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 Summaries of Oral Submissions made at CAH2, ISH3, ISH4 and ISH5

Submission for Deadline 4

Document Date:	April 2025
Document Reference:	14.2
Revision Number:	01
Classification:	Unrestricted

RWE MASDAR

Company:	**RWE Renewables UK Dogger Bank South (West) Limited and RWE Renewables UK Dogger Bank South (East) Limited**	Asset:	**Development**
Project:	**Dogger Bank South Offshore Wind Farms**	Sub Project/Package	**Consents**
Document Title or Description:	The Applicants' Written Summaries of Oral Submissions made at CAH2, ISH3, ISH4 and ISH5		
Document Number:	005648321-01	Contractor Reference Number:	N/A

Rev No.	Date	Status/Reason for Issue	Author	Checked by	Approved by
01	April 2025	Submission for Deadline 4	Burges Salmon	RWE	RWE

Contents

Glossary

Term	Definition
Array Area	The DBS East and DBS West offshore Array Areas, where the wind turbines, offshore platforms and array cables would be located. The Array Areas do not include the Offshore Export Cable Corridor or the Inter-Platform Cable Corridor within which no wind turbines are proposed. Each area is referred to separately as an Array Area.
Baseline	The existing conditions as represented by the latest available survey and other data which is used as a benchmark for making comparisons to assess the impact of the Projects.
Biodiversity Net Gain (BNG)	An approach to development that leaves biodiversity in a better state than before. Where a development has an impact on biodiversity, developers are encouraged to provide an increase in appropriate natural habitat and ecological features over and above that being affected to ensure that the current loss of biodiversity through development will be halted and ecological networks can be restored.
Cable Burial Risk Assessment	Risk assessment to determine suitable burial depths for cables, based upon hazards such as anchor strike, fishing gear interaction and seabed mobility.
Climate change	A change in global or regional climate patterns. Within this chapter this usually relates to any long-term trend in Mean Sea Level, wave height, wind speed etc, due to climate change.
Countryside Stewardship Scheme	The Countryside Stewardship Scheme provides financial incentives for farmers, woodland owners, foresters and land managers to look after and improve the environment. Mid Tier Scheme agreements provide a range of options to help deliver environmental benefits. The Higher Tier agreements require more complex management tailored to individual sites.
Cumulative effects	The combined effect of the Projects in combination with the effects of a number of different (defined cumulative) schemes, on the same single Receptor / resource.
Cumulative Effects Assessment (CEA)	The assessment of the combined effect of the Projects in combination with the effects of a number of different (defined cumulative) schemes, on the same single Receptor/resource.
Decommissioning Plan	A document which would define the extent of works, in relation to the onshore infrastructure, which are required to be undertaken at the end of the operational lifetime of the Projects. The plan would be subject to agreement with relevant stakeholders at the time.

Term	Definition
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 Impact Assessment (EIA)	A statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the EIA Directive and EIA Regulations, including the publication of an Environmental Statement.
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.
Environmental Stewardship Scheme	Environmental Stewardship is an agri-environment scheme run by Defra which aims to secure widespread environmental benefits through improving water quality, reducing soil erosion, improving conditions for farmland wildlife, maintaining and enhancing Landscape Character and protecting the historic environment. The Entry Level aims to encourage large numbers of farmers to deliver effective environmental management in exchange for pay-outs. The Higher Level is designed to support more specific and environmentally beneficial management practices
Groundwater	Water stored below the ground in rocks or other geological strata.
Habitats Regulations	Conservation of Habitats and Species Regulations 2017 and Conservation of Offshore Marine Habitats and Species Regulations 2017.
Habitats Regulations Assessment (HRA)	The process that determines whether or not a plan or project may have an adverse effect on the integrity of a European Site or European Offshore Marine Site.
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.

Term	Definition
High Voltage Alternating Current (HVAC)	High Voltage Alternating Current is the bulk transmission of electricity by alternating current (AC), whereby the flow of electric charge periodically reverses direction.
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.
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.
Landfall	The point on the coastline at which the Offshore Export Cables are brought onshore, connecting to the onshore cables at the Transition Joint Bay (TJB) above mean high water.
Landfall Zone	The generic term applied to the entire landfall area between Mean Low Water Spring (MLWS) and the Transition Joint Bays (TJBs) inclusive of all construction works, including the landfall compounds, Onshore Export Cable Corridor and intertidal working area including the Offshore Export Cables.
National Policy Statement (NPS)	A document setting out national policy against which proposals for NSIPs will be assessed and decided upon.
Nationally Significant Infrastructure Project (NSIP)	Large scale development including power generating stations which requires development consent under the Planning Act 2008. An offshore wind farm project with a capacity of more than 100 MW constitutes an NSIP.
Navigational Risk Assessment (NRA)	A document which assesses the hazards to shipping and navigation of a proposed Offshore Renewable Energy Installation based upon Formal Safety Assessment.
Net Zero	A target of completely negating the amount of greenhouse gases produced by human activity, to be achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere
Offshore Development Area	The Offshore Development Area for ES encompasses both the DBS East and West Array Areas, the Inter-Platform Cable Corridor, the Offshore Export Cable Corridor, plus the associated Construction Buffer Zones.

Term	Definition
Offshore Export Cable Corridor	This is the area which will contain the Offshore Export Cables (and potentially the ESP) between the Offshore Converter Platforms and Transition Joint Bays at the landfall.
Onshore Converter Stations	A compound containing electrical equipment required to transform HVDC and stabilise electricity generated by the Projects so that it can be connected to the electricity transmission network as HVAC. There will be one Onshore Converter Station for each Project.
Onshore Development Area	The Onshore Development Area for ES is the boundary within which all onshore infrastructure required for the Projects would be located including Landfall Zone, Onshore Export Cable Corridor, accesses, Temporary Construction Compounds and Onshore Converter Stations.
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).
Onshore Substation Zone	Parcel of land within the Onshore Development Area where the Onshore Converter Station infrastructure (including the Haul Roads, Temporary Construction Compounds and associated cable routeing) would be located.
Onward Cable Connection	The cable corridor between the Onshore Substation Zone
Order Limits	The limits within which the Projects may be carried.
Other trenchless techniques	Other techniques (aside from HDD) for installation of ducts or cables where trenching may not be suitable such as micro tunnelling or auger boring.
Preliminary Environmental Information Report	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.
Principal contractor	A contractor appointed under Regulation 5(1) (b) of the Construction (Design and Management) Regulations 2015. They have control over the construction phase of a project with several contractors.
Project Change Request 1	The proposed changes to the DCO application for the Projects set out in **Project Change Request 1 - Offshore & Intertidal Works** [AS-141].

Term	Definition
Project Change Request 2	The proposed changes to the DCO application for the Projects set out in **Project Change Request 2- Onshore Substation Zone** [AS-152].
Receptor	A distinct part of the environment on which effects could occur and can be the subject of specific assessments. Examples of Receptors include species (or groups) of animals, plants, people (often categorised further such as 'residential' or those using areas for amenity or recreation), watercourses etc.
Relevant Highway Authorities	The term relevant highway authorities for the Projects includes all highway authorities within the traffic and transport study area, namely, East Riding of Yorkshire Council, Hull City Council and National Highways.
Safety zones	Legislated under the Energy Act 2004, safety zones are rolling buffer areas which protect construction activities by preventing unauthorised vessels from entering their boundary.
Setting	The NPPF identifies setting as that which encompasses an asset's surroundings in which it is experienced. The extent of setting is not fixed and can contribute both positively and negatively to the heritage significance of an asset.
Short-term	Refers to a time period of months to years.
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.
Special Protection Area (SPA)	Strictly protected sites designated pursuant to Article 4 of the Birds Directive (via the Habitats Regulations) for species listed on Annex I of the Directive and for regularly occurring migratory species.
Temporary Construction Compound	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. The Applicants are themselves jointly owned by the RWE Group of companies (51% stake) and (Abu Dhabi Future Energy Company) - Masdar (49% stake).
The Planning Inspectorate	The agency responsible for operating the planning process for Nationally Significant Infrastructure Projects (NSIPs).
The Projects	DBS East and DBS West (collectively referred to as the Dogger Bank South Offshore Wind Farms).

Term	Definition
Transition Joint Bay (TJB)	The Transition Joint Bay (TJB) is an underground structure at the landfall that houses the joints between the Offshore Export Cables and the Onshore Export Cables.
Wind turbine	Power generating device that is driven by the kinetic energy of the wind.

Acronyms

Term	Definition
ADD	Acoustic Deterrent Device
AEoI	Adverse Effect on Integrity
AEP	Annual Energy Production
AIS	Air Insulated Switch Gear
ALARP	As Low as Reasonably Practicable
ANS	Artificial Nesting Structure
AoS	Area of Search
BNG	Biodiversity Net Gain
BNHIDB	Beverley & North Holderness Internal Drainage Board
BTO	British Ornithological Trust
CA	Compulsory Acquisition
CAH2	Compulsory Acquisition Hearing
CBRA	Cable Burial Risk Assessment
CoCP	Code of Construction Practice
CPO	Compulsory Purchase Order
CSS	Countryside Stewardship Scheme
DAS	Design and Access Statement
DBS	Dogger Bank South
DCO	Draft Consent Order
Defra	Department for Environment Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
DML	Deemed Marine Licence
EDR	Effective Deterrence Range

Term	Definition
EIA	Environmental Impact Assessment
EMF	Electromagnetic Fields
ERYC	East Riding of Yorkshire Council
ES	Environmental Statement
ESS	Environmental Stewardship Schemes
ExA	Examining Authority
FFC	Flamborough and Filey Coast
FRA	Flood Risk Assessment
GIS	Gas Insulated Switch Gear
HDD	Horizontal Directional Drill
HRA	Habitats Regulations Assessment
IDB	Internal Drainage Board
IEMA	Institute of Environmental Management and Assessment
IP	Interested Party
IPMP	In-Principle Monitoring Plan
ISH3	Issue Specific Hearing 3
ISH4	Issue Specific Hearing 4
ISH5	Issue Specific Hearing 5
kJ	Kilojoules
km	kilometre
KSCP	Kittiwake Strategic Compensation Plan
LIR	Local Impact Report
LLFA	Lead Local Flood Authority
LMP	Landscape Management Plan

Term	Definition
LoNI	Letter of no impediment
LVIA	Landscape and Visual Impact Assessment
MCA	Maritime and Coastguard Agency
MGN	Marine Guidance Note
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
MoD	Ministry of Defence
MRA	Minerals Risk Assessment
MRF	Marine Recovery Fund
MSL	Mean Sea Level
NAS	Noise Abatement Systems
nm	Nautical mile
NPS	National Policy Statement
NRA	Navigational Risk Assessment
NSIP	Nationally Significant Infrastructure Project
OCoCP	Outline Code of Construction Practice
ODOW	Outer Dowsing Offshore Wind
OEMP	Outline Ecological Management Plan
OFTO	Offshore Transmission Owners
OLMP	Outline Landscape Management Plan
OSMP	Outline Soil Management Plan
PEIR	Preliminary Environmental Information Report
PRoW	Public Rights of Way
PSR	Primary Surveillance Radar

Term	Definition
PVA	Population Viability Analysis
RIAA	Report to Inform Appropriate Assessment
RRH	Remote Radar Head
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SD	Standard Deviation
SIP	Site Integrity Plan
SoCG	Statement of Common Ground
SoS	Secretary of State
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TCC	Temporary Construction Compound
TJB	Transition Joint Bay
TP	Temporary Possession
TSHD	Trailing suction hopper dredger
TTS	Temporary Threshold Shift
UAV	Unmanned aerial vehicle
UK	United Kingdom
UXO	Unexploded ordnance
VP	View Point
W	Watt

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 Compulsory Acquisition Hearing 2 (CAH2), Issue specific Hearings 3 (ISH3), 4 (ISH4), and 5 (ISH5) on 7th to 10th April 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 CAH2, ISH3, ISH4, and ISH5 actions documents to be submitted at Deadline 4 in **The Applicants' Responses to April 2025 Hearing Action Points** [document reference 14.11].

2 The Applicants' Summary of Oral Submissions made at CAH2

2.1 Sections 122 and 123 of the Planning Act 2008 (PA 2008)

General update

3. There are 45 landowners impacted by the Onshore Export Cable Corridor, Onshore Substation Zone and Onward Cable Connection in relation to the Projects.

4. At this stage the Applicants have concluded negotiations on the Heads of Terms with 37 of these landowners (82%). Out of these landowners, 26 (58%) of them have at this stage agreed the Option and Easement Agreement and the Applicants expect that these agreements will be concluded by Deadline 5. The 11 remaining parties who have agreed Heads of Terms but not the form of Option and Easement are currently at different stages of negotiation. However, the Applicants remain confident that these agreements will be completed before the close of Examination.

5. The Applicants acknowledge that there are still 8 (18%) landowners who have not yet agreed Heads of Terms. The Applicants and their appointed agent are still progressing these negotiations with the various landowners and are hopeful that some parties will agree Heads of Terms by the end of Examination but acknowledge that others due to lack of engagement due to other priorities, may ultimately not agree terms.

6. The Applicants are maintaining and updating the **Land Rights Tracker (Revision 4)** [document reference 10.4] to give regular updates on the status of the negotiations which was most recently submitted by the Applicants at Deadline 3 [REP1-046]. An updated **Land Rights Tracker (Revision 4)** [document reference 10.4] is being submitted at Deadline 4.

7. The Applicants provided the following update on progress with other landowners who have made written representations into Examination and were present at CAH2.

Albanwise and Albanwise Synergy

8. The Applicants noted that the parties are having productive discussions and are close to signing Heads of Terms for the Option Agreement. However, a couple of key commercial terms remain unresolved and there will be a need for further negotiations between respective legal representatives to resolve at the Option Agreement stage. The Applicants noted Albanwise's position that the objection will be withdrawn subject to reaching agreement, but it is unlikely due to the complexity and commercial implications that an Option Agreement will be concluded by the end of Examination.

9. The Applicants confirmed that Project Change Request 2 changes some of the rights required (reductions from permanent acquisition to rights / temporary possession and reduction in rights to temporary possession) in relation to Albanwise's interests but not the total extent of land required.

Network Rail

10. The Applicants and Network Rail are continuing to negotiate the form of Option Agreement and Deed of Easement with the Applicants seeking to reach voluntary agreement to enable the delivery of the Projects. However, there are some key outstanding points of disagreement which, as currently drafted, the Applicants consider pose a significant risk to the deliverability of the Projects:

    a. Termination of the Option agreement – Network Rail are requesting the inclusion of a right to terminate the Option agreement without there having been a breach. They have stated they need an ability to terminate at any time on 12 months' notice, without any reason or caveats around that and terminate on 6 months' notice where they require the Easement Strip for their undertaking. This is unacceptable to the Applicants as this could prevent the delivery of the Projects.

    b. Supply – In relation to the Deed of Easement, Network Rail are requesting the inclusion of an obligation on the Applicants to cease operating / cut off supply for such duration as Network Rail may require. The Applicants cannot agree to cease operating a Nationally Significant Infrastructure Project (NSIP) for such duration as Network Rail may require.

    c. Termination of Easement - Where it is not possible for alterations / strengthening of the export cables located within Network Rail property and Network Rail requires the easement strip back for carrying out repairs, or for carrying out substantial works of demolition, reconstruction or development then Network Rail may end the easement at any time on 6 months' notice. This is not acceptable to the Applicants in the context and in relation to a NSIP. The Applicants' cables will be installed a depth which the Applicants consider can co-exist with Network Rail infrastructure. Network Rail having an ability to terminate the easements risks prejudicing a NSIP.

11. The Applicants are accelerating detail design of the specific crossing of the Railway to satisfy the Network Rail of the proposed mitigation strategy, and the parties will continue working on this with a view to reaching agreement by the close of the Examination. However, due to the risk to the delivery of the Projects, unless Network Rail can reconsider these points, which the Applicants consider unreasonable, it is unlikely that agreement will be reached.

Riplingham Estates Limited and Los Trustees

12. The Applicants noted submissions made by the agent appointed by Riplingham Estates Limited and Los Trustees.

13. The Applicants understand the key outstanding issue to be resolved with both Interested Parties (IPs) relates to future development value. The appointed land agent has indicated that the sites have development potential, and the Interested Party would like to redevelop for an alternative use.

14. The Applicants accept that both sites may have development potential and has sent the appointed agents a Development Clause to be included in the legally binding Option and Deed of Grant, allowing for the loss in development value to be recovered once planning consent has been granted for alternative use development in the future, and the Applicants and the appointed agent are currently in discussions in this regard. The Applicants' appointed agent has responded in writing on 1 April 2025 to points raised by the agent and have confirmed that the affected party's reasonable legal costs will be met by the Applicants in considering this proposal. The Applicants have agreed this development clause as a mechanism to recover future loss with several IPs including national housebuilders who have all signed Heads of Terms and are awaiting a response from the appointed land agent.

15. The Applicants wish to note that they have been consistent in their approach in seeking to acquire voluntary agreement with all IPs and have based their commercial offer on a £/metre basis unrelated to land value but reflective of the rights sought, similar to what other Development Consent Order (DCO) Projects have agreed, subject to inflation, and have seen great success with over 80% of landowners agreeable to the terms offered. The Applicants hope to agree Heads of Terms with the IPs within the DCO Examination.

