project which includes either the DBS East or DBS West array, associated offshore and onshore cabling and only the eastern Onshore Converter Station within the Onshore Substation Zone and only the northern route of the onward cable route to the proposed Birkhill Wood National Grid Substation.
Jointing Bays	Underground structures constructed at regular intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
National Policy Statement (NPS)	A document setting out national policy against which proposals for NSIPs will be assessed and decided upon.
Onshore Export Cable Corridor	This is the area which includes cable trenches, haul roads, spoil storage areas, and limits of deviation for micro-siting. For assessment purposes, the cable corridor does not include the Onshore Converter Stations, Transition Joint Bays or temporary access routes; but includes Temporary Construction Compounds (purely for the cable route).
Order Limits	The limits within which the Projects may be carried.
Outline Onshore Written Scheme of Investigation (WSI)	Project specific document forming the agreement between the Applicants, the appointed archaeologists, contractors and the relevant stakeholders landward of MHWS. The document sets out the methods to mitigate the effects on all the known and potential archaeological receptors within the Hornsea Four onshore Order Limits.
Preliminary Environmental Information Report (PEIR)	Defined in the EIA Regulations as information referred to in part 1, Schedule 4 (information for inclusion in environmental statements) which has been compiled by the applicants and is reasonably required to assess the environmental effects of the development.
Sand	Sediment particles, mainly of quartz with a diameter of between 0.063mm and 2mm. Sand is generally classified as fine, medium or coarse.
Special Area of Conservation (SAC)	Strictly protected sites designated pursuant to Article 3 of the Habitats Directive (via the Habitats Regulations) for habitats listed on Annex I and species listed on Annex II of the Directive
Temporary Construction Compound (TCC)	An area set aside to facilitate construction of the Projects. These will be located adjacent to the Onshore Export Cable Corridor and within the Onshore Substation Zone, with access to the highway.
The Applicants	The Applicants for the Projects are RWE Renewables UK Dogger Bank South (East) Limited and RWE Renewables UK Dogger Bank South (West) Limited.

Term	Definition
	The Applicants are themselves jointly owned by the RWE Group of companies (51% stake) and Masdar (49% stake).
The Projects	DBS East and DBS West (collectively referred to as the Dogger Bank South Offshore Wind Farms).
Vehicle (HGV, Traffic) trips	A vehicle movement (i.e. the arrival or departure from site) for the transfer of employees or delivery of goods.

Acronyms

Term	Definition
AEP	Annual Energy Production
ALC	Agricultural Land Classification
BMV	Best and Most Versatile
CfD	Contracts for Difference
CNS	Communications, Navigation and Surveillance
DB	Dogger Bank
DBA	Dogger Bank A
DBB	Dogger Bank B
DBC	Dogger Bank C
DBS	Dogger Bank South
DESNZ	Department for Energy Security and Net Zero
ERYC	East Riding of Yorkshire Council
ES	Environmental Statement
ExA	Examining Authority
GDBA	Geoarchaeological desk-based assessment
HAP	Humber Archaeology Partnership

Term	Definition
ISH	Issue Specific Hearing
MOD	Ministry of Defence
NDA	Non-Disclosure Agreement
NPS	National Policy Statement
OCoCP	Outline Code of Construction Practice
OLMP	Outline Landscape Management Plan
PEIR	Preliminary Environmental Information Report
SAC	Special Area of Conservation
SoS	Secretary of State
TCC	Temporary Construction Compound
TCE	The Crown Estate
WSI	Written Scheme of Investigation

1 Introduction

1. This note summarises the submissions made by RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited ('the Applicants') for Dogger Bank South (DBS) East and DBS West (collectively referred to as the 'Projects') at Issue Specific Hearing 6 (ISH6) on 5th June 2025. This document does not purport to summarise the oral submissions of parties other than the Applicants; summaries of submissions made by other parties are only included where necessary in order to give context to the Applicants' submissions.

2. Updates or responses to action points will be addressed in the response to ISH6 actions documents to be submitted at Deadline 6 in **The Applicants' Responses to June 2025 Hearing Action Points** [document reference 16.8].

