FIVE ESTUARIES OFFSHORE WIND FARM

10.28 APPLICANT'S RESPONSE TO EXQ2

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In preparation of this document Five Estuaries Wind Farm Ltd has made reasonable efforts to ensure that the content is accurate, up to date and complete for purpose.

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DEFINITION OF ACRONYMS

Term	Definition
AIL	Abnormal Indivisible Load
AIS	Air Insulated Switchgear?
ALARP	As Low As Reasonably Practicable
ALO	Agricultural Liaison Officer
BMV	Best and Most Versatile
BNG	Biodiversity Net Gain
BRE	Building Research Establishment
CAH	Compulsory Acquisition Hearing
CBRA	Cable Burial Risk Assessment
CBS	Cement Bound Sand
CFWG	Commercial Fisheries Working Group
CoCP	Code of Construction Practice
COWSC	Collaboration on Offshore Wind Strategic Compensation
CSIP	Cable Specification and Installation Plan
DCO	Development Consent Order
DML	Deemed Marine License
DWR	Deep Water Route
EA	Environment Agency
EACN	East Anglia Connection Node
ECC	Essex County Council
ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
ES	Environmental Statement
ESO	Electricity System Operator
FLCP	Fisheries Liaison and Co-existence Plan
FRA	Flood Risk Assessment
GIS	Gas Insulated Switchgear
HDD	Horizontal Directional Drilling

Term	Definition
HGV	Heavy Goods Vehicle
HHA	Harwich Haven Authority
HRA	Habitats Regulation Assessment
IDRBNR	Inner Dowsing, Race Bank and North Ridge
LAT	Lowest Astronomical Tide
LBBG	Lesser Black Backed Gull
LEMP	Landscape and Ecological Management Plan
LIR	Local Impact Report
MCAA	Marine and Coastal Access Act 2009
MDS	Maximum Design Scenario
MLS	Margate and Long Sands
MMO	Marine Management Organisation
MMP	Material Management Plan
MRF	Marine Recovery Fund
NE	Natural England
NERC	Natural Environmental and Rural Communities Act 2006
NESO	National Energy System Operator
NFFO	National Federation of Fishermen's Organisations
NFOWFL	North Falls Offshore Wind Farm Limited
NGET	National Grid Electricity Transmission
NH	National Highways
NIP	Navigation and Installation Plan
NSIP	Nationally Significant Infrastructure Project
OFTO	Offshore Transmission Owner
OLEMP	Outline Landscape and Ecological Management Plan
OLEMS	Outline Landscape and Ecological Management Strategy
OnSS	Onshore Substation
OWF	Offshore Wind Farm

Term	Definition
OWIC	Offshore Wind Industry Council
PEIR	Preliminary Environmental Impact Report
RPA	Root Protection Area
SAC	Special Area of Conservation
SCC	Suffolk County Council
SCI	Site Of Community Importance
SEE	Socio-Economic Effects
SF6	Sulphur Hexafluoride
SLV	Seascape and Landscape and Visual
SLVIA	Seascape, Landscape and Visual Impact Assessment
SMP	Shoreline Management Plan
SNCB	Statutory Nature Conservation Bodies
SRN	Strategic Road Network
SSSI	Site of Special Scientific Interest
TCC	Temporary Construction Compound
TDC	Tendring District Council
TPO	Tree Preservation Orders
UXO	Unexploded Ordnance
VE	Five Estuaries Offshore Wind Farm
WTG	Wind Turbine Generators
ZTV	Zone of Theoretical Visibility?

1. INTRODUCTION

1.1.1 This document has been prepared by Five Estuaries Offshore Wind Farm Limited (‘the Applicant’) to respond to the Examining Authority's (‘ExA’) Written Questions (ExQ2) [PD-014].

1.1.2 All of the questions raised in ExQ2 have been included in this document, even where questions have been directed to specific Interested Parties and/or Local Authorities. In some cases the Applicant has made comment in relation to these questions where it believes that it would be helpful in understanding the related issues.