East Yorkshire Concrete

16. The Applicants and their appointed agent have continued to engage with the landowner's appointed agent and most recently met with the appointed agent on 5 March 2025. The agent has since confirmed that the landowners are unwilling to engage with the Applicant for a voluntary agreement because the previous commercial incentive to sign Heads of Terms is no longer available. The Applicants however will still try to negotiate with the landowner to agree Heads of Terms for a voluntary agreement, but it is unlikely that these negotiations will have concluded by the end of Examination.

Other parties

17. The Applicants provided the following update on progress with other landowners:

a. Bishop Burton College: The Applicants' appointed agent made a revised commercial offer for the rights required for the access track to Bishop Burton College's appointed agent on 14 March 2025. Heads of Terms have been agreed in relation to rights required over land for cable corridor. The Applicants are awaiting response and believe that there is a reasonable chance that Heads of Terms and Option Agreement can be agreed prior to the end of the Examination.

b. Bryant Homes Northern Limited: Final Heads of Terms have been agreed subject to final landowner approval. The Applicants believe there is a very good chance of the Option Agreement being completed prior to the end of Examination.

c. East Riding of Yorkshire Council: The Applicants and their agent have continued to engage with East Riding of Yorkshire Council to progress matters on the Heads of Terms sent on the 7 June 2024. Co-operation continues but there are resource constraints within the Council and focus on other priorities, with a multitude of projects affecting the Councils Estate. Although there is a willingness on both sides to conclude negotiations on the Heads of Terms, it is unlikely that these will conclude prior to the end of Examination.

d. Environment Agency: The Applicants' agent together with the landowner's appointed agent have agreed the Heads of Terms for the voluntary agreement subject to final EA client approval. The Applicants expect that Heads of Terms will be signed by the interest shortly to allow the respective legal parties to be instructed. The Applicants believe that there is a reasonable chance that the Option Agreement will be completed prior to the end of Examination.

e. James Heppell Mewburn: The Applicants and their agent have actively sought to receive any documentation from the reputed owner to confirm that he has a genuine interest in this unregistered land. The Applicants have not yet received the required information and therefore are unable to negotiate on the necessary rights needed in this plot. The Applicants are continuing to request the necessary information from the appointed agent and are hopeful that an instruction can be received in due course. It is unlikely that any voluntary agreement will be reached prior to the conclusion of Examination.

f. Mark Mewburn: The Applicants are continuing to negotiate with the landowner after they signed the Heads of Terms in haste prior to the expiry of the incentive deadline with several substantial caveats which are not agreeable to the Applicant. The Applicants and their appointed agent have continued to engage with the landowner's appointed agent and most recently met with the appointed agent on 5 March 2025 where the landowner's appointed agent raised further points requiring clarification. The appointed agent has indicated that the commercial position is not yet agreed, however the Applicants remain hopeful that negotiations for Heads of Terms will be concluded by the end of Examination.

g. Michael Braddock: The plot in question now forms part of the foreshore and as such the Applicants understand the ownership has transferred to the Crown and any rights will be acquired under the Agreement for Lease.

h. WFAFP Limited: The Applicants and their appointed agent continue to engage with the landowners and understands that there are several other competing promoters seeking rights over this IPs holding including National Grid Electricity Transmission. Some of the other projects have been consented and are seeking entry to the land and so it is understood that those projects are the priority for the landowner. The Applicants believe that there is the willingness from both parties to reach a voluntary agreement however is it unlikely that Heads of Terms will be agreed prior to the end of Examination.

i. INEOS: The Applicants and INEOS have instructed respective legal teams and are hopeful that an Option Agreement will be completed by the end of Examination

j. The Crown Estate: The Applicants and The Crown Estate agreed Heads of Terms on 10 March 2025. Both parties' respective legal representatives are progressing the Option Agreement. It is hoped that this will be completed by the end of Examination.

18. In addition, the Applicants have made progress with various occupiers including the following tenants of Albanwise:

a. Andrew Woodmansey - A commercial offer for a part tenancy surrender has been made following the change request based on the new land areas. The intention is for the Heads of Terms to be confirmed once the voluntary agreement with the landlord has been reached to ensure that both agreements align. The Applicants believe that there is a good chance of the Heads of Terms being agreed prior to the end of Examination.

b. Robert Charles Elvidge - A commercial offer has been made for the surrender, and the intention is for the Heads of Terms to be agreed once the voluntary agreement with the landlord has been reached to ensure that both agreements align. The Applicants believe that there is a good chance of the Heads of Terms being agreed prior to the end of Examination.

c. Oliver White, Pamela White and the Executor of the Estate of the Late Andrew White – A commercial offer has been made for the surrender however the principal terms are still under negotiation as both parties seek to agree a position on the potential impact on the tenant's caravan park. There is a willingness by both parties to reach a settlement voluntary, however it is unlikely that an agreement will be reached prior to the end of Examination.

d. Further to the above, there are a further ten occupiers whose consent to the works is required. It is standard practice to seek the voluntary agreements with the landowners prior to seeking any necessary right from the tenants. The Applicants have offered a standard set of terms for a tenant consent document which is at an advanced stage. The Applicants have confirmed the commercial position offered on 1 April 2025 and believe there is a good chance that Heads of Terms will be concluded with all ten IPs prior to the end of Examination.

19. Finally, there are four landowners who will be required to grant a temporary right of access for the emergency beach access. Following internal discussions, the Applicants have confirmed that they will seek the voluntary rights through an Option to Lease. The Applicants are in the process of drafting a template document that will be shared with the landowners appointed agents. The Applicants believe that there is a reasonable chance Heads of Terms for the lease will be agreed with all four IPs prior to the end of Examination with the legal documents being completed shortly thereafter.

2.2 Section 127 of the PA 2008 with particular reference to Part 5 and Schedule 15 of the draft Development Consent Order

Network Rail

20. The Applicants confirmed that comments on the latest draft of the protective provisions was shared with Network Rail's solicitor on 4 April 2025. The Applicants noted that these will need to be considered further by Network Rail and confirmed that the parties will continue to negotiate with a view to trying to reach an agreed position before the close of the Examination.

21. The Applicants maintain that the rights sought for the construction and maintenance of the Projects can co-exist with Network Rail infrastructure without causing detriment to Network Rail's undertaking. The Applicants have consulted with Network Rail's asset protection team throughout the pre-application process, receiving business and technical clearance in July 2023. The depth at which the cables will be laid are such that it is highly unlikely they will restrict Network Rail's ability to operate and maintain its railway in the future and therefore Network's Rail's current requests in relation to the points set out in paragraphs 9 to 12 above are not considered necessary by the Applicants. Once the Applicants have further details of the proposed trenchless crossing, it is hoped that Network Rail will confirm the same.

National Gas Transmission

22. The Applicants noted that comments on the latest draft of the protective provisions have been shared with National Gas Transmission's solicitor and further comments are awaited. The Applicants remain hopeful that an agreement on the protective provisions can be reached before the close of the Examination.

National Grid Electricity Transmission

23. The Applicants remain in discussions with National Grid Electricity Transmission on the protective provisions. The main area of disagreement remains the extent to which future projects should be covered in the protective provisions and active discussions are taking place with regards to a co-operation agreement to capture these provisions outside the protective provisions detailed on the face of the order. Heads of Terms for the co-operation agreement was shared by National Grid Electricity Transmission's solicitor on 1 April 2025 and is being considered by the Applicants.

Northern PowerGrid

24. The Applicants confirmed that negotiations with Northern PowerGrid is at an advanced stage the Applicants are confident that agreement on the protective provisions can be agreed before the close of the Examination.

Environment Agency

25. The Applicants received the Environment Agency's preferred protective provisions on 21 March 2025 and the Applicants have responded with comments on these. The Applicants will continue to negotiate with the Environment Agency to try and reach agreement before the close of the Examination.

Beverley & North Holderness Internal Drainage Board (IDB)

26. The Applicants addressed comments raised by the Beverley & North Holderness IDB in the Draft DCO submitted at Deadline 1.

Offshore assets

27. The Applicants are engaged with various parties regarding offshore interactions but maintains that it is not appropriate or generally precedented for these interactions to be dealt with by including protective provisions on the face of the DCO. It is industry standard for such interactions to be dealt with by agreement and such agreements are usually concluded post-consent however where IPs have raised requirements for agreements within their representations, the Applicants are engaged in discussions to progress the form of agreement.

28. During the CAH2 on 7 April 2025, the Examining Authority (ExA) asked the Applicants for the status of negotiations with National Gas Transmission Limited relating to offshore interactions. The Applicants confirm that having reviewed RR-017, there are no references to offshore interests.

2.3 Section 135 of the PA 2008 – Crown land

Defence Infrastructure Organisation

29. The Applicants confirmed that there has been no update on negotiations with the Defence Infrastructure Organisation since the last version of the Land Rights Tracker but remains confident that a s135 consent will be achieved before the close of the Examination.

Secretary of State for Transport

30. The Applicants have provided ExA with an email chain (appended to document reference 14.11) containing permission from Secretary of State for Transport to send the email correspondence to the ExA to confirm that they no longer have any interest in plot 18-006. Following confirmation of the de-trunking order, the Applicants agents are seeking the necessary land rights from East Riding of Yorkshire Council in their capacity as Highway Authority and assumed landowner.

The Crown Estate

31. The Heads of Terms have been agreed and an Option Agreement and s135 letter are in the process of being prepared. The Applicants are hopeful that these will be completed before the end of Examination.

2.4 Funding

Project cost

32. The Applicants confirmed that negotiations with contractors are ongoing and provision of a headline figures for each element of the project cost is commercially sensitive. Anything submitted would need to be redacted and would need to be subject to shareholder approval. The Applicants noted the ExA's position that documents cannot be submitted on this basis.

33. The Applicants noted that they would consider whether costs from other projects could be submitted as a comparison and whether the overall estimated project cost could be updated in line with Retail Price Index.

Ecological compensation measures

34. The Applicants confirmed that costs relating to compensation measures are confidential given commercial discussions with landowners and providers. This is the position taken on this project, notwithstanding the level of detail that has been submitted on other projects.

Shareholder credit rating

35. The Applicants noted that the **Funding Statement (Revision 3)** [REP2-008] provides a credit rating for the shareholders. This is included in paragraph 30, which has been updated.

3 The Applicants' Summary of Oral Submissions made at ISH3

3.1 Aviation and Radar

Helicopter operation mitigation

36. The Applicants confirmed that **Appendix 15-3Helicopter Access Report** [APP-129] has been updated and will be submitted at Deadline 4. The Applicants explained that the updates to the Helicopter Access Report were based on comments received from the Maritime Coastguard Agency on search and rescue. The Applicants reiterated that the updates to the assessment do not impact the overall conclusions of the Report.

37. The Applicants explained that **Chapter 15 Aviation and Radar** [APP-125] applies a worst-case scenario in relation to the impact on helicopter platforms and that a need to engage with affected platform operators was identified. Four platforms were identified in the relevant area (Cavendish, Munro and Cygnus A and B). The Applicants noted that of those four, Cavendish has been decommissioned and removed, and given the location and separation distance of the Munro platform from the Projects, there is minimal impact. It is also noted that the platform is being decommissioned and due for removal pre-construction of the Projects.

38. As for Cygnus A and B, the Applicants held three meetings with Neptune Energy (the operator of the Cygnus A and B platforms) in the year prior to submitting the DCO application and shared the Helicopter Access Report as part of this engagement. The Applicants highlighted that Neptune Energy had not requested further mitigation based on the worst-case scenario. As such, the Applicants do not foresee the need for further mitigation.

Radar effects

39. The Applicants explained that they had a meeting with the Ministry of Defence (MoD) on 6 March 2025. The Applicants wish to reiterate that no infrastructure within the DBS East Array Area would be in the Radar Line of Sight of the Primary Surveillance Radar (PSR) at Remote Radar Head (RRH) Staxton Wold, and therefore mitigation discussions related to the DBS West Array Area only. No offshore wind specialists were present for MoD at the meeting so progression of discussion was limited regarding mitigation and understanding a solution for both parties where the MoD objection could be removed. The Applicants presented four key questions to MoD on radar which the MoD agreed to engage relevant colleagues with. The four key questions the Applicants presented that they are keen to understand were:

a. The appropriateness of the draft requirement wording for any impacts caused by DBS West (Requirement 31, part 1, schedule 2 wording provided to MoD and already in the Draft DCO);

b. The extent to which the MoD agrees that Programme Njord will resolve the mitigation required for the impacts of DBS West on Staxton Wold based on earliest generation of 2030/2031;

c. Assuming Programme Njord will provide mitigation for DBS West over the long term, but may not be delivered in time to cover first power from DBS West, whether mitigation discussions need to be held in relation to interim arrangements; and

d. What the next steps would be in terms of progressing these discussions between both DBS and MoD and in terms of MoD dialogue with the ExA.

40. The MoD agreed to engage relevant colleagues with these questions but could not provide a timeframe for a response. The Applicants confirmed that they are awaiting further engagement from the MoD. However, the Applicants noted that they are aware that MoD have submitted a preferred Requirement into the examination for the Outer Dowsing Offshore Wind Farm. The preferred Requirement is similar to the wording which is currently in the Applicants' Draft DCO.

41. The Applicants noted that the UK Government have released a new policy for delivery and funding of air defence radar mitigation within the Clean Power 2030 Action Plan (released in December 2024). The Applicants understand that an enduring radar mitigation solution will be delivered via Programme Njord by the MoD with government funding, removing the funding requirement for a radar mitigation solution from offshore wind developers. Therefore, it is understood by the Applicants that the mitigation solutions required for any impacts of the Projects on the military radar at RRH Staxton Wold will be for the MoD to select and bring forward, including via their Programme Njord, based on design details and project timelines provided by the Applicants.

42. The Applicants expressed that they are keen to understand the basis for agreeing appropriate mitigation for impacts to Staxton Wold PSR within Programme Njord. The Applicants noted that they will continue to try and progress these discussions. The purpose of these discussions will primarily be to agree the wording (if any) of a Requirement to be included within the Draft DCO and any required interim mitigation measures (such as MoD using the Staxton Wold upgraded radar to mitigate any effects from DBS West). The Applicants confirmed that the Requirement would restrict the operation of the turbines at DBS West until any such mitigation is in place.

Mitigation hierarchy – effects on Staxton Wold

43. The ExA asked the Applicants to explain how they have avoided effects on Staxton Wold. In response, the Applicants explained that they undertook work since Preliminary Environmental Information Report (PEIR) to refine the Array Areas and the Envelope of DBS West. Due to that, the South-West boundary moved further to the East which has reduced the impacts on the Staxton Wold radar.

44. The Applicants explained that developers need to balance a range of considerations and cannot avoid all impacts in every case. Adjusting the array area to avoid impacts on Staxton Wold would have resulted in impacts to other receptors. Overall judgement has been applied to the design and the siting of the Project with respect to avoiding effects.

Turbine height

45. The Applicants explained that the Projects use the 'Rochdale Envelope' method which allows for the maximum adverse case scenario (i.e. worst-case) to be assessed in the Environmental Statement (ES) and a DCO granted on this basis.

46. The maximum design parameters, such as tip height, included within the Envelope are needed to ensure that the Projects are as commercially viable as possible. The Applicants explained that the Envelope approach builds in flexibility and keeps options open which allows the Applicants to respond to the inherent uncertainty of developing a wind farm (such as construction delays).

47. The Applicants provided further context, explaining that there has been long running dialogue between the offshore wind industry and the Government on this. The UK Government has ambitious clean energy targets, including getting to net zero by 2050, which involves maximising capacity. The NPS EN-3 supports this, stating that to meet the Government's objectives, all offshore wind developments are likely to need to maximise their capacity. The Applicants acknowledged that there is a tension between facilitating and maximising development and how the mitigation hierarchy may be applied at the 'avoid' stage. The Applicants noted that they were responding to strong signals from the Government to maximise the renewable energy generation and capacity for its Projects. The Applicants highlighted that this context is important to understand when applying the mitigation hierarchy and noted that the Government has clarified this position by delivering mitigation through Programme Njord, effectively accepting that impacts could not be fully avoided and mitigation would be required.

48. The ExA asked whether the Projects would be commercially viable at a lower tip height. The Applicants explained that it was difficult at this stage to confirm what is or is not viable, and it ultimately comes down to whether the Projects can remain competitive. However, the Applicants noted that overly restricting turbine height at this stage will not provide any benefits when the impact on Staxton Wold can be mitigated by other means. The Applicants highlighted that there are competing pressures when considering tip height which the Applicants must balance, for example, kittiwake benefits from higher air gaps from sea level and would prefer higher tips.

49. The Applicants reiterated that the Rochdale Envelope approach is fundamental to this Project and all other offshore wind projects to ensure they stay competitive and are not unnecessarily restricted.

3.2 Commercial Fisheries

General assessment queries

50. The Applicants provided an update on its engagement with the National Federation of Fisherman's Organisation (NFFO). The Applicants explained that it has held meetings with the NFFO and they have now agreed to disagree the Environmental Impact Assessment (EIA) methodology used by the Applicants with 'no material impact' as a caveat.

51. There is outstanding disagreement between the NFFO and the Applicants on the embedded mitigation measures. This will be considered when further developing the **Outline Fisheries Liaison and Co-existence Plan (Revision 4)** [document reference: 8.28].