2 The Applicants' Summary of Oral Submissions made at ISH6

2.1 Wake Loss

3. The Applicants are currently in technical discussions on wake effects with the DB Projcos (Dogger Bank Offshore Wind Farm Project 1 Projco Limited, Dogger Bank Offshore Wind Farm Project 2 Projco Limited and Dogger Bank Offshore Wind Farm Project 3 Projco Limited) and have a meeting arranged for Tuesday 10th June 2025. The discussion will relate to the technical aspects of the two wake assessments submitted and the mitigation submissions made by the Applicants at D4 [REP4-099] and any additional mitigation measures the DB Projcos believe the Applicants should be considering. The Applicants expressed surprise that they had not received a substantive response to these important submissions at Deadline 5.

4. The Applicants are also arranging a further technical meeting with the Ørsted IPs (Hornsea 1 Limited, the collective of Breesea Limited, Soundmark Wind Limited, Sonningmay Limited and Optimus Wind Limited, Orsted Hornsea Project Three (UK) Limited, Orsted Hornsea Project Four Limited, Lincs Wind Farm Limited, Westermost Rough Limited and Race Bank Wind Farm Limited) and are clarifying the approach of an Non-Disclosure Agreement (NDA) requested by Orsted prior to further discussions taking place. The Applicants are aware that the Examining Authority (ExA) does not have an expert assessor, so they consider there is a limit on the usefulness of technical discussions in ISH6, as compared to these direct technical discussions.

5. The Applicants noted that the Ørsted IPs have withdrawn their objections from Hornsea Four Offshore Wind Farm, Westermost Rough Offshore Wind Farm, Lincs Offshore Wind Farm and Race Bank Offshore Wind Farm. The Applicants also noted that the Ørsted IPs confirmed that they accepted the Applicants' wake loss figures, provided on a without prejudice basis, and will submit a financial impact assessment based on those figures. The Applicants fundamentally object to any financial compensation being payable in this matter.

6. The Ørsted IPs acceptance of the Applicants' figures (in contrast to the DB Projcos) is noteworthy as the Ørsted IPs are both recognised as leaders in the modelling field and familiar with RWE's modelling team and capability, having been involved in multiple industry-level projects with RWE and seen validations of RWE's modelling in those contexts. It is also noteworthy that the Ørsted IPs did not accept the applicants' wake report in a similar situation in the examination for Outer Dowsing.

7. The Applicants stated that they have engaged in the accepted manner with the DB Projcos until the emergence of wake effects in recent examinations. No concern has been expressed by the DB Projcos regarding engagement on topics other than wake loss. There has been no custom and practice of substantive engagement on wake loss at the pre-application stage for new offshore wind farm projects.

8. It was first formally raised by the DB Projcos at the Preliminary Environmental Information Report (PEIR) stage in August 2023. The Applicants note that the question of wake effects from the Projects on the Annual Energy Production (AEP) of Dogger Bank A, Dogger Bank B and Dogger Bank C was analysed by DB Projcos in a report dated 11 February 2021, which is reference 10 in the DB Projcos' wake assessment [REP5-070] but nothing was raised with the Applicants until August 2023.

9. If this raised a serious concern which could legitimately be addressed through the planning process (or otherwise), the Applicants would have expected the DB Projcos to have raised it strongly and insistently with the Applicants as it was bringing forward the Projects from that point onwards, rather than saying nothing for 2.5 years despite wider conversations with the Applicants regarding other project interfaces in the interim. It appears likely that DB Projcos response to the PEIR in August 2023 was prompted by the arguments being made by Rhyl Flats during the Awel y Môr DCO examination in early 2023.

10. The Applicants' position is that there is an attempt to retrospectively apply a contested interpretation of National Policy Statement (NPS) EN-3 to hold the Applicants to an inappropriate standard which was not accepted to apply at the time. Notably, other Round 4 projects, such as, Mona, Morgan and Outer Dowsing (and extension projects like Five Estuaries), did not act differently from the Applicants. The Applicants strongly argue that they have acted in accordance with accepted practice. The further context for the Applicants' approach is the fact that there are no accepted mitigation options regarding wake effects as between a new project (outside the Crown Estate's (TCE) buffer distance) and existing or emerging projects, as compared to other topics like cable interactions.