2. GENERAL AND CROSS-TOPIC QUESTIONS (GC)

Ref	Question to:	Question	Applicant's response
GC.2.01	Applicant	**STATCOMS** Reference to STATCOMs has been made in section 4.5 of the Technical Note for Onshore Civils and Electrical [REP2-030]. The abbreviation/acronym STATCOMs has not been defined in the Technical Note, what are they?	STATCOM is an abbreviation for 'static synchronous compensator'. STATCOMs are a type of power electronic devices which are used to control reactive power, improving the stability of the grid.
GC.2.02	Applicant and National Grid Electricity Transmission (NGET)	**The role of the proposed East Anglia Connection Node (EACN) substation** In paragraph 4.6.2 of the Applicant's Technical Note for Onshore Civils and Electrical [REP2-030] it is stated that the EACN substation would not *"… solely serve the windfarms but is part of a wider project"*. What other projects would the EACN substation serve?	The Applicant notes that National Grid describes the EACN Substation as *"a new East Anglia Connection Node (EACN) 400 kV substation, which would connect clean energy from offshore wind generation to the energy network so the energy can reach homes and businesses where it's needed."* The Applicant is aware of two other projects that have grid connection offers from the National Grid Electricity System Operator Limited (ESO) to the EACN substation, the North Falls OWF and the Tarchon Interconnector.
GC.2.03	NGET	**Need for the EACN substation** If both the Five Estuaries and North Falls projects were to be consented by the Secretary of State but for whatever reason neither were subsequently to proceed to implementation, would there be a need for the proposed EACN substation?	Not directed at the Applicant.
GC.2.04	Essex County Council	**Landscape mitigation and habitat creation** (cross-cutting relating to Ecology, Farming and Visual Impact) In the Outline Landscape and Ecological Management Plan (OLEMP) [REP2-022] the plan for the onshore substation zone shows an area to the north and east of the proposed substations as a traditional orchard and meadows. At Issue Specific Hearing 3 you commented *"copses and small woodlands, which are more typical of the Tendring landscape"* and *"that using it for meadowlands … for ecological mitigation/ enhancement was not the best use of it'.* Elaborate on why you consider the planting proposals for the substation zone would not be appropriate.	Not directed at the Applicant.
GC.2.05	East Anglia Two Limited	**Wake Loss** In your Deadline 2 written submission [REP2-079] you contend *"… The turbines associated with the current application will inevitably cause wake loss in the context of the East Anglia Two project arrays. Given the proximity, it is likely that the losses will be material"*. a) What evidence to do you have to support the contention that the siting of the wind turbine generators forming part of the Proposed Development would interfere with the operation of the East Anglia Two Offshore Wind Farm? b) How much of East Anglia Two's generating capacity do you consider would be impaired because of the proximity of the Proposed Development's wind turbine generators?	Not directed at the Applicant.