52. The Applicants explained that meetings were held in November 2022 with the Commercial Fisheries Working Group as well as with the NFFO to discuss the EIA methodology. Discussions with the NFFO are ongoing and a further meeting is planned to take place in mid-April 2025.

53. The Applicants noted it would update the Statement of Common Ground (SoGC) with the NFFO and that it will be submitted at Deadline 4.

Alternative fishing grounds

54. The Applicants explained that alternative fishing grounds differ in size depending on the receptor. The main receptor in the assessment is under 10m static pots and traps. Alternative fishing grounds for that receptor are likely assessed within the alternative fishing ground area. However, the Applicants noted that pelagic vessels range is outside the Economic Zone for the UK so are not included.

55. Within the Commercial Fisheries Study Area there are already various restrictions on commercial fishing, including:

a. Permits to utilise certain gear types, and prohibitions of other gear types within the inshore region;

b. Byelaw prohibiting bottom-towed fishing across the whole of the Dogger Bank Special Area of Conservation (SAC) and a buffer zone;

c. Prohibitions on scallop dredging during certain times of the year and in specific areas;

d. Prohibition on fixed nets from 1 March to 30 September; and

e. Prohibition on pot vessels over 10m in length in certain circumstances.

56. The Applicants explained that the data is not available to identify individual vessels when considering increased transit to alternative fishing grounds which is why it has not been assessed. The Applicants highlighted that some vessels do not regularly enter the study area, particularly the pelagic vessels which may only enter once a decade.

57. The Commercial Fisheries Study Area was agreed to by the relevant stakeholders during early consultation. During consultation, the operators of mobile vessels gave feedback that the footprint of the Proposed Development does not have an effect on their fishing due to their large quota areas.

Coexistence and cooperation agreements

58. The Applicants agreed to come back in writing on the role of the arbitrator and the alternative dispute resolution process in the **Outline Fisheries Liaison and Co-existence Plan (Revision 4)** [document reference: 8.28].

59. The Applicants explained that cooperation agreements will be entered into prior to construction works occurring within the relevant areas. These agreements may change with the life of the Projects, so will need fluidity, however the Applicants confirmed that the intention is to secure initial agreements prior to any impacts occurring.

Effect of potential benthic compensation

60. The Applicants explained that the process of implementing an extension to or a new SAC was a process led by Department for Environment Food and Rural Affairs (Defra) and the Applicants have little influence over that process. Despite this, the Applicants acknowledge that they would stand to benefit from it if the process was successful and are a keen spectator.

61. As such, impacts to commercial fisheries as a result of any new designation will be unknown until the benthic compensation is decided by Defra.

3.3 Infrastructure and Other Users (inc. wake loss)

Wake loss

62. The Applicants reiterated their position that offshore wind farms are not included in the scope of 'Other offshore infrastructure and activities' in National Policy Statement (NPS) EN-3 paragraphs 2.8.196 to 2.8.203. The Applicants acknowledged that it is open to the Secretary of State (SoS) to conclude that this issue is an important and relevant consideration under section 104(2)(d) of the Planning Act 2008. This is what the SoS decided on Awel y Mor (AyM).

63. As is custom, the Applicants have included information in **Chapter 16 Infrastructure and Other Users (Revision 3)** [REP1-011] of the Application on interaction with other offshore wind farms. However, the Applicants' overarching position is that a wake loss assessment does not sit within that.

64. The Applicants provided a summary of the positions taken in other offshore wind farm examinations:

Mona Offshore Wind Farm

65. This is the first application which had to grapple with the AyM decision within its examination. Wake loss was not identified by the applicants as an issue at the PEIR stage. In its ES, the applicant noted concerns raised by the other wind farm operators on wake loss. The applicant's original position was that NPS EN-3 paragraph 2.8.44 recognises that offshore wind development will occur in or close to areas where there is other offshore infrastructure, and noted The Crown Estate project boundary requirements of 7.5km. The Applicant's position was that there were no other operational offshore wind farms located within 7.5km of the Mona Array Area and therefore the Mona Offshore Wind Project location adheres to the The Crown Estate siting criteria. Following the statutory pre-application consultation, the Applicant reduced the Mona array area which increased the distance from the nearest existing operational wind farm by 4km, and also increased the distance from a number of other operational wind farms, thereby reducing the potential for wake effects.

66. During the Mona Examination, the Ørsted IPs instructed Wood Thilsted Partners Ltd to develop an independent wake impact assessment for their operational offshore wind farm assets in the Irish Sea. This wake impact assessment was submitted into the Examination. The applicant did not submit its own wake assessment but did update its GHG assessment in response.

67. At the end of its Examination period, the applicant's position on wake loss, as detailed in its closing submissions, can be summarised as follows:

a. The applicant considered the issue of wake effects in the Other Sea Users chapter of the ES, presenting information on compliance with The Crown Estate Round 4 separation criteria with existing projects, and setting out the distances between Mona and those projects. On the basis of those separation distances the potential for wake effects was not considered further.

b. The applicant considers that, on a proper interpretation of the EIA Regulations and the paragraphs of NPS EN- 3, there is no requirement for the applicant to conduct a detailed wake loss assessment, and that the NPS policy tests have been met.

c. At over 30km (at the very closest) from the Ørsted IPs projects the Mona Offshore Wind Project cannot in any sense be said to be 'close' in terms of NPS EN-3 paragraph 2.8.197.

d. There is no appropriate policy or guidance for offshore wind farm areas on which to undertake a wake loss effects assessment, and no established regulator looking at this matter.

e. Paragraphs 2.7.197 and 2.8.198 should be read in light of the wider strategic context, and the exercise already undertaken by The Crown Estate in assessing what separation distance was acceptable for Round 4 projects.

f. The modelling of wake loss effects is dependent on very accurate information of the wind farm that is being proposed as well as the existing operational wind farm. This information is either not known or confidential and not available in the public domain.

g. The impacts of any mitigation for wake loss would have significantly greater impact on Mona than on projects over 30 km away.

h. A DCO requirement is neither justified or workable, and would fail the tests set out in paragraph 4.1.16 of EN-1.

i. A commercial agreement is not suitable or necessary in this matter as there are no residual effects and it is not supported by policy.

Morgan Offshore Wind Farm

68. Much like in Mona, wake loss was not identified as an issue at the PEIR stage. The Applicant in its ES Chapter 9 Other Sea Users responded to concerns raised by other offshore wind farm operators, and argued that its exceedance of The Crown Estate's 7.5km spacing criteria is such that it should not be considered to be 'close' to the other operational schemes for the purposes of paragraph 2.8.197 NPS EN-3. There is no policy or offshore wind farm EIA guidance securing the process by which to scope in and assess, in EIA or socio-economic terms, the operational effects of one offshore wind farm's wind distribution on a neighbour for all stages of the lifespan of the proposed wind farm. As such the applicant did not consider wake effects required further assessment.

69. During the Examination, the Ørsted IPs instructed Wood Thilsted Partners Ltd to develop an independent wake impact assessment for their operational offshore wind farm assets in the Irish Sea. This wake impact assessment was submitted into the Examination. The applicant did not submit its own wake assessment, but did update its GHG assessment in response.

70. At the end of its Examination period, the applicant's position on wake loss as detailed in its closing submissions can be summarised as follows:

    a. The Morgan Generation Assets meets The Crown Estate's spacing criterion between Round 4 developments and existing offshore wind farm infrastructure.

    b. The Morgan Array Area was reduced following receipt of statutory pre-application consultation responses. This boundary change between PEIR and application submission which increased the distance to the offshore wind farms operated by the Ørsted IPs (from 7.5km to a minimum of 8.1km) has indirectly mitigated any wake impact by 0.2 % on average across the Ørsted IPs projects.

    c. There is no justifiable basis for a further amendment to the boundary as "mitigation" and there is no 'appropriate wake mitigation' that can be applied between different offshore wind projects, which would not have a disproportionate effect on the Morgan Generation Assets and further mitigation is therefore not feasible.

    d. The applicant considers that, on a proper interpretation of the EIA Regulations and the paragraphs of NPS EN- 3, there is no legal or policy requirement for the Applicant to conduct a detailed wake loss assessment, and that the NPS policy tests have been met.

    e. The applicant does not consider an assessment needs to be conducted, given the lack of policy and guidance to undertake one. That lack of policy and guidance is also of relevance to the drafting and benefit of a DCO Requirement which might seek to control design parameters. Such a requirement is unnecessary to make the development acceptable in planning terms, and wholly unreasonable.

    f. Any mitigation would have a significantly more detrimental impact on the energy generation from Morgan than any minor benefit that may be accrued by the Ørsted IPs projects. There is no appropriate wake mitigation as there is no policy or guidance requiring an assessment of wake impacts, or stating what mitigation would be considered appropriate, to ascertain what level of residual effect is considered acceptable.

    g. A commercial agreement is not suitable or necessary in this matter.

Morecambe

71. As with Mona and Morgan, wake loss was not identified as an issue at the PEIR stage. The applicant in its ES noted that yield / wake effects were raised in consultation by other offshore wind developers. In Chapter 17 Infrastructure and Other Users, the applicant noted that the distance of the closest windfarm (12.9km away) exceeds the 7.5km criteria set by The Crown Estate as part of the Round 4 licencing. The applicant also pointed to the Frazer-Nash, 2023 study which identified that at a greater than 10km separation between windfarms there is a levelling off of total interaction loss with buffer distance and by 20km the wake losses become 'vanishingly small'. The applicant noted that the Morecambe offshore wind project sits at a greater distance than 10km from other windfarm sites and therefore, the potential for wake effects were not considered further.

72. During the Examination, the Ørsted IPs instructed Wood Thilsted Partners Ltd to develop an independent wake impact assessment for their operational offshore wind farm assets in the Irish Sea. This wake impact assessment was submitted into the Examination. The Applicant did not submit its own wake assessment, but did provide an updated carbon assessment in relation wake effects and shipping within a technical note.

73. At the time of writing, the Morecambe examination is still ongoing. The applicant's latest position on wake loss can be summarised as follows:

    a. The Morecambe proposed development is not "close" to the Ørsted IPs' projects in terms of NPS EN-3 paragraph 2.8.197 and, accordingly, a bespoke wake assessment is not required.

    b. The applicant considers that it could not produce anything substantially different to the Wood Thilsted report submitted by the Ørsted IPs. This report suggests very low project-alone numbers, with all of the Ørsted IPs' projects having impacts of under 1% save for two projects that are just above 1%.

    c. There is limited practical mitigation available for wake losses once a site boundary has been identified, as the impact is a function of the scale and distance of a project.

    d. The NPSs recognise that residual impacts on other offshore infrastructure can remain and be considered acceptable.

    e. The NPSs do not require compensation or indemnification of all theoretical economic losses attributable to increased congestion and coexistence of the marine environment.

Five Estuaries

74. Consistent with the other offshore wind farms above, wake loss was not identified as an issue at the PEIR stage. Wake loss was also not addressed in the ES. Wake loss was stated as a ground for registering as an interested party by East Anglia TWO Ltd in their relevant representations.

75. During examination, East Anglia TWO Ltd submitted into the examination a report titled 'Wakes and Blockage Impact Assessment of the proposed Five Estuaries Wind Farm on East Anglia 2 Wind Farm'. The applicant did not submit a wake assessment.

76. In its closing statement, the applicant's position on wake loss can be summarised as follows:

a. The provisions in EN-3 have not historically required any new offshore wind farm development to assess wake loss effects on existing or emerging wind farms.

b. If the SoS applies the policies on 'other offshore infrastructure and activities' to offshore wind farm projects, then he is directed by para 2.8.342 of NPS EN-3 to take a pragmatic approach in relation to the potential effects of an offshore wind farm project on other offshore infrastructure. This pragmatism is particularly important in relation to projects within the same asset class, where there is already a sophisticated quasi-regulator setting the parameters for the location of new projects in relation to existing or emerging ones. The applicant complied with The Crown Estate's buffer distance for Extension projects of 5km. The applicant refined the northern array boundary during the pre-application consultation phase, which had the effect of increasing the average distance between the two projects.

c. In the case of wake effects, the applicant is not aware of any policy or guidance which requires such an assessment to be carried out as part of offshore wind farm EIAs, or how an assessment ought to be undertaken.

d. The EN-3 policies in contention are stated to apply to 'existing offshore infrastructure' (which East Anglia 2 is not) or offshore 'activities'.

e. Paragraph 2.8.2 of EN-3 urges developers to maximise offshore wind project capacity within the technological, environmental, and other constraints of the project. The over-riding policy consideration should be to maximise the aggregate Annual Energy Production (AEP) of projects to contribute towards government targets.

f. The Crown Estate's Extension separation criteria, as referenced above, are also important in considering the correct application of paragraphs 2.8.197 and 2.8.198 of NPS EN-3.

g. A DCO requirement is neither justified or workable, and would fail the tests set out in paragraph 4.1.16 of EN-1 that a requirement must be necessary, relevant to planning, relevant to the development to be consented, enforceable, precise, and reasonable in all other respects.

h. The applicant does not consider a commercial agreement is suitable or necessary in this matter, given that it has followed normal practice and respected The Crown Estate's buffer distance.

Outer Dowsing

77. In line with the other offshore wind farm DCOs, wake loss was not identified as an issue at the PEIR stage. The applicant in its ES noted that Ørsted IPs raised wake effects as an issue during consultation. The applicant's original response to this issue was that they had complied with the requirements of The Crown Estate's Offshore Wind Leasing Round 4 process, including that projects may not be located within 7.5km of an existing offshore windfarm unless the owner of the offshore wind farm has given their written consent. The applicant stated that this requirement is considered to mitigate against the potential for the Outer Dowsing project to impact the energy output from the other wind farms.

78. During the examination, the applicant submitted a wake loss technical note which showed the wake effect on neighbouring offshore windfarms was not significant in EIA terms, and therefore a wake loss assessment was not required. The Ørsted IPs submitted its own wake study technical note. The Applicant submitted a further independent wake study carried out by Wood Thilsted Partners Ltd that was agreed by both parties.

79. In its closing statement, the applicant's position on wake loss can be summarised as follows (to note, this was not available at the time of ISH3 but has been included in order to provide the ExA with the most up to date information):

a. The question of the applicability of the policies relating to "Other offshore infrastructure and activities" in EN-3 to wake effects experienced by other offshore wind farms is the subject of a debate across multiple examinations which will be determined before Outer Dowsing.

b. If the SoS decides EN-3 policies do apply, then the applicant has put forward evidence demonstrating that wake effects arising from the Outer Dowsing Project are very small and cannot be said to be significant in EIA terms or material in policy terms.

c. The imposition of a requirement following the model of Requirement 25 of the Awel y Mor Offshore Wind Order 2023 would not be appropriate as it fails the policy tests for requirements.

d. The imposition of protective provisions, which have not been agreed by the Applicant must logically be subject to the same tests as the imposition of requirements, particularly in light of the criminal sanctions for breach. The proposed protective provisions fail the tests for the imposition of requirements, as well as broader principles of legal certainty, and there is no basis in law, policy, precedent or evidence for the requested payment provisions.

80. The overall positions taken by the applicants in the other offshore wind farm examinations, summarised above, is that there are various contested points regarding the applicability of, and approach to applying, the EIA Regulations and the applicability of, and the approach to applying the 'offshore infrastructure' policies of NPS EN-3. The factual matrix of the applications varied as regards the distances involved and the stage at which the objecting projects were in the development cycle (ranging from consented through to operational). The applicants were consistent in rejecting a requirement (or protective provisions) requiring design steps to reduce wake effects or to provide financial compensation. The summaries above do not claim to cover every point and nuance raised by the relevant parties in these Examinations.

81. In relation to paragraph 2.8.344, the Applicants explained that context is required when considering whether this policy has been complied with. The SoS is directed by paragraph 2.8.342 of NPS EN-3 to take a pragmatic approach in relation to the potential effects of an offshore wind farm project on other offshore infrastructure. As previously noted, the pragmatism applied by the SoS will necessarily vary depend on the class of infrastructure it is being applied to. This is particularly important in relation to projects within the same asset class, where special considerations plainly apply.

82. In particular, the Applicants noted that there is already a sophisticated quasi-regulator (The Crown Estate) setting the parameters for the location of new projects in relation to existing or emerging ones. These parameters included specifying a buffer distance to take account of wake effects and other considerations. The Applicants complied with The Crown Estate's buffer distance for Round 4 of 7.5km. This buffer had been increased from the 5km which was used for the 2017 Extensions round. The licensing process allows offshore wind farm developers to focus on maximising its energy generation, as the buffer distance already takes into account wake effects.

83. The Crown Estate has a unique role in this sector and its role in seabed licensing is expressly referenced in paragraph 3.8.31 of EN-3 as regards siting of new projects. The Crown Estate has a government-granted monopoly of offshore wind licensing outside 12 nm (section 84 Energy Act 2004). It liaises with the Department for Energy Security and Net Zero (DESNZ) in relation to the timing, overall capacity and design of offshore wind licensing rounds. It has a statutory function as competent authority under the Habitats Regulations for such offshore wind licensing rounds as 'plans' under those Regulations. It has engaged in a range of initiatives to constructively influence the interaction between the offshore wind sector (and other sectors it has an interest in such as aggregates extraction and carbon dioxide storage) and other stakeholders in the marine environment. It funds and runs various research programmes directly and indirectly relevant to the development of offshore wind.