11. The Applicants have followed a multi-stranded approach to considering wake effects. First, the most important step which the Applicants took, was to respect the 7.5km buffer set down in TCE's Round 4 leasing process. TCE is on record stating that an important consideration for setting buffer distances was the consideration of wake effects (see TCE's response to ExQ1.1.2 in the Outer Dowsing examination – [REP2-080] of the Outer Dowsing Examination Library).

12. Second, the Applicants have a longstanding and ongoing interest in researching and understanding wake effects in various scenarios, and the potential to mitigate wake effects within a wind farm and between wind farms. The conclusions of this ongoing research were explained in **Wake Effects - Response to Issue Specific Hearing 3 (ISH3) Action Points** [REP4-099]. This generic research is very important – if it had identified mitigation steps which were reasonable then they would be being adopted by the Applicants and it is reasonable to assume would have been adopted more generally in the industry. Instead, such mitigation steps have not been identified as explained in **Wake Effects - Response to Issue Specific Hearing 3 (ISH3) Action Points** [REP4-099].

13. Third, in addition to this generic research, the Applicants specifically considered wake effects from the Projects on Dogger Bank A (DBA) as explained in section 7.4 of **Wake Effects - Response to Issue Specific Hearing 3 (ISH3) Action Points** [REP4-099]. This concluded that no reasonable mitigation was available.

14. The Applicants explained that there are a range of complexities which would arise even if reasonable mitigation measures were theoretically available in AEP terms. This would include, for example, the question of how mitigation would apply as between different projects at different points on the compass at different distances. This would inevitably create trade-offs between the effectiveness of any mitigation between such projects. There is no industry discussion, let alone guidance on that question. Further, the question of how mitigation measures should be weighted against other design considerations would need to be clarified. There is no guidance or custom and practice on this.

15. The Applicants shared draft Environmental Statement (ES) chapters with the DB Projcos and the Ørsted IPs before submission. The Ørsted IPs responded to confirm they had no comments to make on the draft chapter.

16. There has been good collaboration with the other parties on certain issues but wake effects remain a novel issue in this context. The Applicants stressed again that they have followed the accepted approach to wake effects. The Awel y Môr decision was unexpected and led to uncertainty for future developments. The Applicants stated that they remain of the view that wake effects were well understood when the buffer distance was set by TCE for Round 4 in 2019. This involved substantial market engagement, and (despite repeated invitations to provide evidence otherwise) it appears that no developers lobbied TCE to increase the buffer distance or include financial compensation provisions for existing projects in the Round 4 draft agreement for lease.

17. If a new system is introduced for wake effects, it can only apply to new projects after Round 4. Any such system will give rise to a host of complex technical and policy issues, which would need substantial discussion between industry and Department for Energy Security and Net Zero (DESNZ) to be resolved.

18. The Applicants stressed there is no history of routinely including wake effects within an ES nor guidance on how to conduct a wake assessment.

19. The Applicants consider that the fundamental point on wake effects revolves around TCE's buffer areas and the consideration of reasonable mitigation options. The Applicants have operated well within the bounds of reasonableness in terms of engagement with the other parties on this issue.

20. The Applicants have adhered to normal industry standards during the site selection and design phases under the current wording of EN-3.

21. The Applicants consider that the latest amendments to NPS EN-3 are material alterations and go beyond clarification. The Secretary of State (SoS) evidently considers these amendments to be necessary and the changes will only apply to future applications. The SoS may place importance on emerging policy, but it is not clear what view the SoS is going to take on upcoming decisions. It is important that the Applicants (and promoters of other current schemes) are not retrospectively held to a new standard through the draft EN-3 language as that would be unreasonable and unfair.