3. CLIMATE CHANGE (CC)

Ref	Question to:	Question	Applicant's response
CC.2.01	Applicant	**Nature of gas that might be used if the proposed onshore substation was to be gas insulated** Clarify whether Sulphur Hexafluoride (SF6) would or would not be used if the proposed onshore substation was to be gas insulated. Should the applicant intend to use SF6, explain, as required by paragraphs 2.9.62 to 2.9.64 of National Policy Statement EN-5: a) why the use of SF6 could not be avoided, including giving details of the alternatives that have been considered and why those alternatives are technically infeasible or would require bespoke components that are grossly disproportionate in terms of cost; and the plan for the monitoring and control of fugitive SF6 emissions consistent with the Fluorinated Gas Regulation and its successors.	The transition to SF6 free Gas Insulated Switchgear (GIS) substations is in progress and the Project is actively engaging with the market and tracking the technological developments with the various suppliers. The primary use of SF6 in GIS is in the switchgear. There are a range of solutions which mostly involve the use of alternative solutions for the switchgear including the use of clean air mixes (80% N2, 20% O2), PFAS/ Fluoronitrile / C4FN), Dry air (80% n2, 20% d2), Natural Gas mix of N2, O2 and CO2). This transition started with the smaller sizes of switchgear and as the industry gains experience with this technology solutions are being developed for switchgear at higher voltages (as would be needed for the Five Estuaries substation). The second use of SF6 is in circuit breakers. The volumes of SF6 used involved in circuit breakers is significantly less than in switchgear. As the industry has focused on transitioning away from SF6 in switchgear first, the technological transition away from SF6 in circuit breakers is a few years behind switchgear, and hence there are likely to be hybrid systems available where the switchgear is SF6 free, but the circuit breakers are not. The available GIS solutions for the Project would depend on the year they are procured and it is not possible to say at this stage the exact solution that would be available. The primary approach to avoid the use of SF6 is through the use of AIS technology. If this is not possible and GIS must be used then the Project would seek either entirely SF6 free, or a hybrid solution depending on the available technology in the year of delivery. If SF6 could not be avoided then the project would abide by the monitoring and: DEFRA's *"Requirements for businesses that operate or service high voltage switchgear that contains sulphur hexafluoride (SF6)".* There are automatic continuous gas monitoring systems that continuously measures gas pressure and temperatures. The project will also adhere to the regulations *"Fluorinated gas (F gas): guidance for users, producers and traders Requirements if you work with F gas"*.
CC.2.02	Applicant	**Carbon Emissions Assessment** Advise as to whether the recent High Court judgement for Friends of the Earth Limited and South Lakeland Action on Climate Change versus Secretary of State Levelling Up Housing and Communities [2024] EWHC 2349 (Admin) has any implications for the assessment of carbon emissions undertaken in Climate Change section of the Environmental Statement (ES) [APP-093]. Most particularly, is any further analysis of carbon emissions downstream of the project necessary?	The Applicant has undertaken its Environmental Impact Assessment (EIA) in accordance with the principles of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 2017 Regulations). The 2017 Regulations specify that "*The EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the proposed development on the following factors… land, soil, water, air and climate"* (Regulation 5(2)(c)). The EIA process therefore requires the identification of potential likely significant effects before assessing whether the project in question would give rise to those likely significant effects. The output of that assessment in

			this case has been the Environmental Statement, in particular Chapter 6.4.1 Climate Change [APP-093]. The FoE Case also draws on the recent decision of R (Finch on behalf of the Weald Action Group) v Surrey County Council [2024] UKSC 20 (the Finch Case). Both the FoE Case and Finch Case consider whether adequate EIA was carried out in respect of climate change impacts from carbon-emitting fuels (coal and oil, respectively) and the subsequent combustion of those fuels. This was because downstream effects on climate change of burning the extracted coal had not been assessed and it was held that the burning of the coal was an inevitable consequence of its extraction. There was therefore enough of a connection between the project being developed and the effect of the burning the coal to be extracted. The position in those cases can immediately be distinguished from this Project by virtue of the fact that this is a renewable development and will provide energy which is generated through renewable means, rather than through the combustion of fuels. In this case, it is not possible or practical to make a causal link between the generation of energy through the development and any increase or decrease of carbon emissions as a result of downstream use. There is no inevitability around the use of the energy generated and it would not therefore be possible to determine whether there is a likely significant effect as a result. The impact-receptor-effect pathway is too intangible for there to be any assessment of the likely significant effects. “Downstream emissions” refer to the carbon emissions arisings from the outputs of the project during its use, and at end of life. These emissions usually arise at a business’s customers, and as a result of the distribution, storage, use, and disposal of its products or services. In the case of a coal mine, these are significant, as the use of the coal produced by the mine clearly generates significant fossil carbon emissions. In contrast, a wind farm provides emissions-free electricity to its customers, so once built, the only likely significant future carbon impacts of the Project will be associated with the efforts to disassemble it at its end of life, and those have already been included in the analysis. With the details of how that might be done very uncertain, given how far into the future it will take place, the gross assumption was made for the calculations that the decommissioning will take as much effort (cause the same carbon emissions) as the commissioning. This very likely over-estimates the burdens, as disassembly is less energy intensive, and energy will have been significantly decarbonised by then.
CC.2.03	Applicant	**Waste Management** Essex County Council and Tendring District Council in section 10.9 (Shoreline Management Plan) of their Local Impact Report (LIR) [REP2-043] make reference to the Hydrology, Hydrogeology and Flood Risk section of the ES [APP-088] in relation to the Essex and South Suffolk Shoreline Management Plan (SMP) and matters relating to the	No discussions have been held to date. The Applicant is happy to explore suitable options for the re-use of materials or by products with ECC/TDC where appropriate. The Applicant notes relevant exclusions (Article 2(1)) and definitions (Article 3(1)) of the Waste Framework Directive (2008/98/EC), as transposed into