84. The Applicants reiterated the distance between the DBS projects and the Ørsted IPs' projects, with some being between 40km – 100km away from the Projects, and the remaining projects at even further distances. In comparison to AyM, which only had one project claiming wake effects, the Applicants have multiple projects on different points of the compass requesting mitigation and compensation. The Applicants highlighted that there is no available mitigation which could possibly mitigate the impacts claimed, as steps to mitigate in one direction would cause greater effects in the other.

85. Further, there is nothing in NPS-EN3 that requires financial compensation and there is no precedent in the planning system for new developments having to provide financial compensation to other developments in this type of situation. Anyone who is seeking financial compensation (which was rejected by the SoS in AyM) is trying to take the planning system in a direction for which there is no basis.

86. With regard to the interpretation of 'close', an important aspect to consider is the buffer distance as set by The Crown Estate. As noted, The Crown Estate has a deep understanding and crucial role in the offshore wind industry. The Crown Estate took wake effects into account, amongst other factors, when setting the buffer distance for the Round 4 licensing round. The industry had time to comment and participate in consultation on the buffer distance and as far as the Applicants are aware, they were not lobbied to increase that distance. The Applicants also explained that the buffer distance is fundamental to site selection and the potential interaction with other users. As such, this point is already addressed in advance of the planning process and is acknowledged in EN-3.

87. If wake effects are in consideration, then it is important that the SoS take into account why the buffer distance was set, who it was set by, and what reliance was placed on that by offshore wind farm developers.

88. In addition, the Applicants highlighted that no one has a legal 'right to wind'. This is supported in the leading text on torts, Clerk and Lindsell on Torts 24th edition (citing the case of *Webb v Bird and Others* (1863) 13 Common Bench Reports (New Series) 841) which states "[i]t is not a nuisance to prevent the free access of air to another man's land, although it may cause him damage, for example by building so to cut off the winds from a windmill." (at Para 19-150)

89. The Applicants reiterated that no one disagrees with the statement that wake effects may go beyond 7.5km, but it is about striking a balance and that is where The Crown Estate decided to strike it. Overall, the Applicants maintain that none of the offshore wind farms objecting are 'close' with regard to EN-3.

90. The Applicants explained that precedent comes up a lot in DCO Examinations especially in DCO drafting. For example, applicants are frequently told by Examining Authorities that precedent alone is not sufficient justification for inclusion of provisions in DCOs, even where the relevant language has been approved multiple times by the relevant Secretary of State. In practice, there is a balance to be struck between taking account of previous DCO decisions, whilst also being mindful of different circumstances which may distinguish a particular case.

91. In the case of the AyM decision, the Applicants acknowledge that the ExA highlighted that it was setting a precedent in recommending Requirement 25. However, its reason for reaching that conclusion was very narrow – simply that the wording in EN-3 did not expressly disapply the relevant paragraphs to other offshore wind farms. Even though the counter argument was very strong (particularly in the case of what is now paragraph 2.8.345 which expressly refers to 'other offshore industries' in a way which simply cannot refer to offshore wind projects).

92. The previous Secretary of State did not discuss this point in her decision letter, which simply accepts the recommendation. The Applicants submit that it is unlikley that the previous SoS realised what impact this decision would give rise to, which has played out over the various examinations summarised above. A range of issues have come under the most intense spotlight, which merit a fundamental reconsideration of the approach adopted in the AyM decision.

93. Furthermore, Requirement 25 was imposed without any consultation on its drafting and there are significant issues relating to whether this type of condition, in principle and in its detailed drafting, meets the tests laid down in EN-1. The Applicants have made submissions on this concern as have other applicants in the examinations referred to above.

94. The Applicants also consider that the Clean Power Action Plan 2030 is of little weight, and the statements on wake effects are not significant. It simply highlights that there is an industry issue, explains that an expert group is being convened to consider it and recites the facts of the AyM case. It does not set or confirm a policy.

95. It is therefore open to the new SoS to make a lawful decision and not impose an AyM type Requirement, as there is no binding precedent.

96. The Applicants accept that wake effects are relevant to the GHG assessment and a minor consideration should be given to the potential reduction to the AEP of other wind farms. While this has not been done historically, it has been raised recently in other examinations. The Applicants will submit a technical note addressing this at Deadline 4 (**Principles of Greenhouse Gas Assessment in Offshore Wind** [document reference 14.10]). For the purposes of that note, sensitivity tests have been carried out based on impacts to AEP of 0.5%, 1% and 2% of other offshore wind farms within 50km of the Projects. The Applicants reiterated that considering wake loss in the GHG assessment has not changed the conclusion that there is an overwhelmingly large beneficial GHG effect from the proposed Projects.

97. The Applicants confirmed that the prevailing wind direction in this area is from the south-west, but that wind does also come from other directions.

Mitigation

98. The Applicants explained that a wake assessment is not required to make conclusions on what mitigation may be available for wake effects. This is because any mitigation generally results in a significant reduction in generation for the mitigating project for an almost unmeasurably small benefit to the mitigated project. For example, extensive studies done for AyM, which looked at mitigation options including buffer distance, layout style, and turbine operating modes for wake effects on Gwynt y Mor, found that any mitigation performed in the design of AyM had 50 times more impact on AyM to one times to Gwynt y Mor. For DBS, the disproportionate impact is likely to be higher due to the distances involved.

99. Other parties have raised the option for other types of mitigation like wind sector management. However, the Applicants have not considered this here as wind sector management was developed for mitigation of loading issues in onshore wind farms when turbines are closely spaced. There is no evidence that this type of mitigation is suitable in the context of an offshore wind farm or over great distances or that it is even possible to procure the relevant turbines.

100. The Applicants are aware of other forms of mitigation that are in research phases, but these options realistically will not be available within the next 15 years. The Applicants have also considered changes to turbine height as a form of mitigation, however this proved to not be effective at providing mitigation to wake effects.

101. Overall, the Applicants concluded that there is nothing viable in terms of wake loss mitigation for the Projects at this time.

102. The Applicants submitted that private agreements are not commonplace for wake loss. These agreements normally only take place when projects are within the The Crown Estate buffer distance and are owned by different owners. A move to including protective provisions as suggested by the Dogger Bank Projcos has been resisted by the applicants in every examination and they cannot be compared to protective provisions in place for statutory undertakers where there may be a physical impact on their infrastructure.

103. The Applicants emphasised that the Ørsted IPs and the Dogger Bank Projcos are better placed to assess wake impacts on their own projects than the Applicants. This is particularly the case because they will have a deep understanding of the wind conditions affecting their projects, which are a very considerable distance from the Projects.

104. The ExA posed several questions on the predicted annual energy loss to Dogger Bank A as predicted in the wake loss assessment previously noted in **Chapter 16 Infrastructure and Other Users (Revision 3)** [REP1-011]. The Applicants at ISH5, responded to the ExA's request for further information in respect of the Applicants' withdrawn wake assessment conclusion previously referred to in **Chapter 16 Infrastructure and Other Users (Revision 3)** [REP1-011] and the strong indication from the ExA of the risk of further delay to the Examination if the ExA's requested information on this matter is not provided. The Applicants confirmed that they will provide a response to the questions raised by the ExA at ISH3 in respect of the Applicants' withdrawn wake assessment conclusion at Deadline 4. This will be done on a "without prejudice" basis.

105. The Applicants noted that the Dogger Bank Projcos will be submitting their own wake assessment at Deadline 4 and that the Ørsted IPs have also been requested to do so by the ExA.

106. Notwithstanding the Applicants' position that wake effects should sit outside the planning regime:

a. It is the Applicants' view in the case of Ørsted, it is much better placed to provide a wake assessment;

b. In the case of the Dogger projects, the Dogger Bank Projcos are better placed in some respects to provide a wake assessment given that the projects are not operational and some aspects of any assessment will involve the potential use of confidential information, depending on the approach adopted;

c. The Applicants reserve the right for their technical experts to comment on any wake assessment submissions which are made.

3.4 Shipping and Navigation

Vessel displacement queries including temporal effects and recreational vessel assessment

107. The Applicants provided an overview of their position on Shipping and Navigation, noting the following:

a. A comprehensive assessment of shipping and navigation hazards has been undertaken. This includes **Chapter 14 Shipping and Navigation** [APP-121] of the ES and the related appendices (**Appendix 14-1 Shipping and Navigation Consultation Responses** [APP-123] and **Appendix 14-2 Navigational Risk Assessment (NRA)** [APP-124]).

b. The NRA is the key technical document for shipping and navigation and has been undertaken in compliance with Marine Guidance Note (MGN) 654.

c. Based on the vessel traffic data collected as part of the NRA, traffic volumes in the region of the Southern North Sea containing the Projects' Array Areas are relatively low and there is no interaction with sensitive vessel types such as timetabled commercial ferries which would be most acutely disrupted. This is attributed to the distance offshore of the Projects' Array Areas and the presence of other nearby offshore wind farms under construction which have already deviated the bulk of traffic (Dogger Bank A, Dogger Bank B, Sofia and Dogger Bank C). The presence of these developments has already resulted in the displacement of commercial routeing in a manner which reduces interaction with the Projects' Array Areas. Therefore, further disruption to commercial routeing is expected to be negligible.

d. This view is supported by consultation during the NRA process with the Applicants understanding there to be no outstanding areas of significant concern in relation to shipping and navigation. Additionally, this view was reinforced by ongoing engagement with each of the Maritime and Coastguard Agency (MCA), Trinity House and UK Chamber of Shipping in October 2024 to discuss and progress their respective SoCGs. Discussions have been positive and constructive with all three parties, with this reflected in the status of each SoCG submitted at Deadline 1 (to be further updated for Deadline 4). The Applicants are confident that each SoCG will be fully agreed and completed during the examination process.

108. In relation to fuel consumption and distance, the Applicants noted that there is a negligible effect due to other offshore wind farms in the vicinity of the Proposed Development. As such, interactions with commercial vessels are limited. The Applicants noted that the issue of vessel displacement was also discussed with industry stakeholders.

109. The Applicants explained that distance is the pertinent factor for vessel operators when considering fuel consumption. Duration becomes a more important factor where a time sensitive service is being provided, such as commercial ferry and lifeline services. The Applicants stated that no such services operate in proximity to the Projects' Array Areas such that a deviation to the mean route position would be required.

110. The Applicants noted that an assessment on duration would be based on the relationship between distance, speed, and time. If duration was considered quantitatively then it would generally be identical to the proportion of distance change, i.e., up to 1% of the total route duration.

111. The Applicants submitted that the ExA's advice to the SoS should be that there are not appreciably longer transit times for deviated routes.

112. The Applicants explained that mitigation measures for recreational vessels include charting of infrastructure and promulgation of information. Owing to the distance offshore and length of voyages, the Applicants expect that recreational vessels operating in proximity to the Projects' Array Areas will be experienced and passage plan in advance, taking account of the presence of the Projects via the mitigation measures noted.

113. The Applicants noted that this was reflected in consultation feedback from the Royal Yachting Association and Cruising Association [APP-123], who commented that there was very limited recreational activity in proximity to the Projects' Array Areas and it was confirmed that displacement of recreational vessels is not a major issue in this area, nor the displacement of larger vessels into the path of recreational vessels. The Applicants confirmed that due to the distance of the Array Areas offshore, there was adequate open sea such that it would be expected that any recreational vessels using this area would be sufficiently experienced that they could navigate the area as they see fit.

114. In relation to NPS EN-3, the Applicants confirmed that no mitigation is required as there are no significant impacts to recreational users. Due to the open sea outside the Projects' Array Areas, the Applicants explained that commercial and recreational vessels can exist in harmony without any designated routes and safe navigation can continue.

Alternative shipping routes following the change to the proposed Offshore Export Cable Corridor

115. The Applicants confirmed that the baseline shipping routes still stands since there are no associated deviations and any impacts associated with the Electrical Switching Platform along the Offshore Export Cable Corridor would no longer be present. As such, the effects will be less than what was concluded in the Application for the assumed Worst Case Scenario. This also applies to the equivalent cumulative risk assessment.

Monitoring proposal timescales

116. The Applicants explained that it is difficult at this stage to confirm what minimum monitoring would be across the Projects with respect to cable protection and cable exposures. For example, perceived engineering risk drives monitoring, where there are no perceived engineering risks then less monitoring would be required and vice versa. The Applicants noted that more information on monitoring frequency will come out of post consent design and will be agreed by the Marine Management Organisation (MMO) as prescribed in the Deemed Marine Licences (DMLs).

117. The Applicants agreed to submit a note describing the type of engineering risks which would lead to more monitoring.

118. The Applicants explained that it will obtain new DMLs for any cable protection in new areas, or where the maximum volumes permitted by the DMLs were exceeded. The DMLs have conditions which require the Applicants to report on the deployment of any additional cable protection and how much material is deposited and where (Condition 23 in DMLs 1 and 2 and equivalent conditions in the other DMLs). In relation to anchor fouling risk during the time that extra protection has not been deployed, the Applicants will rely on notifications to mariners and others in relation to any cable exposures as provided in the DMLs (Conditions 9(11) and (12) of DML1 and 2 and equivalent conditions in other DMLs).

119. In relation to vessel traffic monitoring, the Applicants confirmed that it would intend to discuss with Trinity House and the MCA if any changes to the findings of the NRA required additional mitigation. The nature of such additional mitigation is not possible to define at present as it would depend on the nature of the changes. The Applicants took an action to coordinate with the MCA on updating section 3.3 of the **Outline Vessel Traffic Monitoring Plan** [APP-254] to provide more certainty on how changes identified as a result of monitoring would be addressed and secured.

4 The Applicants' Summary of Oral Submissions made at ISH4

4.1 Hydrology and Flood Risk

Flood risk datasets

120. The Applicants noted that the Environment Agency has published new datasets with the latest release being in March 2025. A technical note is being prepared to compare the new datasets with the older set, as well as information not previously published related to future flood risk; however, an initial review suggests no significant change. This means that the findings of the original **Flood Risk Assessment (FRA)** [APP-168] remain valid.

121. A review of the updated data at the onshore converter station confirms that it is still in Flood Zone 1. Furthermore, the flood zone extents along the Onshore Export Cable Corridor and construction elements remain largely unchanged.

122. The Applicants noted comments made by the ExA and clarified by the Environment Agency regarding the suitability of the 2013 River Hull and Holderness Drain Flood Mapping Study. Although the new NaFRA2 dataset is more up-to-date, the Applicants agree with the Environment Agency that the 2013 study is the more detailed model and therefore remains valid for use in the **FRA** [APP-168].

Mitigation for the displacement of flood water

123. The Applicants confirmed that they are in discussions with the Environment Agency regarding updated data for the two Temporary Construction Compound (TCC) locations, shown as being located in Flood Zone 3 (confirmed as Flood Zone 3a). There is some disparity between the modelling results provided by the Environment Agency which, unlike the Flood Zone dataset, takes into account the presence of flood defences.

124. Updated data has recently been received by the Applicants, specific to the two TCC locations, and discussions with the Environment Agency to clarify this point will continue.

125. Mr Tandy asked where in the DCO it was secured that any TCC's in Flood Zone 3 would not raise ground levels. The Applicants confirmed that paragraph 190 of the **Outline Code of Construction Practice** (**OCoCP) (Revision 3)** [REP1-025] has been previously updated to add measures for TCC's in flood Zone 3 and queried whether this wording was now sufficient. Mr. Tandy reviewed this during the break and confirmed he was seeking further confirmation that ground levels would not be raised. The Applicants confirmed they would review again and discuss with the Environment Agency if there are any further measures they would wish to be added as mitigation for these compounds. The Applicants confirmed that this was discussed at the Hydrology and Flood Risk Expert Technical Group and the Environment Agency had requested gaps for flood channels to be included, which were added to the OCoCP prior to submission.

Watercourse crossings

Crossing methodology

126. The Applicants noted submissions made by the IDB regarding use of trenchless methods to cross certain watercourses. Discussions took place on the 8th April 2025 regarding these concerns. The Applicants' position related to the unnamed ordinary water courses and smaller crossings, where the **Obstacle Crossing Register (Revision 4)** [document reference 7.5.5.2] retains the option for open cut or trenchless crossing. For larger crossings, the Applicants are content to include a preference for trenchless methods. However, wording should be retained to allow open cut methods if conditions allow this. The Applicants will make changes to the crossing schedule and **OCoCP (Revision 3)** [REP1-025] and **Obstacle Crossing Register** (Revision 4) [document reference 7.5.5.2] to provide this reassurance to the IDB, at Deadline 4.

127. The Applicants have also discussed bank stabilisation options with the IDB if open cut methods are used. There would need to be a crossing method statement agreed with the IDB which would capture these methods. The Applicants hope that there will be a pragmatic discussion with the IDB but in the event of any disagreement, there is a dispute resolution process in the **Draft DCO (Revision 7)** [document reference 3.1]. Schedule 15, Part 4 (paragraph 12) of the protective provisions for the Drainage Authority in the **Draft DCO (Revision 7)** [document reference: 3.1] states that '*Any dispute arising between the undertaker and the drainage authority under this Part of this Schedule, if the parties agree, is to be determined by arbitration under article 47 (arbitration), but otherwise is to be determined by the Secretary of State for Energy Security and Net Zero on a reference to them by the undertaker or the drainage authority, after notice in writing by one to the other*'. The arbitration rules are set out in Schedule 16 of the **Draft DCO (Revision 7)** [document reference: 3.1].