22. The SoS has included specific paragraphs addressing wake effects, using "nearby" rather than "close" terminology. The Applicants consider it reasonable that TCE has applied their judgement to decide on the 7.5km distance, which is a highly relevant factor in determining what constitutes "nearby". It is not necessary for the SoS to include a specific reference to TCE buffer distances in the NPS. It is clear that taking those into account (given that wake effects inform those buffers, with other factors) is a highly relevant consideration when interpreting "nearby" or "close".

23. Regarding long-distance references in paragraph 2.8.232 of draft NPS EN-3, there is an obvious inconsistency between "nearby" and "long-distance". This is a point that is likely to be raised by various parties to the draft as it is difficult to reconcile the two terms.

24. The Applicants noted that caution should be applied to the consultation letter issued by the SoS on the Mona Offshore Wind Farm project. It is a short letter but does suggest the SoS will consider the draft NPS EN-3 wording in the decision. Notably, there is no mention of financial compensation drafting being sought in the letter. This is consistent with the previous SoS decision at Awel y Mor and the drafting in the emerging changes to EN-3.

25. The Applicants consider that convincing evidence would need to be submitted to substantiate any claim relating to future viability, even assuming there was a policy basis for financial compensation under EN-3, which is rejected. There are currently only high-level observations by the DB Projcos about financial loss. This is very different to viability, which focusses on profitability and necessarily includes consideration of total expected revenue.

26. The Applicants submit that it is plain from the DB Projcos conduct since the Projects were announced that there is no threat to the viability of DBA, Dogger Bank B (DBB) and Dogger Bank C (DBC). It is apparent that the DB Projcos analysed the impact on AEP in February 2021 and it is reasonable to assume will have updated that analysis from time to time.

27. If there was a meaningful viability concern, it would have been raised insistently in the context of the substantial discussion on other matters during the pre-application period, alongside the formal consultation process. This did not happen.

28. The conduct of the DB Projcos implies, in addition, that they did not consider there were reasonable mitigation measures available to the Projects, as they had every opportunity to raise this issue as well and did not. (This is consistent with the point made in **Wake Effects - Response to Issue Specific Hearing 3 (ISH3) Action Points** [REP4-099] that the layouts of DBA and DBB show no indication of departure from design to maximise the AEP of each project, which the DB Projcos have not disputed.)

29. Taking their conduct over the last 4 years (and more) into account, for the DB Projcos to claim a concern about viability and a failure to mitigate at this stage is completely unconvincing. The reality is that as experienced developers they accepted that new wake effects during the life of DBA, DBB and DBC was a risk which they had to take into account in general terms and they accepted it. [Post hearing note: the corporate history of DBA, DBB and DBC is completely inconsistent with a concern over project viability. A 20% stake in DBA and DBB was acquired in the knowledge of DBS and the main financing of DBC was done in the same knowledge. This is addressed in more detail in the Applicants' response to the Projcos replies to ExQ2.]

30. The impact on each of the three Dogger Bank projects is substantially different, including on the DB Projcos own wake assessment. The DB Projcos claim that the 3 projects should be treated as one, which is not accepted. Unless persuasive arguments are made to the contrary the effect on each wind farm should be considered individually in the normal way.

31. The Applicants noted that the protective provisions proposed by the DB Projcos and the Orsted IPs are unreasonable, unworkable and completely unsupported by policy. There are also issues around the timing envisaged in the context of an ongoing development, agreements to agree and the need fora wide range of public interest matters to be determined by the SoS rather than experts. The Applicants will provide comments on the draft protective provisions, but will not engage in detailed discussion on their form or provide alternative drafting. Where something is proposed which is completely unsupported by policy and entirely novel and unprecedented it is not reasonable to expect an applicant to engage on a without prejudice basis.

32. It is important to note that financial compensation was rejected in principle in the Awel y Môr decision by the SoS. It was entirely open to the SoS to have sought new drafting from the parties relating to financial compensation during the decision phase and she did not do so.

33. The Applicants noted that they have tried to replicate DB Projcos' assessment but have been unable to do so in the limited time available so far. The exclusion of the Hornsea projects from the DB Projcos' assessment makes up some of this difference and the choice of blockage model appears to make up another large portion. The Applicants noted that the blockage model used by RWE outperformed the DB Projcos' model in a validation exercise in a large cross-industry research exercise on blockage issues (the GloBE project run by the Offshore Renewable Energy Catapult and funded by the Carbon Trust). The validation work on the RWE model as part of that project is available to Equinor as one of the DB Projcos partners.