		“Hold the Line” policy for the period up to 2055. The Councils consider that there is an opportunity to utilise the *‘material generated by horizontal drilling or other trenched excavations’ ‘for coastal protection or habitat creation in Essex’*. Has any engagement with stakeholders been undertaken in respect of utilising waste soils/sub- soils for the management of coastal change?	domestic law. Any options would need to be considered in the context of these definitions, provisions under the Environmental Permitting regime, prevailing Environment Agency guidance and available industry protocols. It should be noted, that the limited quantity of arisings, physical/chemical composition (i.e. suitability for engineering end uses or habitat creation) and project programme may constrain such reuse opportunities. Options may include the re-use of the material at suitable receiver site(s) under the CL:AIRE Definition of Waste Code of Practice, subject to further consideration of both the material and re-use options under a Material Management Plan (MMP). Other options may also be present under the Environmental Permitting regime whereby the material could be reused (recovered) for defined beneficial purposes.

4. DRAFT DEVELOPMENT CONSENT ORDER (DDCO)

Ref	Question to:	Question	Applicant's response
DCO.2.01	Applicant	**DCOs cited as precedents for the purposes of drafting the dDCO** Paragraphs 4.3 and 4.4 of the Explanatory Memorandum [REP1-010] cite the following made DCOs as precedents for the purposes of drafting the dDCO: a) Awel y Môr Offshore Wind Farm Order 2023 b) Hornsea Four Offshore Wind Farm Order 2023 c) East Anglia ONE North Offshore Wind Farm Order 2022 d) Hornsea Three Offshore Wind Farm Order 2020 e) Norfolk Vanguard Offshore Wind Farm Order 2022 f) Norfolk Boreas Offshore Wind Farm Order 2021 g) Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024 The Applicant is requested to submit copies of the above listed made DCOs so that they can be added to the Examination Library and referred to by the ExA as may be necessary.	These have been compiled into a single document (10.33 Compiled DCOs in response to ExQ2) at submitted at Deadline 4.
DCO.2.02	Applicant	**Potential requirement defining width parameters for an onshore cable corridor for the proposed Five Estuaries Offshore Wind Farm alone and for the proposed Five Estuaries Offshore Wind Farm in combination with the proposed North Falls Offshore Wind Farm** Further to the discussions held during Compulsory Acquisition Hearings (CAH) 1 and 2 concerning the Compulsory Acquisition powers being sought to provide an onshore cable corridor for both the proposed Five Estuaries and North Falls Offshore Wind Farms and the information about cable corridor widths included in the Applicant's post CAH1 *"Technical Note: Onshore Civils and Electrical"* [REP2-030], the Applicant is requested to, on a without prejudice basis, submit wording for a potential requirement defining width parameters for an onshore cable corridor of sufficient width for the proposed Five Estuaries Offshore Wind Farm alone.	The Applicant, as set out in previous submissions, does not agree that the requirement sought is appropriate or necessary and maintains its position as noted in the question. As requested and provided without prejudice to that position, the drafting below would require to be inserted either into Requirement 17 or as a new requirement in Part 1 of Schedule 2 with associated numbering amendments. This drafting has had regard to Requirement 10(9) of the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024, noting the differences between the two projects: *(1) In the event that the undertaker notifies under [paragraph 17 of this Part][sub-paragraph (1)] that build option 2 is to be implemented, the width (being measured at 90 degrees to the orientation of the cables within each work) of each of Works Nos 4, 5, 6, 7, 8, 9, 10, 11 and 12 may not exceed 45 metres and Work No. 14, when including Work No.14D, may not exceed 60 metres; except (in both cases):* *a) where trenchless techniques are to be used to install the cables, where the width may not exceed 90 metres;* *b) as necessary to create a transitional (tapered) area between the width for the trenched installation and the width for the trenchless installation compounds, to such extent as is necessary to properly space out the cables approaching the trenchless installation compound, up to the maximum width of the trenchless installation compound concerned in each relevant location; or* *c) where necessary to provide connections to accesses, haul routes and temporary construction compounds as authorised by Schedule 1 where the width may extend to that necessary to effect the connection required.*