Temporary watercourse crossings

128. The Applicants noted that discussions are continuing with the Environment Agency regarding crossing methodologies and that protective provisions will ensure that watercourse crossings can be approved by the Environment Agency as part of detailed design.

129. There are some areas of complexity including in the vicinity of a new solar farm development (Pear Tree Hill) where flexibility is required in terms of the temporary crossing of main rivers with the temporary haul road by 'clear span' structures. The Applicants explained a response to the Environment Agency's relevant representation, where this was raised was provided in October 2024 and included in the draft SoCG but the Environment Agency had not provided a response; they would seek to meet with them to discuss. The Applicants also noted concerns raised by the IDB regarding the long term maintenance of any permanent culvert structures and will respond to the IDB in writing on this point at Deadline 4.

130. The Applicants confirmed that temporary (haul road) crossings of watercourses have been assessed for the duration they will be in place (4 – 6 years) in each catchment area. The main impact from the crossing will be the trenched works to install a temporary crossing and culvert but the duration is also relevant with a longer period meaning a high magnitude of impact. Where a crossing is required, there will be mitigation in place including culverts to allow worst case flows.

Drainage matters

Surface water discharge rates and volumes

131. At the conclusion of ISH4, the Applicants confirmed that the proposed discharge rates for the Projects are subject to detailed design but will be restricted to the calculated worst-case 1:1-year greenfield run-off rate equivalent (typically 1.4 l/s/ha) - unless it's impractical to do so due to the risk of blockage from small diameter orifices in the control chamber. Debris screens and regular inspection and maintenance will reduce the risk of a blockage, but very small diameter orifices could result in an overly onerous maintenance burden.

132. Typically, increasing very low discharge rates to 1l/s (the minimum specified by the IDB), which is still a very low rate, would have no impact during more extreme storm events (for example the 1:30-year and 1:100-year events) since run-off from these events is proposed to be restricted to a discharge rate lesser than the equivalent greenfield run-off rate for these storm events (e.g. the 1:100-year event is limited to the greenfield (pre-development) 1:1-year run-off rate, not the 1:100-year run-off rate). Increasing discharge rates to 1 l/s would result in a minor increase in flows to the receiving watercourse(s) during the 1:1-year and 1:2-year storm events but any increase in flood risk is expected to be low, and considerably lower than the risk of overflow from regular blockages.

133. Proposals will be discussed and agreed fully with all relevant parties throughout the detailed design and approval stages to ensure flood risk is managed appropriately and effectively.

Delivery of all drainage features within the Onshore Export Cable Corridor order limits

134. The Applicants noted that sufficient space has been provided along the Onshore Export Cable Corridor for surface water management and soil storage. This is based on experience of the approach taken by other similar projects including Triton Knoll and Sofia offshore wind farms. The amount of land required in a given location will depend on topography and site specific consideration for each location, which will be a matter for the Contractor. The Applicants explained that construction drainage would be developed and implemented to minimise water within the Onshore Export Cable Corridor and trenches by ensuring ongoing drainage of surrounding land. During construction, the onshore cable installation would be designed such that it will be bounded by parallel drainage channels (one on each side), as described in section 6.3.2.3 of the **OCoCP (Revision 3)** [REP1-025] to intercept the existing land drainage. This water would be drained to new outfall locations and although these drains would be installed prior to construction, they would remain in place for the operational lifetime of the Projects.

135. Any water entering cable trenches during construction from surface runoff would be managed through the Surface Water Management Plan, as detailed in section 6.3.2.4 of the **OCoCP (Revision 3)** [REP1-025] and pumped via settling tanks, sediment basins or mobile treatment facilities to remove sediment, before being discharged into local ditches or drains via temporary interceptor drains. Any such drainage plant items and storage / attenuation areas would be located / relocated where required as part of the sequencing of works by the Civil Contractor and shall be located within the Onshore Export Cable Corridor Order Limits. The Contractor will optimise the arrangement of soil storage areas to ensure any required surface water management can be located at effective locations within each section of the works. Water would be discharged at a controlled rate into the existing drainage network via the pre-construction drains or using local ditches or drains.

4.2 Landscape Character and Visual Amenity (including good design)

Effects from construction compounds

136. The Applicants confirmed that the temporary construction compounds were assessed as part of the construction works and the assessment is based on the parameters set out in section 5.7.1.8 of **Chapter 5 Project Description (Revision 3)** [REP1-009] of the ES. Individual elements of the compounds are not assessed separately. The Applicants noted that the construction phase is defined as six years as a worst case scenario for the sequential construction scenario.

137. The Applicants noted that at viewpoints 2 and 3, the construction effects would reduce but would be replaced by the operational effects of the onshore converter stations.

Landscape mitigation hierarchy, with particular reference to compensatory measures

138. The Applicants confirmed that the mitigation hierarchy has been followed. They have sought to avoid impacts where possible and provided mitigation where necessary. The residual significant impacts are localised and will not affect landscapes. The landscape mitigation proposals include some enhancements but there are no proposed compensatory measures.

Landscape and Visual Impact Assessment (LVIA) Figures - Viewpoints 1 and 6 [REP2-024]: choice of location and representation of the worst case scenario for sensitive receptors

139. The Applicants explained that the viewpoints selected are taken from publicly accessible locations. It is not usual to show views from private locations unless specifically requested through dialogue with the local authority. In this case viewpoints were agreed with East Riding of Yorkshire Council (ERYC). A request for a viewpoint was raised by the tenants at Butt Farm but this was not included in their relevant representation. It is acknowledged there would be closer views from campsite fields and around the property at Butt Farm. However, the viewpoint selected in the LVIA is considered to show a representative view experienced by receptors from the public right of way. It also indicates the type of views that would be experienced by people at Butt Farm and the campsite, to the extent that these can be illustrated from a publicly accessible location. The Applicants agreed to consider the request from the tenants at Butt Farm and provide a response at Deadline 4.

140. With regards to comments about leaf cover, the Applicants accept there is a degree of uncertainty in modelling tree growth. It is not always possible to provide a precise indication of the future appearance of a tree or shrub. It should be noted that the year 1 view does not include mitigation planting at this location and therefore reliably represents the worst case.

141. The Applicants confirmed that a number of visualisations have been re-submitted to the ExA using winter photography. The Applicants agreed to review the leaf cover and provide a response at Deadline 4.

142. For viewpoint 6, the Applicants noted that the view was selected to illustrate the wider view of the countryside. It is accepted that following detailed siting there is some screening in the foreground which does not represent what someone would see from locations further along the path. The Applicants will consider whether any additional visualisations could be provided from different viewpoints and provide a response at Deadline 4.

Landscape and Visual Impact Assessment Figures - Viewpoint 3 [REP2-024]: potential for additional mitigation

143. The Applicants noted that the assessment acknowledges there is an opening in the landscape mitigation planting where the indicative permanent access road enters the site. This is due to the location of the Onshore Export Cables which would run into the Substation Zone as well as the access road. The location of the Onshore Export Cables and permanent access road within the corridor will be more accurately sited post-consent which will enable options for additional tree planting to the north-west of the Substation Zone to be considered. This could include woodland alongside the access road and / or tree planting within the hedgerow along the access road.

Outline Landscape Management Plan (OLMP) [document reference 8.11]

144. The Applicants confirmed that advanced planting is not factored into the landscape and visual impact assessment. This is to ensure that the worst case scenario is being assessed. Requirement 10 of the **Draft DCO (Revision 7)** [document reference 3.1] has been updated to ensure that a specific landscape management plan for advance planting is secured.

145. The Applicants confirmed that any advanced planting could not take place until consent had been obtained, but would be undertaken at construction outset to allow it to start establishing during the 4-6 year construction period. The Applicants explained that ERYC had already raised the issue of confirming those areas which could be planted as soon as possible and protecting them from future damage. The Applicants agreed that the **OLMP (Revision 4)** [document reference 8.11] would be updated to confirm that at DL4.

146. The Applicants noted that mitigation for the proposed development is not seeking to provide any mitigation for any other projects.

147. The Applicants are open to exploring options to work with the Humber Forest as set out in paragraph 30 of the **OLMP (Revision 3)** [REP2-031].

Implications of ash die back on existing woodland screening

148. The Applicants have not been able to survey trees outside of the Order Limits but consider that the presence of ash trees in the woodland around the site is limited. Therefore, the occurrence of ash die back would be limited in terms of impacts from screening from those woodland. The Applicants noted that they would liaise with ERYC to establish the potential rates of ash die back in the region. However, ERYC confirmed at the hearing when asked that they did not have any data that could be supplied on the presence of ash or rate of die back.

149. Requirement 11(2) of the **Draft DCO (Revision 7)** [document reference 3.1] already includes a process for removal of diseased species and replacement (in the **OLMP (Revision 3)** [REP2-031]). This would include Bentley Moor wood as this is within the Order Limits for the Projects. Other woodlands are not within the Applicants' control.

150. The Applicants stated that they do not consider that the presence of ash die back would affect the conclusion of the landscape and visual assessment. While the generally wooded nature of the local landscape is referenced in the LVIA, the assessment does not rely on woodland areas outside of the Order Limits, such as Risby Park wood and Birkhill Wood, providing specific screening for the substation.

Good design: architectural review, amendments to the **Design and Access Statement (DAS)** [REP2-027]

151. The Applicants explained that there is no specific definition for 'low level features' within the Substation Zone: where this term is referenced in the LVIA it simply means the lower parts of the Onshore Converter Station. Cross sections of the Substation Zone have been submitted to the ExA in Appendix A of the **DAS (Revision 2)** [REP2-027] which shows maximum heights of key infrastructure in relation to existing woodland and the proposed planting after 10 years, based on an indicative design.

152. The Applicants noted that screening is designed to grow over time. In the short term there will be relatively limited screening but this will develop. The precise amounts of screening would depend on where the viewer is in relation to the screening and the Onshore Converter Station. In terms of providing screening of low level features, such as fencing, the gate house, switchgear and vehicle movement all of which are confirmed to be below 10m in the cross sections, the Applicants' expectation is that it would reduce visibility of these parts of development in most views at year 10.

153. The Applicants stated that maximum heights for specific elements of the Onshore Converter Stations would not be known until detailed design but a maximum building height and footprint for the purposes of defining the Rochdale Envelope for the ES have been included in section 5.7.2.1 of **Chapter 5 Project Description (Revision 3)** [REP1-009] and indicative heights for other elements of the design are included in plate 4.6 and Appendix A of the **DAS (Revision 2)** [REP2-027].

154. The Applicants noted comments made by ERYC on the design review approach, received by email on the 8th April 2025, and a response will be provided in writing at Deadline 4. The Applicants consider that this process is still at a high level stage and will be subject to refinement at the detailed design stage in terms of number of people on the panel and who they will be. The Applicants are willing to add reference to Historic England as a consultee in the **DAS (Revision 2)** [REP2-027]. The Applicants also consider that the design panel should include people who are suitably knowledgeable about the type of infrastructure and members from RWE who are not part of the Project team, but can add valuable insights from work on other offshore windfarms.

4.3 Noise and Vibration

155. The Applicants noted concerns raised by ERYC on the wording contained in paragraph 34 (Section 5.2) of the **OCoCP (Revision 3)** [REP1-025] and agreed to make amendments to remove the wording *'No activity where significant noise is audible beyond the Onshore Development Area will take place outside of these hours including Sundays, public holidays or bank holidays apart from under the following circumstances'* and replace it with the following '*No plant or machinery in the construction of the Projects shall be used outside the agreed core hours 7am – 7pm Monday to Saturday and at no time on Sundays or Bank Holidays unless agreed in writing with the Local Authority, likely under the following circumstances:".* The Applicants confirmed that they had corresponded in writing with ERYC (via email, 03/04/25) in advance of the hearings to confirm that they would be willing to make this amendment. This approach has been agreed with ERYC.

156. The Applicants confirmed that the noise impact assessment is based on vehicle movements being from 6am until midnight. The assessment did not find any significant effects.

157. The Applicants noted that additional information regarding mobilisation of light and heavy goods vehicles, outside of core working hours, is provided in the Outline Traffic Management Plan (Revision 2) [AS-020] section 4.8, and paragraphs 33, 34 and 59. Appropriate loading / unloading and parking areas for construction vehicles would be designated within the construction sites to avoid the need for parking or waiting on the highway. These matters would all be managed and agreed with ERYC by the Traffic Management Co-ordinator, through the processes described in the OCTMP (Revision 2) [AS-020].

158. The Applicants noted that it would be happy to work with ERYC in relation to obtaining a s61 consent for certain activities but that specific locations cannot be agreed before a contractor has been appointed. This could be finalised as part of the Code of Construction Practice to be approved by the relevant planning authority under **Draft DCO (**Revision 7) [document ref: 3.1] Requirement 19.

4.4 Onshore Historic Environment

<u>Effects on heritage assets from construction</u>

159. The Applicants confirmed that effects from construction would be temporary and reversible. This would not give rise to any significant effects and there would be no harm to the significance of any designated asset. The following assets were considered in turn:

a. Catfoss Hall: The Applicants clarified that at its closest Catfoss Hall is 170m from the order limits and approximately 350m from the nearest temporary construction compound. The construction works would be temporary and would not change the character of the agricultural land which would remain effectively unchanged. There is also screening around Catfoss Hall which limits the impact of the works. It is also relevant to note that driveway and planting around the hall is a modern feature and is well maintained to retain a sense of seclusion. The Applicants confirmed there would be no change to the significance of the asset.

b. Cobble Hall: The Applicants noted that Cobble Hall is approximately 330m from the nearest temporary construction compound. Views from the asset to the pipeline route to the north are well screened and the longer views westward are into a modern agricultural setting. This receptor was scoped out of the assessment on the basis that adverse effects are unlikely.

c. Black Mill: The Applicants noted that the architectural value of the mill is quite generalised and there would be no significant effects from the works.

d. Anti-aircraft gunsite: The Applicants confirmed that works at the converter station would be perceptible at the scheduled monument. Construction noise would also be audible. However, this would not affect the significance of the asset. The Applicants noted that this sort of asset was not listed as a type of asset that would be sensitive to noise in Historic England guidance relating to aviation noise. It was also mentioned that the site is on private land with a limited number of visitors, especially at night where construction lighting may be perceptible.

Decommissioning effects

160. The Applicants confirmed there would be no direct physical interference during decommissioning as the land would already be disturbed. The effects would therefore be significantly lower than construction. There would also be a lower magnitude of impact for any change in setting. Any effects could also be controlled by the decommissioning plan (under requirement 27 of the **Draft DCO (Revision 7)** [document reference 3.1]).

Anti-aircraft gunsite scheduled monument near to Butt Farm

161. The Applicants clarified that the post-mitigation scenario for this asset will be once the measures in the **Design and Access Statement (Revision 2)** [REP2-027] have been applied.

162. The Applicants explained that there is a difference between policy and the strict application of EIA methodology. The harm test is an absolute test which does not have any regard to the value of a receptor. It therefore does not match up neatly with the EIA approach.

163. The Applicants confirmed that 'negligible' is used in the assessment where something is discernible but would not affect the significance of the asset. 'No impact' is used where there is effectively no difference.

164. The Applicants do not consider that additional detail on lighting is required. There would be no permanent lighting at substation. It would only be for maintenance activities. The **Draft DCO (Revision 7)** [document reference 3.1] also includes requirement 22, which secures a written scheme to manage and mitigate any artificial light emissions during operation, which Historic England are happy with.

165. The Applicants stated that it disagrees with Historic England's position that the gunsite is designed to fire southwards. The apex of the gun site triangle is northwest and this is where the gunfire would be directed to.

166. The Applicants mentioned that although the site is a rare survival, much of what is sited there is not unusual for sites that have survived. The visibility of the substation does not affect someone's ability to understand the operation of the gunsite. The sense of awe for the asset comes from what it was used for and imagining what it would have been like while operational and does not derive from the scale or complexity of the designated structures.

167. The Applicants confirmed that geophysical surveys and trial trenching have taken place to establish whether there would be any archaeological remains of the associated battery site within the Order Limits, and no such remains have been observed. However, ancillary structures for the gun site were deliberately quite ephemeral.

168. The Applicants noted that the converter station would not compete with the asset. It would not be in a simultaneous view as a viewer would be walking towards the site from Butt Farm. It would only be within view if someone scans across the site.

169. The Applicants stated that even if the ExA were to find that the project would result in harm to the asset, the benefits of the projects as set out in the Planning Statement would outweigh the harm. The project also benefits from having critical national priority status, as set out in NPS EN-1.

170. Discussions are ongoing with Historic England and the landowner with regards to proposals for enhancement measures. This would also need to be agreed with the relevant tenants. This would not physically interfere with the asset and would be implemented post-consent.

171. The Applicants confirmed that cumulative effects on the asset have been assessed but that unknown developments cannot be included. This would be a matter for those projects to assess.