34. The overall differences in position as between the parties will become clearer as the technical discussions continue. The Applicants confirmed that turbine size is unlikely to have a material impact on the results, in accordance with the point made in the DB Projcos' wake assessment.

35. The Applicants confirmed that no specific phase of the Project was considered in the model for the in-isolation scenario of the greenhouse gas sensitivity analysis. It was just an approximation and therefore half the value was used for half the installed capacity.

2.2 Effects to Radar

36. The Applicants noted that timings for Programme Njord are unclear as the process is ongoing with the Ministry of Defence (MOD). There is no established project development timeline, although the MOD's Deadline 5 Submission [REP5-052] confirms that the tender process is currently live and therefore it is clear that it is progressing. Requirement 31 of the **Draft DCO (Revision 9)** [document reference: 3.1] states that the wind turbines in DBS West cannot operate until the SoS, following consultation with the MOD, is satisfied that appropriate mitigation measures will be implemented and that they will be in place for the life of the Project. Interim measures may be agreed upon if Programme Njord is not forthcoming within the Projects' development timescales. Solutions are available based on previous experience, but the choice of solution will be a matter for MOD to decide upon. The wording of the requirement is standard, it has been used in multiple offshore wind DCOs and it has been agreed with the MOD, with the exception of detail relating to the applicability of the requirement solely to DBS West as favoured by the Applicants (on the basis that DBS East is not predicted to cause any impacts on the Staxton Wold radar).

37. The Applicants consider that changing the wording of the requirement that was provided by the MOD is challenging due to engagement difficulties with the MOD. Further, it is not felt to be necessary as the wording is believed to be adequate and has been accepted as such for numerous other offshore wind DCOs. This established approach has not caused issues in other projects.

38. The Applicants noted slightly different wording in the Rampion 2 DCO but stated that the Rampion 2 situation is different as military radar is not involved. The Applicants confirmed that the expectation is that mitigation will be maintained throughout the Project's lifetime by MOD.

39. If interim Staxton Wold radar mitigation solutions are required before the Programme Njord mitigation is implemented, the Applicants believe that it would be up to MOD to define and set the terms of such a solution.

40. The need for, and potential solutions pertaining to, interim mitigation will need to be further discussed between the Applicants and MOD post-consent as plans for project development and the delivery of Programme Njord mature.

41. In any event, the Applicants and MOD have agreed requirement wording which would prevent relevant parts of the Project having an impact on military air defence radar at Staxton Wold because both MOD and SoS must confirm that any potential impacts are adequately mitigated before the turbines in DBS West can begin operating. The Applicants are confident, based on previous experience, that if an interim solution were required, this could be agreed with the MOD and delivered in a timely manner.

42. Whatever interim and final mitigations are ultimately selected and applied by the MOD are expected to be highly confidential and subject to NDAs due to concerns regarding national security.

43. The Applicants believe the requirement is reasonable and meets the six tests and are not aware that any party is disputing this. Extensive work has been done with the UK Government, MOD, and developers to address national security and accelerate renewable energy development. The accepted requirement wording helps navigate these issues. Despite some uncertainties, this remains a credible and deliverable model. The Applicants are confident in Programme Njord's delivery.

44. The Applicants discussed the relevant NPS requirements applicable to the SoS's decision making in relation to radar impacts. In particular, the Applicants submitted that the SoS could consider the likelihood of a mitigation solution under Programme Njord becoming available within the Projects' implementation timescales as high. This is on the basis that Programme Njord is a government-led initiative being developed by the MOD specifically to enable the long term co-existence of wind farms and air defence. The Windfarm Mitigation for UK Air Defence Phase 3 Stream 2: Competition Document (April 2024) confirms that "*Through the Joint Air Defence and Offshore Wind Task Force and programme NJORD, the MOD is currently working on procuring mitigation solutions **in the near term** that will enable the next generation of large-scale offshore windfarms to be built that will become operational **from 2025** and beyond.*" (emphasis added). There is a clear intention on behalf of the government that Programme Njord will be progressed and a mitigation solution will be deliverable in line with the Projects' timeframes for delivery.

45. The Applicants note that the relevant part of the NPS EN-1 (paragraph 5.5.60) concludes by stating that "Provided that the Secretary of State is satisfied that the impacts of proposed energy developments do not present risks to national security and physical safety, and where they do, provided that the Secretary of State is satisfied that appropriate mitigation can be achieved, **or appropriate requirements can be attached to any Development Consent Order to secure those mitigations**, consent may be granted."

46. The Applicants noted that the maximum tip height of the turbines has been updated at Deadline 5 to 378m above mean sea level, further reducing any potential impacts on radar.

47. There are multiple constraints concerning the mitigation that can reasonably be implemented to address any MOD radar impacts. The Applicants are seeking to develop a full-scale project with an optimal design that provides the greatest possible chances of Project viability and ensures commercial competitiveness, whilst adhering to standard design requirements. Since PEIR, turbine tip heights have been reduced twice (including at D5), and the footprint for DBS West has been refined to mitigate radar effects. It is challenging to deliver clean energy without impacting some receptors, though efforts have been made to avoid and minimise these impacts where practicable in line with the mitigation hierarchy. Achieving clean energy targets may necessitate some adverse effects, which will be addressed through mitigation measures. This fact is acknowledged by government (for example, NPS EN-1 (paragraph 5.5.50)) recognises that projects should be designed "where possible" to "minimise" adverse impacts, it does not require adverse impacts to be entirely avoided through design. Similarly, paragraph 5.5.46 of NPS EN-1 recognises that "it is likely to be unreasonable for the Secretary of State to require mitigation by way of a reduction or alteration in the scale of development" due to effects on communications, navigation and surveillance (CNS) systems, (unless exceptional circumstances apply). For this reason, government has brought forward Programme Njord to help ensure that Net Zero targets are not jeopardised through conflicts between air defence radar and the roll out of large-scale offshore wind projects.

48. The design envelope allows flexibility in turbine heights and the Applicants require this flexibility to give them the greatest chance of bringing forward a viable, commercially competitive development. The Contracts for Difference (CfD) process requires the Applicants to consider the competitiveness of the Projects. Various aspects, including tip height, will impact the Project's competitiveness.

49. Both small and large turbines were assessed as worst-case scenarios in the ES, which did not account for the viability of bringing forward the assessed scenarios. The Applicants cannot be restricted to smaller turbines on the basis that the Project must be competitive from a CfD perspective and they may be restricted by the turbines which are available on the market. There are also other considerations of having smaller turbines including needing more platforms and cables. The Applicants highlight that whilst high numbers of small turbines might allow the avoidance of impacts to radar, this design solution would increase impacts to other receptors, not least the Dogger Bank Special Area of Conservation (SAC), within which greater footprints of impacts would be required to allow for the installation of more cables, foundations, cable protection and scour protection on the sea bed. Additionally, as referred to above, paragraph 5.5.46 of NPS EN-1 is clear that "it is likely to be unreasonable for the Secretary of State to require mitigation by way of a reduction or alteration in the scale of development" as a form of mitigation for impacts on CNS systems, unless exceptional circumstances apply.

2.3 Other Environmental Matters

2.3.1 Geology and Lane Use

Sterilisation of mineral resources

50. The Applicants noted that planning applications in other areas are in progress. A planning application 24/01362/CME was submitted (to be determined) for the extraction of 2,200,000 tonnes (extend quarry life by four-five years) at North Cave. If permitted, this would bring the East Riding of Yorkshire Council (ERYC) proportionally closer to their landbank requirement.

51. Assuming an extractable quantity is located within the Order Limits, the mineral would only be sterilised for the lifetime of the Projects which is temporary. The mineral would remain in situ and could be extracted post-decommissioning. If the cable ducts are left in situ, this is not anticipated to be an issue as a company capable of extracting material should be able to easily break through ducts. Therefore, the Applicants do not consider the Projects would have a significant impact on the supply of sand and gravel.