4.5 Onshore Ecology

The extent of proposed temporary hedgerow and tree removal including effects on local wildlife sites and proposed mitigation

172. The Applicants confirmed that the 6m clearance area has been included to allow for safe access for HGVs from the public highway, however may be refined at the detailed design stage. The Applicants will review and amend any wording in the **OCoCP (Revision 3)** [REP1-025] and **Outline Ecological Management Plan (OEMP) (Revision 4)** [REP2-029] which suggests that a minimum of 6m would need to be removed even if not required, as this would not be in the case in practise. 6m clearance would be the maximum clearance for safe access but may not be required in all locations. The Applicants confirmed that 'where required' would be added to the OEMP wording to make this clearer.

173. The Applicants noted that any hedgerows being replaced will be species rich. Any relocation of hedgerows will be considered on a case by case basis depending on the distinctiveness of the hedgerows to see if it would survive translocation. This mitigation is not currently included in the **OEMP (Revision 4)** [REP2-029].

174. The suitability of the wording 'like for like' was discussed in regard to replacement planting as written in the **OEMP (Revision 4)** [REP2-029]. The Applicants highlighted that 'like for like' was used to identify where any failed planting would be replanted with the same species as was originally replanted rather than 'like for like' in respect of replacing a removed tree with a tree of the same species, age / maturity and in the same location as the removed tree, as this would not be practicable. The Applicants confirmed that they would re-visit the wording in the **OEMP (Revision 4)** [REP2-029] to remove any ambiguous wording in this respect. In addition, the Applicants would also look to maximise biodiversity when replanting.

Potential effects of trenchless crossing techniques on Bentley Moor Wood ancient woodland

175. The Applicants noted that the geometry for trenchless crossings under Bentley Moor Wood will be a matter for detailed design. This would depend on a further assessment of woodland depth and tree roots, and geotechnical conditions.

176. The Applicants confirmed that the long-term management of the woodland would be secured through the **OLMP (Revision 3)** [REP2-031].

177. Outside of Bentley Moor Wood, the Applicants do not consider that it would be appropriate for a trenchless techniques to be restricted at a minimum clearance depth of 5m below ground level for trees that are not ancient or veteran. Most tree roots (80-90%) extend 0.6m below ground so trenchless crossing are carried out at less onerous clearances.

Licence for bats and badgers

178. The Applicants are in the process of obtaining a letter of no impediment from Natural England. No definitive timescale for a response can be provided although it is hoped that it will be received before the close of the Examination.

4.6 Geology and Ground Conditions/ Land Use and Agriculture

Updates to Chapters 19 and 21

179. The Applicants confirmed that the change to the assessment criteria was to remove the reference to the Agricultural Land Classification grades from the magnitude of impact assessment criteria as they were already included in the sensitivity criteria, this was in response to a previous comment by the ExA, at Deadline 2. Mr Tandy asked if the assessment methodology was based on professional judgment or Institute of Environmental Management and Assessment (IEMA) guidance and if the revisions to Table 21-8 of **Chapter 21 Land Use (Revision 3)** [REP2-002] had made any difference to the assessment. The Applicants explained both the IEMA guidance and professional judgment had been used to form the assessment criteria, as noted in Table 21-8 of **Chapter 21 Land Use (Revision 3)** [REP2-002] (see (*) star). The Applicants were uncertain of the part of the assessment criteria that had been removed at Deadline 2 that was driving to query and agreed to review as an action point (No.45).

Loss of agricultural land use

180. The Applicants clarified that a low magnitude of impact has been assigned to reflect the fact that the agricultural potential of the land will not be impacted. The loss over the construction period is the loss of production over that period but, this will not affect agricultural potential. There is also an additional impact of soil disruption but the soil will be fully restored in line with the **Outline Soil Management Plan (OSMP) (Revision 2)** in Appendix A of the **OCoCP (Revision 3)** [REP1-025]. The Applicants noted there is a commitment to reinstate land within two years between jointing bays. This is a large proportion of the area within the Order Limits where the land would be unavailable for less than two years (short term). Although the assessment is based on a worst case scenario, it has not been possible at this stage to be clear exactly where reinstatement will not be possible for longer than two years. For example, the Applicants do not know exactly where Jointing Bays will be located or, where temporary haul roads and compounds would need to be retained to access them in a worst case sequential construction scenario of up to 6 years. The Applicants have stated Jointing Bays will be located between 0.75 and 1.5km in **Chapter 5 Project Description (Revision 3)** [REP1-009]). There is a commitment to have communications processes in place including an agricultural liaison officer, as set out

in the **OSMP (Revision 2)** in Appendix A and the **Outline Communications and Public Relations Procedure** in Appendix B of the **OCoCP (Revision 3)** [REP1-025].

181. The Applicants do not accept that the projects will impact the agricultural quality of land, however they do accept some areas will not be available for crop production for over two years (4 years in a concurrent and 6 years in sequential scenario). Although there will be some severance of land outside of the Order Limits, the mitigation for this is that the land will be reinstated as soon as possible and access will be maintained. There have also been discussions on micrositing Jointing Bays where relevant e.g. to locate them at the edge of field boundaries

Proposed Onshore Export Cable burial depth

182. The Applicants confirmed that the design cable depth is 1.6m but there is some flexibility in this figure typically ranging from 1.3-1.7m from surface level to top of cable duct to allow for natural variation in topsoil thickness (0.1-0.5m) along the cable route. The minimum depth is 1.1m which is from surface level to the top of the duct and would be 0.9m from surface level to the protective tile. The Applicants noted that although the minimum depth is an important consideration for this part of the ES and agricultural production above the cable, the deeper figure is more relevant for other chapters due to the larger excavation and soil management quantities considered. The Applicants seek to ensure greater than minimum cable protection by maintaining the design depth where practicable. The Applicants confirmed they did not consider there to be any implications to the outcomes of the ES associated with updating the parameters in **Chapter 5 Project Description (Revision 3)** [REP1-009] to include a minimum depth.

183. The Applicants noted that a drainage study has been done for those land owners that have agreed. This considers drainage across the site and will be used to inform pre-construction drainage. The Applicants will ensure that the cable depth at a given location will be at a level to support drainage.

Future mineral resource assessment

184. The Applicants confirmed the ES and OCoCP states a Minerals Risk Assessment (MRA) will be undertaken prior to commencement of construction. This would be a desk based assessment before determining whether detailed ground investigations may be required. However, the Applicants confirmed they do not intend to commercially excavate any minerals within a Mineral Safeguarded Area that may be identified as part of a MRA. The Applicants agreed to consider if this mitigation was appropriate if extraction was not possible and provide a response at Deadline 4.

185. The Applicants noted that only a small mineral safeguarding area is affected and it is impossible to avoid the entirety of the area. If minerals were identified which are economically viable to excavate, this could be done after the decommissioning of the Projects.

Designated sites

186. The Applicants confirmed that Chapter 19 figures [REP1-013] will be updated to clarify that the whole route is not impacted by Site of Special Scientific Interest (SSSI) risk zones.

187. The Applicants also noted that the Skipsea Drain Local Geological Site has never been designated and has been mis-mapped. This point has been confirmed with the ERYC and the Hull Geological Society and will be confirmed in writing at Deadline 4.

188. The Applicants confirmed that there is no viable pathway for the Burton Bushes SSSI to be impacted so this has not been assessed as part of the ES.

5 The Applicants' Summary of Oral Submissions made at ISH5

5.1 Offshore Ornithology EIA

Assessment methodology

Abundance estimates

189. In relation to the abundance estimate, the Applicants confirmed that they have presented both the mean and upper to lower 95% confidence intervals as suggested by Natural England (NE). The Applicants consider that the mean or central values are more representative and appropriate, while Natural England take a more precautionary line and as such the Applicants disagree with Natural England on this point.

Number of birds at risk of displacement and mortality (between the arrays)

190. Natural England consider that birds between the two Array Areas, beyond the industry standard 2km displacement distance from the arrays, could be at risk of impact. The Applicants explained that this is an outstanding area of disagreement between Applicants and Natural England. The Applicants have not discussed this issue with Natural England and Natural England have not specified a buffer distance which they consider should be applied in this instance. The Applicants' position is that assessment beyond the 2km industry standard displacement distance from the arrays is unprecedented. There are plenty of examples of arrays that are closer together in other windfarms, for example, Norfolk Boreas, Norfolk Vanguard and East Anglia where three windfarms are in a line with no gaps between them, and there was no requirement placed on any of these projects to consider displacement beyond 2km and because of the proximity of an adjacent wind farm.

191. As such, the Applicants do not think this is an additional impact that needs to be considered. The Applicants continue to consider displacement and mortality rates of 50% and 1%, respectively, as appropriate and precautionary and based on evidence collected at operational windfarms. NE disagrees with the study the Applicants rely on (Trinder *et al.* 2024[1]) and the Applicants have already provided detailed responses to this during the Examination.

192. The Applicants confirmed that there are no outstanding issues regarding collision risk with Natural England.

[1] Trinder, M., O'Brien, S.H. and Deimel, J., (2024). A new method for quantifying redistribution of seabirds within operational offshore wind farms finds no evidence of within-wind farm displacement. Frontiers in Marine Science, 11, p.1235061.

193. In response to concerns raised by the Royal Society for the Protection of Birds (RSPB) as to biases in the digital aerial survey methodology [AS-173], the Applicants confirmed that the aerial surveys were conducted in a manner which has been industry standard for the past 10 years. The Applicants reiterated that the quality assurance that goes into the aerial methods is standard and of high quality. Further, the digital aerial survey methodology was consulted on and agreed to by the expert topic group prior to the submission of the Preliminary Environmental Impact Report, which includes Natural England and RSPB, and no concerns were raised at that point (see **Appendix 12-1 Offshore Ornithology Consultation Responses** [APP-104]).

194. Possibilities for further ornithological mitigation

195. The Applicants provided more detail as to why a larger air gap would not support the commercial viability of the development. The key considerations leading to the conclusion that increasing the air gap would not be feasible included:

a. the increased risk of impacts to MoD radar and the associated mitigation costs;

b. the need for larger foundation sizes and the corresponding increases in steel and detrimental consequences for project design / cost;

c. limited availability of vessels with the capacity to install the largest turbines and foundations which would be exacerbated by any increase in air gap.

196. Notwithstanding these key issues, the Applicants have further investigated the implications of increasing the air gap above 34m mean seal level (MSL). There are a multitude of factors that influence the impact on a project of increasing the air gap, and it cannot be assumed that what has been considered acceptable by one project is feasible for another. Factors including ground and metocean conditions, water depths, the size of turbines being considered and the transmission technology all contribute to commercial and technical viability of a project, and correspondingly the feasibility for a project to absorb greater cost and complexity.

197. The Applicants explained that initial calculations of the additional foundation cost to increase the air gap to 40m MSL are about €300m for both projects, noting that this relates only to cost of steel and fabrication and does not include additional transport and installation costs associated with larger foundations. This also does not reflect any increase in turbine costs and must be considered not only in the context of the commercial viability and competitiveness of the project, but also in need to provide value to the consumer.

198. The increased foundation sizes required for a 40m MSL air gap would lead to a corresponding increase in weight of approximately 24% for the largest monopile. This increase significantly limits the pool of potential installation vessels, and for the larger turbines within the DBS design envelope would likely put it beyond the capability of even the largest vessel available on the market today. Consequently, there may be a need to select an alternative foundation concept in some locations, for example a 3-legged jacket, with a further step change in cost.

199. The Applicants have, in developing its design envelope, appropriately considered the air gap in relation to both mitigating impacts from bird collision risk and ensuring the technical and commercial viability of the Projects. The Applicants have allowed for flexibility, and reiterated that the governing factor is the overall swept area across the wind farm.

200. The ExA asked the Applicants to comment on the air gap in the Hornsea Four Offshore Wind Farm Order. The Applicants explained that Hornsea Four is a different project, with different parameters and different considerations to balance. Hornsea Four is on a different timeline to these projects and may have already chosen a turbine and proven its viability, or they may have more flexibility to adapt to cost increases.

201. The Applicants have given this matter careful consideration, have followed the mitigation hierarchy, and are confident that they have gone as far as possible applying the different factors in play. As such, there is no scope for the same parameters as Hornsea Four to be applied to these projects and the Applicants have no intention of increasing the air gap as detailed in the Application.

Foraging ranges (in relation to distance from seabird colonies)

202. The Applicants explained that foraging ranges are used to define connectivity between SPAs and wind farms and are derived from a review of independent studies (Woodward *et al*. 2019). As the contributing studies present different estimates the review has summarised these and presents the following ranges:

a. Mean – this is the 'mean of means' across studies

    i. This is a representative value reflecting the sorts of foraging trips made most often by most individuals.

b. Mean-maximum – this is the mean of the maximum distance reported in each study

    i. The mean-max reflects the longest trips recorded by individuals and is therefore by definition unrepresentative of normal behaviour.

203. The Applicants explained that the mean maximum summary value in Woodward *et al.* (2019[2]) for guillemot is derived from six Special Protection Area (SPA) specific maximum foraging range estimates: 7, 9, 27, 44, 65, and 338km. The last much larger distance came from a study at Fair Isle when fish prey stocks collapsed. It very clearly fits the definition of an outlier which the authors noted themselves.

[2] Woodward, I. et al. (2019) Desk-based revision of seabird foraging ranges used for HRA screening. BTO Research Report 724, p. 139.

204. Excluding Fair Isle, the mean range is slightly reduced from 33.1km to 23.9km while the mean max is reduced from 73.2km to 55.5km. Notably the standard deviation (SD) for each metric also declines from 36.5km to 21.1km and from 80.5km to 39.7km for the mean and mean-max respectively. Thus, using the values with the outlying Fair Isle data omitted, even applying Natural England's precautionary approach DBS is beyond foraging range: 55.5+39.7 = 95.2km (reduced from 153.7km). A similar adjustment for razorbill reduces the mean-max plus 1SD from 164.6 to 122.2km, which would remove DBS East from connectivity range, but it is still considered highly unlikely that razorbill from Flamborough and Filey Coast will forage on DBS, since the mean-max plus 1SD estimate is not representative of typical foraging areas (as noted by Woodward *et al.* 2019[2]).

205. Overall, the mean-max is clearly a precautionary value and the mean-max plus 1SD is highly precautionary. In the case of guillemot, when a robust dataset is used, even applying Natural England's precautionary approach the Projects are beyond breeding season connectivity range. In practical terms, there are not enough hours in the day for guillemot to regularly fly the distances suggested by Natural England and be able to feed their chicks. This is the same for razorbill.

206. The Applicants strongly contest Natural England's definition and consider it is in fact an unreasonable interpretation of the evidence.

207. The Applicants explained why it is fair and reasonable that the location and layout is effective mitigation. As part of the progression of project design from the Preliminary Environmental Information Report to the application stage the array area boundaries were reduced and refined. A number of factors, including bird distribution data, were considered as part of the boundary refinement exercise. Density mapping based on the site-specific aerial survey data was collated and examined to indicate areas within The Crown Estate lease options that showed higher and lower densities of birds, and this was used alongside other environmental and technical information to enact the boundary change. The Applicants highlighted that birds are highly mobile and will continue to be. Overall, the Applicants believe that they have done everything feasible to mitigate impacts on offshore ornithology.

208. The Applicants confirmed that there was no further update or information on mitigation for the red throated diver.

5.2 Offshore Ornithology HRA

Flamborough and Filey Coast (FFC) Special Protection Area (SPA)

Kittiwakes

209. The Applicants explained that the in-combination assessment is a complex process, as additional information from other offshore wind farm projects may arise and advice may change. In response to Natural England's concerns, the Applicants are making some appropriate amendments to the in-combination assessment which will be submitted at Deadline 4. In respect of compensation requirements, the Applicants highlighted that this is based on the Projects' total impact and not the in-combination effects (and hence modifications to the in-combination total have no material bearing on the compensation requirements).

210. The Applicants confirmed that they have used the initial population size numbers as presented by Natural England for the PVA models, and these were included in the updated version of the **Report to Inform Appropriate Assessment (RIAA) Habitats Regulations Assessment (HRA) Part 4 of 4 – Marine Ornithological Features** [AS-085].

211. The Applicants further noted that following the minor modification to in-combination totals and additional requests for impact scenarios (e.g. inclusion of displacement at 70% and mortality at 10%) all the population viability assessments are being reviewed and updated with additional scenarios as per Natural England requests.

212. Natural England is requesting the need to consider future realistic seabird population trends, rather than assuming the same growth rate will continue over the next 30 years. The Applicants consider that Natural England has taken this position because they advise use of density independent Population Viability Analyses (PVA) (i.e. models which allow unlimited growth) but then appear to disagree with the model outputs because of the unlimited growth they predict. The Applicants consider that the solution to this would be to undertake density dependent PVA, whereby growth is regulated through feedback mechanisms. This would remove the need for contradictory advice (undertake density independent models but review the results with respect to density dependent expectations).

213. Natural England's position is that because there have been no studies of density dependence at the FFC SPA colony it is only appropriate to consider density independent PVA. However the Applicants consider it to be a straightforward task to make some educated assumptions, derived from studies conducted elsewhere, about how density dependence should be incorporated. This would be a much more logical and pragmatic approach than attempting to reconcile model outputs generated by one type of model with those that would be obtained by an alternative.