52. In a meeting on 15th May 2025 with ERYC they identified that although the preferred areas have been identified in the Joint Minerals Local Plan (November 2019), planning applications have not been coming forward for these areas, hence why there is a shortfall recorded a supply of sand and gravel.

53. Yarrow Aggregates have confirmed they do not intend to develop the land to the south of the Projects and will be developing to the north of their current site.

Loss of agricultural land

54. The Applicants noted the late submission made by Mr Julian on behalf of JL White & Sons and will respond to this in writing. The Applicants confirmed that they would have been mindful of severing agricultural land when deciding on the Order Limits and considering routes. It is essential for the Applicants to balance several considerations.

55. The Applicants stated that areas of Best and Most Versatile (BMV) land (Agricultural Land Classification (ALC) Grades 1, 2 and 3a) may be required for up to six years which is the absolute worst-case scenario in a sequential construction scenario. The Applicants applied the mitigation hierarchy and have avoided BMV land where possible. The Onshore Export Cable Corridor width was reduced after statutory (S.42) consultation from 100m to 75m, when the HVDC technology was selected and, and the Applicants have committed to reinstating between jointing bays within two years.

56. The Applicants reiterated that flexibility for CfD purposes is crucial. One Project may be delayed which is why the six year construction period is included as a worst-case scenario if the Projects are delivered sequentially. Offshore elements of the Projects may not be delivered concurrently which may result in a second cable pull. An early project commitment was made, as 'designed in' (embedded) mitigation that the first Project would install the cable ducts for the second Project, so that any later phase of works would be limited to the Jointing Bays working areas and cable pulling. Therefore, eliminating the requirement to excavate the full length of the cable corridor for a second time and allowing the further commitment to reinstating between jointing bays within two years to be made. The major adverse effects on temporary loss of agricultural land are temporary and should be balanced against the substantial benefits of the Projects and the fact that 82.4%, the equivalent of 366ha, of the land would be reinstated within two years. Only 69ha, 15.8% of agricultural land would be retained for longer than two years and up to six years.

57. The Applicants noted that the commitment to reinstate land between Jointing Bays within two years is included in section 5.17, para 101 of the **Outline Code of Construction Practice (OCoCP) (Revision 4)** [REP4-040], which is secured by Requirement 19 of the **Draft DCO (Revision 9)** [document reference: 3.1]. In addition, Appendix A includes a comprehensive **Outline Soil Management Plan**, section 4.7 includes measures for reinstatement of soils and states '*The Applicants can confirm that soils will be returned to their to original configuration, reinstatement would return soils, including their BMV status to the original functionality, following an appropriate managed aftercare period*.'

58. The Applicants confirmed that pre-commencement works would include works to get ready to start the main works such as surveys e.g. geotechnical investigation, archaeology and ecology surveys and vegetation clearance. These works would require a temporary access to site and in some instances, there will need to be some temporary hardstanding to avoid damaging land from vehicle movements, when these works take place. It is not the intention that the temporary haul road or Temporary Construction Compounds (TCCs) would be constructed as a pre-commencement work.

59. Although some areas will need to be fenced, the entire works will not be fenced without the agreement of ERYC. This is secured by Requirement 19(4) of the **Draft DCO (Revision 9)** [document reference: 3.1]. It is not possible for the Applicants to specify where fencing will be required in relation to the pre-commencement works but some fencing may be required, for example to prevent access to land for safety reasons or to ensure site security.

60. The Applicants confirmed it is not in the Applicants' interests to fence off any more land than is required as it would give rise to potential compensation claims from landowners. The Applicants confirmed, as stated previously, the type of works included within the definition of pre-commencement works has been included in multiple other offshore wind farm DCOs and therefore has been accepted by the SoS as being reasonable and necessary to enable the delivery of projects that are of critical national priority.

2.3.2 Onshore Heritage Assets

Archaeology: potential significance of effects from vibration on heritage assets

61. The Applicants noted that the ES assesses the worst-case scenario for buried archaeological remains, particularly those close to vibration sources. This is primarily confined to small areas directly affected by construction activities which can be mitigated through standard procedures.

62. The type of disturbance anticipated would primarily affect buried archaeological remains. Issues may arise only if any such remains are exceptionally fragile. The focus is on areas that will be directly disturbed by construction activities. The Applicants do not anticipate any physical effects to the structures of heritage assets.

63. All designated assets are located at sufficient distances to avoid being physically affected by vibration disturbances. The vibration threshold that could cause cosmetic damage to lightweight structures is estimated to be approximately 5m away from horizontal directional drilling. For particularly fragile archaeological remains, this scenario is considered highly unlikely. Therefore, the potential for additional impacts beyond direct disturbance is very small, and no further mitigation measures have been proposed. Overall, any potential damage to artefacts is expected to be negligible.

Archaeology: recommendations of the Phase 2 Archaeological Evaluation Trenching Report

64. The Applicants confirmed that the **Outline Onshore Written Scheme of Investigation (WSI) (Revision 2)** [REP4-048] does not provide recommendations for further archaeological works. Instead, it outlines the Applicants' approach to investigating the site and incorporating those findings into the Survey-Specific WSIs which define the scope and methods of specific works. Transferring recommendations from one document to another at this stage is premature. The Applicants noted they will consider recommendations specifically for the survey-specific WSI, which is a more appropriate place for capturing details relating to the recommendations of the Phase 2 Archaeological Evaluation Trenching Report. This approach has been discussed with the Humber Archaeology Partnership (HAP), and there was broad agreement that it is the most appropriate method.

Archaeology: hydrological effects on items of archaeological importance inside and outside of the order limits.

65. The Applicants confirmed that they have carried out a Geoarchaeological desk-based assessment (GDBA) as requested by HAP. The evidence from the desk-based assessment indicates that there would be no effects. The results of this assessment have been discussed with HAP, and there was broad agreement that it is represents a robust basis for the assessment presented in the ES.

66. The overall drainage plan ensures that any hydrogeological conditions would remain unaffected by the Projects. The Applicants have an **Outline Drainage Strategy (Revision 3)** [REP2-033] in place to manage operational drainage and anticipate no operational impacts. During the temporary construction phase, as per Requirement 19 of the **Draft DCO (Revision 9)** [document reference: 3.1], a Code of Construction Practice (to include a Surface Water Management Plan) would be in place, and the Applicants do not foresee any construction drainage impacts outside of the order limits.

67. In response to an ISH4 action points [REP4-096], the Applicants confirmed that the land drainage design aims to restore the drainage system to its previous condition. It will divert existing drainage and maintain its functionality once installed and operational.

68. The Applicants confirmed there is no hydrological connection between Burton Bushes and the site, which has dry clay soils and no signs of waterlogged archaeological deposits.

Proposed access road for the converter stations adjacent to the anti-aircraft gunsite scheduled monument nearby to Butt Farm

69. The Applicants noted that there is likely to be a requirement for some lighting at the entrance of the access road, but this would be the only permanent lighting required on the access track. **Draft DCO (Revision 9)** [document ref. 3.1] Requirement 22 (operational lighting plan) provides a mechanism for ERYC to approve the operational lighting required for the Onshore Converter Stations. **Chapter 5 Project Description (Revision 3)** [REP1-009] and the **Design and Access Statement (Revision 2)** [REP2-027] will be updated at Deadline 7 to include a commitment that the permanent access track will not be lit, or include any permanent signage. Street furniture will be minimised.

70. The **Outline Landscape Management Plan (OLMP) (Revision 4)** [REP4-044] has been developed to include a hedgerow along the access road. This is still subject to detailed design and sign-off, under Requirement 9 of the **Draft DCO (Revision 9)** [document ref 3.1]. The OLMP and the inclusion of the hedgerow has been developed with input from landscape and visual representatives from ERYC. The Applicants will consult with stakeholders (ERYC landscape and visual, ERYC heritage, Historic England) on their views on potentially replacing the hedgerow with a post-and-rail fence, before making any decisions regarding removal.

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