214. The ExA asked about changes to the Additional Submission accepted at the discretion of the ExA - Table 5.1 updated [AS-174] originating from the **Appendix 1 - Project Level Kittiwake Compensation Plan (Revision 4) [REP2-010]**. The Applicants explained that there was a minor error in the previous version of the table in **Appendix 1 - Project Level Kittiwake Compensation Plan (Revision 4) [REP2-010],** in the way that the DBS East and DBS West figures together for the upper 95% confidence interval had been combined. It was explained that the change did not impact the Applicants' ability to delivery compensation at the required scale, and that this reduced the worst-case impact figure. The Applicants also confirmed that the Table will be updated at Deadline 4 and will include the 1:2 and 1:3 ratio as well.

215. Due to the numerous issues identified with the Hornsea 3 'New Colony' calculation approach, the Applicants further noted that Natural England had advised them that Natural England has commissioned the British Ornithological Trust (BTO) to undertake a review of the Hornsea Four compensation quantum calculation methodology and is intending to submit this into Examination. The report from the BTO will also seek to outline the most appropriate methodology to apply when determining kittiwake compensation quantum.

Artificial nesting structures (ANS)

216. The Applicants explained that the ANS is top side design is scalable up to the point of fabrication. As such, the number of nesting spaces can be updated up until final decision on quantum has been made by the SoS. This allows for flexibility and the Applicants are confident that they can increase nesting spaces to provide the necessary compensation required. The Applicants will engage with the foundation design engineers to outline what the upper limits of the ANS in are the updated **Appendix 1 - Project Level Kittiwake Compensation Plan** [document ref: 6.2.1] submitted at Deadline 4.

217. The Applicants explained the down selection of ANS sites Site 5, Site F and Northwest was undertaken on the basis of several site-specific factors including:

a. unsuitable ground conditions such as bedrock within the foundation depth, and bed mobility.

b. engineering constraints relating to water depth resulting in limited opportunities.

c. navigation concerns following a shipping and navigation risk assessment

d. HSE concerns in relation to distance from safe harbour and transit times to medical assistance for visiting personnel and human safety.

e. environmental concerns relating to increased emissions associated with long transits.

218. Each shortlisted candidate site is considered to be ecologically viable and suitable. The next step in terms of priorities is ensuring that the sites that are taken forward are deliverable. The Applicants' ANS will be between 12.6km and 20.1km away from the Outer Dowsing Offshore Wind (ODOW) ANS site if the Applicants progress with candidate site 6a which is the closest to the ODOW offshore ANS preferred location. The other candidate sites are approximately 90km away from the ODOW ANS location. The Applicants do not consider the distance between ODOW's ANS location and candidate site 6a to be ecologically prohibitive given the proximity of colonies elsewhere, both onshore and offshore.

219. The Applicants confirmed the final candidate site will be chosen after geophysical surveys are conducted. These are due to commence at the end of April 2025. Marine Licences applications should have been prepared and submitted before the end of Examination.

220. The Applicants confirmed that a Memorandum of Understanding has been signed with Outer Dowsing Offshore Wind (ODOW) regarding a collaborative approach to ANS. The intention remains that the Applicants will deliver their own offshore ANS, and ODOW will deliver theirs but there will be apportioned nesting spaces for the respective parties on each individual structure. The details are commercially sensitive and as such cannot be shared at present but updates will be provided in **Appendix 1 - Project Level Kittiwake Compensation Plan (Revision 4)** [REP2-010] where possible in due course.

221. The Applicants explained they have reduced the breeding seasons required for installation of offshore ANS ahead of wind farm operations from 3 to 2, following the latest stage of site selection work. A review of the detailed delivery programme revealed that it would be extremely difficult for the Applicants to deliver the structure ahead of Q4 2027. It is not due to lack of ambition that the Applicants cannot deliver the offshore ANS within four breeding seasons, but rather that appropriate care and due diligence needs to be taken to ensure each step of the design is carried out correctly. Further, the Applicants noted that the four breeding seasons becomes less relevant when considering the quantum of mortalities on this project and that fact that the ANS will take over 14 -36 years to deliver full compensation under current projections. Furthermore, the Applicants have already installed an onshore nesting structure at Gateshead which may offset mortality debt up to seven breeding seasons ahead of the first operation.

222. The Applicants will be updating the kittiwake compensation plan at Deadline 4 to address Natural England's comments on this topic. If the Natural England's compensation methodology review comes in before the end of Examination, the Applicants confirmed they will review and apply it assuming the Applicants agree with the findings.

Auks

223. The Applicants confirmed that all remaining requests from Natural England for the Auks PVA, and any additional impacts to be run through the PVA to get the predicted effect will be provided at Deadline 4.

224. The Applicants explained that they have provided updated numbers in the **Precaution in the Ornithology Assessment and Implications for Compensation Quantum** [REP3-030] and this will be carried forward into the auk compensation plan. The Applicants noted that they have only provided the Hornsea Four method to date.

225. The Applicants confirmed that it would submit into Examination the Guillemot and Razorbills Compensation site short list refinement report in an unredacted form.

226. The Applicants provided a general update on auk compensation, noting:

a. Surveys were undertaken at Middle Mouse in February 2025 to gather evidence of the presence of predators, using lethal traps and camera traps. The results of these surveys were inconclusive and therefore further surveys will be required during the seabird breeding season to determine conclusively whether predators are present or absent.

b. Surveys were conducted at Worms Head in January 2025 through use of an unmanned aerial vehicle (UAV) / drone to undertake an assessment of habitat suitability for guillemot and razorbill. The UAV was equipped with a thermal camera which was used to detect the presence of mammals on the headland. The results of the surveys highlighted an abundance of habitat suitable for breeding guillemot and razorbill and recorded the presence of rats moving around on steep sections of the headland.

c. On 13 March 2025 the Applicants received a statement from Defra, which was jointly agreed by Defra, DESNZ, Natural England, The Wildlife Trust, RSPB, The Crown Estate and the Offshore Wind Industry Council. The statement confirmed they were looking at strategic compensation measures for offshore wind development on the Isles of Scilly. The statement is included in **The Applicants' Responses to ExQ1** [REP3-027, ExA question I.D. OR.1.30].

227. The Applicants confirmed that Isles of Scilly represent an appropriate option with the ability to provide strategic level compensation, However, and as stated in the Strategic Compensation Measures for Offshore Wind Activities: Marine Recovery Fund interim guidance (January 2025), strategic measures secured through the MRF cannot be relied upon for consent at this time and must be provided alongside project-led measures. The Applicants consider that Worm's Head has the potential to cover all the compensation required for the Projects The further surveys required should be completed and submitted with the Examination timeframe.

228. The Applicants reiterated that their preference is to deliver compensation on a project-level basis. However, this is a dynamic situation, and so multiple options are being considered currently, including strategic level compensation through the Isles of Scilly and also the Marine Recovery Fund.

Farne Islands SPA – Report to Inform Appropriate Assessment (RIAA) conclusions

229. The Applicants explained that the issues raised by Natural England for guillemot at the Farne Islands SPA are of the same nature as those that have raised more generally. As such, any remaining issues will be picked up in the revised **RIAA HRA Part 4 of 4 – Marine Ornithological Features (Revision 4)** [document reference 6.1] submitted at Deadline 4.

Greater Wash SPA – potential impacts on red throated diver populations from changes to the location of the planned exit pits

230. In terms of the changes to the planned exit pits from intertidal to subtidal, the Applicants explained that in the cable landfall region of the SPA there are no modelled red throated divers. Natural England have accepted the conclusion that there would be no adverse effect because the numbers involved are so small. The Applicants further explained that they have already assessed vessels in this area regardless of the change to the exit pits as there were always going to be vessels traversing this area.

231. The Applicants intend to submit updated imagery which sets this out along with a narrative at Deadline 4.

5.3 Fish and Shellfish Ecology EIA

Potential impacts on herring

Worst-case location for the assessment of underwater noise impacts on herring

232. The Applicants explained that historically, values from Popper *et al.* (2014[3]) have been used to determine the extent of impact to fish and shellfish receptors from underwater noise. Within this guidance, the greatest range at which an impact is considered is 186dB.

233. Cefas and Natural England have recently started to cite Hawkins et al. (2014) which describes a 135dB 'behavioural response' threshold. This extends significantly beyond the distances usually used for the determination of underwater noise impacts. This increased impact range results in a greater overlap of potential herring and sandeel spawning/nursery grounds and habitat.

[3] Popper A. N., Hawkins A. D., Fay R. R., Mann D. A., Bartol S., Carlson T. J., Coombs S., Ellison W. T., Gentry R. L., Halvorsen M. B., Løkkeborg S., Rogers P. H., Southall B. L., Zeddies D. G. & Tavolga W. N. (2014). Sound exposure guidelines for Fishes and Sea Turtles. Springer Briefsin Oceanography.

234. In early 2014 two papers were published (Hawkins et al. 2014[4]; and Hawkins and Popper, 2016[5]) describing the results of an experiment to examine behavioural effects of impulsive noise on fish. This experiment examined sprat (rather than herring, noting however that the two species share similar hearing mechanisms and sensitivity), in a sea loch with limited anthropogenic noise (in contrast to the open-sea environment of the Dogger Bank).

235. Findings indicated that 50% of sprat indicated a behavioural response to impulsive sound at 135dB. A response was considered as "a sudden change in depth, or echo strength of a target, or movement out of the sonar beam (cut-off) occurring during the trial." Changes in echo strength indicated "a change in density of the fish, or a change in their orientation". In summary, the threshold for a behavioural response was very broad, and likely not indicative of an effect that could be considered to have a population level impact on the species.

236. As such, the Applicants dispute the claim that the 135dB limit establishes the best-available scientific evidence but rather that it represents preliminary findings to inform more comprehensive behavioural disturbance metric in future studies. In contrast, the current assessment uses the established criteria in Popper *et al.* (2014[4]) as this approach has been developed specifically to provide a science-based criteria for effects of anthropogenic sound (including pile driving and shipping) on fishes.

237. The Applicants explained that the location chosen for piling to represent the worst-case scenario was the worst-case scenario for all adult stage fish species, including herring. Whilst it is acknowledged that alternate piling locations may result in an increased overlap with areas of higher potential herring spawning ground, it must be noted that the spawning ground itself is not vulnerable to underwater noise. Rather it is the adult life stage of this species that is most vulnerable to underwater noise impacts and these individuals are not confined to areas of higher spawning potential.

238. When examining the heat map alone, it indicates that a possible increase in overlap with potential spawning grounds may occur should the DBS West piling location be moved to the south-west corner. However, EMODnet sediment data indicates that there is limited suitable habitat forming sediment (marginal or preferred) in the region that the 186dB temporary threshold shift (TTS) limit would shift into, and so additional overlap with these spawning grounds is not likely. Any additional overlap would likely be limited to the 135db threshold.

239. Despite this, the Applicants have agreed to provide an assessment of underwater noise extents when considering a piling location in the south-west of the DBS West Array Area at Deadline 5.

[4] Hawkins, A.D., Roberts, L. & Cheesman, S. (2014). Responses of free-living coastal pelagic fish to impulsive sounds. Journal of the Acoustical Society of America, 135(5), pp. 3101- 3116. doi:10.1121/1.4870697

[5] Hawkins, A. D., & Popper, A. N. (2016). A sound approach to assessing the impact of underwater noise on marine fishes and invertebrates. ICES Journal of Marine Science: Journal du Conseil, 74, pp. 635–671.

240. The Applicants explained that there is no evidence in Hawkins *et al.* (2014[4]) or Popper *et al*. (2014[3]) that shows that 135db would have an impact on herring spawning behaviour. The study did not consider spawning or herring behaviour and was carried out in a quiet sea loch in Scotland, not in the Dogger Bank. The Applicants consider that the 186db limit is more suitable and is an accepted methodology and approach to determining temporary threshold shift which is known to be a temporary impact on herring. The Applicants do not consider that relying on Hawkins *et al.* (2014[4]) is appropriate or justified as the authors note themselves that it should not be used in the way purported by the MMO or Natural England.

Potential impacts on sandeel

241. The Applicants explained that electromagnetic fields (EMF) has been considered in the assessment, and as a part of that assessment, the determination of distance and total sediment volume as influenced by EMF was determined. While the heating of sediment is something that is known and acknowledged, the distance over which or the volume of sediment that would be heated is considered to be less than that of EMF, the impacts of which have been assessed and are considered to be negligible. As such, there is no adverse effects. Further, this impact was not included within the scoping stage of assessment, and has not been raised until this point.

242. The Applicants noted that conditions 22 of DMLs 1 and 2, Schedules 10 and 11 of the **Draft DCO (Revision 7)** [document reference: 3.1] require post-construction monitoring to occur, which would include monitoring of habitat suitability for sandeel.

Fish habitat loss

243. The Applicants explained that the critical element for fish habitat loss is the footprint of the Projects. In terms of foundations and cable protection, these elements have been reduced several times over the course of the EIA process. These reductions included the removal of certain types of foundations from the envelope, reduction in the number of offshore platforms (and resultant reduction in cables and cable protection allowance). The bundling of the export cables has also resulted in a decrease in the estimate of potential cable that cannot be buried. The Applicants reiterated that it is not seeking to put more infrastructure on the seabed than is required.

244. With regards to the assessment of fish habitat disturbance from unexploded ordnance clearance, the Applicants explained that they have looked at a large footprint (about 30km^2). If 100 unexploded ordnance (UXO) detonations occurred, then each would result in a crater that is about 20m^2 a total of 2,000m^2 . This equates to approximately 0.007% of the assessed total area of disturbance from construction from the Projects within the SAC. Within **Chapter 5 Project Description (Revision 3)** [REP1-009], there is an indicative number of 41 UXO, so the impact on fish habitat loss is not material.

5.4 Marine and Coastal Processes and Benthic Ecology EIA

Assessment methodology: sensitivity assessment of Dogger Bank and Smithic Bank

245. The Applicants explained that the Dogger Bank is designated as a "sand bank" in terms of habitats (i.e. Annex 1 habitat under the Habitats Regulations) but it is not a sand bank in terms of morphology. It is complex set of glacial landforms covered with a veneer of sand. For that reason, with regard to Marine and Coastal Processes the Applicants do not assign it high value and it is not assessed as such. The Dogger Bank is designated under the Habitats Regulations for its ecology and not for geological purposes. It is therefore assessed as Annex 1 sandbank in the **RIAA HRA Part 2 of 4 Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)** [AS-051] updated at Deadline 4.

246. The Applicants confirmed the conclusions reached in terms of sensitivity are correct and valid and that it would update tables 8-52 and 8-54 of **Chapter 8 Marine Physical Environment** [APP-080] to provide the correct values.

247. The ExA asked if the sensitivity of Dogger Bank would change to low if it was assigned a high value. The Applicants explained that the sensitivity is not solely based on value, and tolerance and recoverability would need to be considered too. As such, the sensitivity may not change solely based on a high value as it is a balance between all three.

Disposal of dredged material: The requirement for sand wave levelling and the extent of proposed mitigation and monitoring

248. The Applicants continue to envisage using a trailing suction hopper dredger (TSHD) and that position has not changed since January 2025. The Applicants explained that down pipes and fall pipes are not typically equipped to a TSHD for the purposes of disposing sand and so they are not proposing to dispose of sediment via this method. However, the Applicants have asked Natural England to clarify whether they are aware of dredgers suitable for DBS which may be equipped with this disposal technology and will give this matter further consideration if it can be demonstrated that this technology exists. The cable statement will confirm the exact details of dredging and disposal post consent.

249. The Applicants reiterated its commitment to dispose of like sediment on like sediment (sand, gravel, and silt), and that they do not consider there to be any risk in that approach. The Applicants do not propose any further sub-classifications of sediment beyond sand, gravel, and silt for this purpose.

250. The Applicants explained that within the export cable corridor, they have modelled sand wave clearance and the increases in suspended sediment concentrations as a result of that activity. The Applicants have also modelled cable trenching and increases in suspended sediment concentration because of that. As part of that assessment, the Applicants have considered all benthic and other designated receptors in relation to those changes in suspended sediment concentrations, and there is no impact. As such, further commitments as suggested by Natural England are not required. The Applicants are further awaiting comments from Natural England about whether there is a vessel which may be able to achieve what they are suggesting in terms of fall/downpipe disposal.

251. Further, the Applicants explained that within the export corridor, when undertaking sand wave clearance, the Applicants would dispose of that material within close proximity to the area, so the Applicants would expect deposition of sand on a sand dominated substrate. As the Applicants are not traveling significant distances away from the area of disturbance to dispose of that material.

252. The Applicants confirmed that the commitment to deposit like sediments on like sediments will be provided in the revised cable statement to be submitted at Deadline 4 which is secured by the DMLs.

253. The Applicants took an action to provide a summary of Dogger Bank A & B and Sofia allowances on sand wave clearances and how that compares to this project at Deadline 4.

Potential impacts to seabed and coastal morphology from trenchless landfall works

254. The Applicants explained that it agreed with Natural England that landfall impacts had not been thoroughly assessed in **Benthic Ecology Technical Note (Revision 2)** [REP3-025] following the removal of an intertidal punchout at landfall as included in Change Request 1. As such, an updated technical note will be produced at Deadline 5 which will assess all impacts in relation to landfall activities. The Applicants noted it did not expect there to be any changes to the findings due to the change of the location of the exit pits from the intertidal area to the subtidal area.

255. The Applicants explained that the change request does not have an impact on the cumulative effects assessment. The exit pits are now in the subtidal area. Activity around landfall is temporally restricted, so the potential overlap with Dogger Bank D remains the same as has been assessed.

Baseline assessment of sediment transport pathways and seabed mobility and the proposed requirement for cable / scour protection

256. The Applicants noted that they submitted a report titled **Bed Mobility & Thermal Environment** [REP3-032] at Deadline 3 which assesses sand wave migration rates and seabed elevation change due to naturally occurring sediment transport processes. The Applicants consider that this should address Natural England's concerns on this matter.

257. In relation to cable protection licensing, the Applicants have updated their position based on representations made by the MMO. From an operational and maintenance point of view, licencing processes for cable protection can take around 12 months to get approved which is a period of risk for the Applicants where cable exposures are apparent. The Applicants want to have preconditioned authorisation to deposit new cable protection in new areas which is why the Applicants suggested that new protection is licenced with new Marine Licences in 10 year periods throughout the operational stage. For replenishment protection, the Applicants suggest that deposits through the operational phase are covered under the DMLs. The Applicants disagree that there would be any value in going through a separate licencing process for this within or without a protected site, as the impacts will have been assessed and compensated for already. Any replenishment would occur on 'lost' habitat so there is no real risk of new harm to licence in this scenario.

Potential changes to physical and biological processes following the placement of structures and cable/ scour protection on the seabed

258. The Applicants explained that they have not had any recent discussions with Natural England on this issue but the impacts on sandeel remain the same. In the assessment, the Applicants have assumed that potential for sandeel spawning equals presence, which is not necessarily the case. The Applicants have used the worst-case in terms of footprint of impact (both for disturbance and habitat loss) and equate that to an effect on habitat for sandeel (which may not actually be present) and therefore the Applicants have been adequately precautionary in the assessment.

259. In relation to the halo effect raised by Natural England, the Applicants explained that there has been no discussion with Natural England to date on this issue, and confirmed that this issue was not raised by Natural England prior to the relevant representations either with the Applicants (in relation to their application or the Crown Estate (in relation to their plans for strategic compensation). The Applicants have addressed the halo effect within the written responses [REP3-028] and will add this text to the **RIAA HRA Part 2 of 4 Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)** [AS-051] which will be updated at Deadline 4. The Applicants are seeking a meeting with Natural England at which this issue will be discussed.

260. The Dogger Bank is a mosaic of different types of sandbank biotopes, based upon gravel, sand and silt sediments, all which are highly variable (in terms of both species composition and abundances) even within specific biotopes, and all of which are encompassed by the 'Annex 1 sandbank' habitat. The Applicants have reviewed the evidence for halo effects and consider that these are unlikely to be expressed in dynamic environments such as the Dogger Bank, to such a degree that the change represents a change from Annex 1 sandbank given the variability of sandbank biotopes described. Therefore, while there may be changes to biotopes as a result of this effect, it would not represent a loss of extent of Annex 1 sandbank. The Applicants have included provision to investigate halo effects within the **In-Principal Monitoring Plan (Revision 2)** [REP2-043].

261. The Applicants reiterate that they have adequately considered colonisation of hard substrates above the seabed (foundations and cable protection). The Applicants have assessed colonisation of inter array cables based upon the assumptions for what cable protection percentage would be required and have responded to Natural England on this point.

5.5 Benthic Ecology and Coastal Processes HRA

Dogger Bank Special Area of Conservation (SAC)

Physical disturbance and compensation for habitat loss and Recovery times for habitats within the Dogger Bank SAC and scale of predicted impact

262. The Applicants reiterated that the evidence provided by Natural England is inadequate in relation to recovery times for habitats within the Dogger Bank SAC specifically in relation to the assertion that recovery will take 10 -25 years. Natural England's evidence presented at Deadline 2[6] [referred to in REP2-065] is:

a. Generic – not specific to Dogger Bank SAC;

b. Does not include any evidence from any offshore industry (other than fisheries or aggregates, which have very different effects in terms of form and frequency) regarding physical disturbance and recovery;

c. Has old references to review papers or meta-analyses;

d. Does not include any direct studies of the effect or evidence from offshore wind post-consent monitoring;

[6] 2019 Article 17 reporting: UK Offshore information for H1110 - Sandbanks which are slightly covered by sea water all the time as part of the Fourth Report by the United Kingdom under Article 17 of the EU Habitats Directive https://jncc.gov.uk/jncc-assets/Art17/H1110-OFF-Habitats-Directive-Art17- 2019.pdf

e. Does not take into account the evidence presented by the MarESA for recovery of the relevant biotopes (which the Applicants have added in full to the **Review of Evidence on Recovery of Sandbank Habitat Following Habitat Damage (Revision 2)** [REP3-021];

f. Does not acknowledge site specific evidence of recovery provided by the Applicants in the **Review of evidence on recovery of sandbank habitat following habitat damage (Revision 2)** [REP3-021] or UK Government studies (i.e. Eggleton et al, 2016).

263. The Applicants assessment is primarily based upon MarESA approach (with additional evidence for support and context) in relation to recovery timescales. The Applicants note that for the most common biotope within the Array Areas (MB5233 Nephtys cirrosa and Bathyporeia spp. in Atlantic infralittoral sand), MarESA states:

As a consequence of the dynamic nature of the habitat the faunal component of the biotope is very sparse and low in species richness. Therefore, the community might be considered 'mature' only a few days or weeks after the last storm event, as the mobile species displaced from the biotope and those from adjacent area colonize the substratum via the surf plankton. Even following severe disturbances ***recovery would be expected to occur within a year****; biotope resilience is therefore assessed as 'High' for any level of impact.*

264. The Applicants do not understand how, given the above, and similar statements by MarESA for the other biotopes within the Offshore Development Area in the Dogger Bank SAC (presented in Appendix A of [REP3-021]) Natural England can suggest that it could take between 10 to 25 years for these biotopes to recover. The Applicants are seeking a meeting with Natural England at which this issue will be discussed.

265. The Applicants explained that the intention is to update the compensation plan [APP-060] to include the footprint of habitat disturbance from construction. If the Secretary of State concludes that habitat disturbance does contribute to an adverse effect on integrity (AEOI) , then the SoS can take that into account at that point. The Applicants have addressed the halo effect within the written responses [REP3-028] and will add this text to the **RIAA HRA Part 2 of 4 Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)** [AS-051] which will be updated at Deadline 4, there is no additional loss of extent of Sandbank (i.e. habitat loss) to add to the compensation plan.

266. The Applicants also noted that compensation should not be considered lightly and needs to have a justified scientific basis. The difference between outcomes is the requirement to compensate for approx. 2km² for habitat loss only or 30km² if disturbance is concluded to contribute to Adverse Effect on Integrity (AEoI). Although the Applicants do not know the financial contribution that is required by the MRF this order of magnitude difference clearly has financial implications for the Projects. In addition, concluding AEOI on the basis of disturbance has implications for future projects given the extent of designations around the UK coast. In addition, consideration also needs to be given to other sea users who could be affected by new designations, such as the fishing industry. The NFFO raises this point in their SoCG with the Applicants, noting they are concerned about further disruption and displacement from designated sites. This concern has also been raised in parliament to the Environmental Audit Committee.

Plan level HRA conclusions versus project level RIAA conclusions

267. The Applicants reiterate their opinion that the conclusions of the Plan Level HRA may be superseded by Project Level assessments where more detailed information is available. The Appropriate Assessment Guidance on the use of Habitats Regulations Assessment – July 2019 supports this (our emphasis added):

An appropriate assessment for a more strategic plan, such as the local plan, can consider the impacts on sites and confirm the suitability or likely success of mitigation measures for associated non-strategic policies and projects.

As long as these measures have been properly considered in a recent plan, and the development will not create additional risks of a significant effect on a habitats site, they may not need further assessment at the non-strategic level.

This is a high standard to meet and will need to be assessed on a case by case basis. The following are some indicative criteria to consider:

a. *the strategic appropriate assessment was properly carried out;*

b. ***it remains valid and there is no new material and relevant information that should be considered (e.g. provided by ongoing site condition monitoring, or further relevant detail that has become available at the lower, non-strategic level);***

c. *it specifically caters for and addresses all the impacts in the relevant area from the non-strategic plan or project (alone and in combination) and there is the necessary certainty around the use of any mitigation measures.*

268. The Applicants consider that it is reasonable that '*new material and relevant information'* can be introduced supporting project level assessment and that, for example, site specific survey undertaken at the Dogger Bank by the Applicants (such as the **Met Mast Survey Analysis** [APP-083] and argumentation around recovery within the **RIAA HRA Part 2 of 4 Annex I Offshore Habitats and Annex II Migratory Fish (Revision 3)** [AS-051] (and expanded on in **Review of Evidence on Recovery of Sandbank Habitat Following Habitat Damage (Revision 2)** [REP3-021] fits the definition of '*ongoing site condition monitoring'*).

Humber Estuary SAC - RIAA conclusions

269. The Applicants have made a commitment in relation to cable protection and cable bundling within the Cable Statement [REP2-039] which is a document secured in DMLs (Schedules 10-14 of the **Draft DCO (Revision 6)** [REP3-004]. As such mitigation in this respect has been secured. The Applicants highlighted the small scale of any protection inside the 10m depth contour even in a worst case, and reiterated that the protection would lie over 40km away from the area Natural England suggest could be impacted. It is a stretch of the imagination to believe that an impact is likely.

270. The Applicants provided further information on their position regarding cable protection in the nearshore environment to the Environment Agency at previous deadlines. This included references to the Applicants' responses provided to Natural England on the matter through the pre-examination and Examination process to date and the proposed plans to submit an updated physical processes modelling technical note at Deadline 5, focused specifically on the nearshore environment. The Environment Agency confirmed in an email dated 27th March 2025 that they were satisfied with the information provided and with the mitigation proposed by the Applicants, and that the position of this item is now agreed.

5.6 Marine mammals EIA

Worst case piling scenario(s)

271. The Applicants explained that requiring two worst case piling locations to be monitored would have logistical and economic implications as it would be hard to ensure those piles fall within the first four and is maintaining its stance to monitor the first four piles.

Embedded mitigation

272. Embedded mitigation (i.e. those measures that have been incorporated into the design of the development to prevent or reduce any significant adverse effects) would include soft-start and ramp-up of piling activity in order to minimise potential impacts on auditory injury. The Applicants noted that any additional mitigation will be identified in the final Marine Mammal Mitigation Protocol (MMMP) and the final Site Integrity Plan (SIP). Those additional measures are still in discussion and would include updates to the project design and potentially the use of secondary mitigation measures and will be in line with new Defra policies. The final suite of mitigation measures will be presented in the final MMMP and final SIP post-consent.

The Outline Marine Mammal Mitigation Protocol (MMMP)

273. The Applicants confirmed that there has been no further progress on this with Natural England and the MMO since Deadline 3. The Applicants explained that the MMMP has been updated to reflect the Defra noise policy, 'The Department for Environment Food and Rural Affairs Policy Paper on Reducing Marine Noise' published on 21 January 2025 as part of Defra's Marine Noise Package. In line with this policy the Projects will utilise best endeavours to deliver noise reductions, were applicable, through the use of primary and/or secondary noise reduction based on the final project design.

274. The Applicants consider that they have made sufficient progress to reduce noise levels pre-consent, including the option to use noise reduction systems should they be required. The final mitigation requirements would be confirmed in the final MMMP and through consultation with the relevant SNCBs. These measures may include but are not limited to:

a. Different foundation types and installation methods;
b. Primary and / or secondary noise reduction systems;
c. Scheduling of pile driving; and
d. Seasonal or spatial restrictions on concurrent piling.

275. The Applicants explained that the current impact ranges modelled in the ES are based on the worst case design envelope for the Projects. There is potential for the hammer energy to be reduced post consent once project design has been refined and finalised. Once the Projects' design has been finalised, there is also the opportunity to alter the strike rate scenarios within the soft start and the ramp up to further reduce the impact ranges that would then be remodelled to determine whether any secondary measures would be needed to further reduce impact ranges.

276. The Applicants concede that Natural England have relevant concerns as to the timeframe for the noise abatement systems to be procured by the Applicants prior to construction. As such the Applicants are willing to bring the consultation schedule in the SIP forward to give the Applicants a larger time frame to ensure that Natural England are satisfied the correct measures are in place.

277. The Applicants confirmed that they have now updated all assessments and mitigation measures such that they fully adhere to the Marine Noise package published in January 2025.

UXO clearance

278. The Applicants explained that no discussions on this topic have occurred with Natural England. However, the Applicants have updated the MMMP so that the low order clearance is now the default. The use of noise abatement, such as the bubble curtains, is now required for a high order clearance, and these would only be undertaken as contingency. A separate marine licence application for UXO investigation and clearance will be required. Further underwater noise modelling, including the use of a bubble curtain for these high order clearances would be undertaken and the application would be submitted with these updated impact ranges to ensure that any contingency clearance is effectively assessed.

Conclusions for harbour porpoise and grey seal

279. The Applicants explained they have made efforts to reduce the envelope, and have taken as many measures as possible while still trying to achieve a design envelope that is feasible. The Applicants are confident that the measures outlined the MMMP will make further reductions once the final design has been confirmed.

280. A further technical note on the reduction of impact ranges based on the Projects' current worst case with a 10dB noise reduction to represent the application of noise reduction measures is being submitted at Deadline 4. The technical note explains that the original modelling identified that a minimum 112 minute acoustic deterrent device (ADD) activation would be necessary to deter harbour porpoise from the 10km impact area during a single monopile installation which would be capped at 80 minutes for the effective use of an ADD. This activation time would also be sufficient to cover the impact ranges for minke whale, dolphins and seals. With the impact ranges from a 10dB noise reduction, the ADD activation time is greatly reduced. For one monopile installation at DBS East (the worst case), the ADD would need to be activated for a minimum of 25 minutes for minke whale to move outside of the impact area, which is also sufficient to cover the deterrent ranges for harbour porpoise, dolphins and seals which would only need 12 minutes of ADD use. This is well within the accepted durations stipulated by Natural England.

Monitoring and adaptive management

281. The Applicants reiterated that their position is the same, and do not think there is a need for further provision in the DCO on adaptive management.

5.7 Marine Mammals HRA

Interim Population Consequence of Disturbance (iPCoD) modelling

282. The Applicants noted that they have not had any interaction with Natural England on this point but are willing to discuss the remaining issues on marine mammals with Natural England at their next meeting. The Applicants are seeking a call with Natural England to discuss these matters before Deadline 5.

Southern North Sea SAC, Humber Estuary SAC and Berwickshire and North Northumberland Coast SAC - RIAA conclusions, use of Noise Abatement Systems (NAS) and Site Integrity Plan (SIP)

283. The Applicants will not be providing an in-combination assessment with reductions due to the use of NAS as requested by Natural England. The Applicants confirmed the primary and secondary measures are not confirmed and are yet to be agreed with MMO and Natural England and as such cannot reduce the effect on the SAC in the SIP as requested. The assessment that has been presented is overly precautionary because it includes piling at approximately eight other wind farms at the same time as piling at the Projects, with no noise mitigation, which is a highly unlikely scenario following the release of the marine noise policy by Defra. The Applicants pointed out that there are ongoing studies which may impact the findings in the SIP, including monitoring at Moray West OWF which estimates an effective deterrence range (EDR) for unabated piling of 10km compared to an EDR of 26km for unabated piling included in current guidance.

284. The Applicants reiterated that the Projects themselves do not have any adverse effect on site integrity.

285. In relation to effects on grey seals in the Berwickshire and North Northumberland Coast SAC and the Humber Estuary SAC, the Applicants explained that the proposed 10dB reduction which could be obtained through either primary and or secondary measures will reduce the overall disturbance in the area. This should assist Natural England with their confidence that there would be no adverse effect on site integrity.

Post consent monitoring

286. The Applicants confirmed that they are committed to undertake industry standard monitoring for the first four piles post-consent. This commitment is captured in the **In Principle Monitoring Plan (Revision 2)** [REP2-043]. The Applicants have also added a standalone ornithological monitoring condition in the DMLs.

287. The Applicants explained that the additional monitoring condition on Rampion 2 Offshore Wind Farm Order 2025 was as a result of the applicant in that case committing to a double bubble curtain which has not previously been deployed in UK waters during piling. The Applicants reiterated that there is nothing present that would require additional monitoring and do not believe that further commitments in this regard are required.

5.8 Other HRA issues

Habitats Regulations Derogation: Provision of Evidence [APP-051]

288. The Applicants confirmed that Table 4-4 of the **Habitats Regulations Derogation: Provision of Evidence** [APP-051] will be updated so that it aligns with the RIAA and the revised envelope. This will be updated for Deadline 4.

Decommissioning within the Dogger Bank SAC

289. The Applicants explained that the difference between previously consented projects on the Dogger Bank and the Projects is that the habitat loss impact for those projects was considered temporary (albeit long-term), with the assumption that all infrastructure could be removed (including foundations and cable protection) and recovery at those locations would take place.

290. It is no longer considered that removal of all infrastructure can be guaranteed (for example, while the foundations can be removed, cable protection removal can be difficult). Therefore, as far as the HRA is concerned, habitat loss is considered to be a permanent impact, and the Applicants have assessed it as such. This results in the conclusion of AEoI resulting from habitat loss.

291. The Applicants reiterated that the worst-case scenario, which is that all foundation and cable protection infrastructure is left in place post decommissioning, has been assessed.

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