DCO.2.03	Applicant Marine Management Organisation (MMO)	**Article 7 (Benefit of the DCO)** a) **For the MMO** - identify any concerns you continue to have with respect to the drafting of Article 7 (Benefit of the Order). How do you consider those concerns would affect the MMO's ability to undertake its duties pursuant to Article 5 (Deemed marine licences under the 2009 Act) and Schedules 10 and 11(the Deemed Marine Licences) included in the dDCO and explain how those concerns might be addressed? b) **For the Applicant** - explain why you consider the MMO's position is incorrect with respect to the operation of Article 7 and the DMLs and signpost any support for your position that might be found in the made DCOs to be submitted in response to ExQ 2 DCO.2.01?	b)The Applicant refers to its detailed submissions made on this point in response to the MMO's relevant representation, REP1-049. The drafting sought follows precedent, including the recently made Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024. The ability for an undertaker to transfer a marine licence has been included in numerous DCOs since 2015 when it was included in the Dogger Bank Creyke Beck Offshore Wind Farm Order 2015. The Applicant notes that the MMO's representation is the same in substance to that made on other OWFs and which has been repeatedly considered by the Secretary of State and not supported in determination. The ability to transfer the benefit of the deemed marine licence was considered in detail in relation to the application for the Hornsea Four project where the MMO adopted a position similar to that set out in respect of this Application. In the Hornsea 4 Offshore Wind Farm examination, the MMO submitted that "there is already a mechanism for transferring the DMLs under the Marine and Coastal Access Act 2009 (MCAA). In the MMO's view Article 5 should be reserved to the transfer of the Order and should not refer to the DMLs. The DMLs should be considered separately and dealt with under MCAA" (Hornsea 4 examination library reference AS-031, Additional submission, accepted at the discretion of the Examining Authority). The Examining Authority in that case rejected the MMO's request noting that the provision had been included in the recently made Orders for Norfolk Vanguard, Norfolk Boreas, East Anglia ONE North and East Anglia TWO. The Secretary of State's decision accepted inclusion of wording which permitted the transfer of the deemed marine licence. The same provision as sought in this case is included in Article 5 of the granted Hornsea 4 DCO. The Planning Act 2008 is clear that marine licences may be deemed in a DCO in appropriate areas (s149A) and that a DCO may include such further provisions ancillary to the operation of that deemed marine licence (s122(3)), including transfer along with the benefit of the other parts of the Order. It is inarguable from the wording of section 122(5)(a) and (c) that a DCO may "apply, modify or exclude a statutory provision which relates to any matter for which provision may be made in the order" or "include any provision that appears to the Secretary of State to be necessary or expedient for giving full effect to any other provision of the order". Deemed marine licences are clearly matter for which provision may be made in a DCO, section 72 MCAA 2009 is a provision relating to that deemed marine licence and the transfer power is accordingly authorised by s122 of the Planning Act. The ability to transfer the deemed marine licence is related to the deeming and is submitted to be a sensible, expedient part of the wider power to transfer the benefit of the order. There is accordingly no legal barrier to including these provisions in the dDCO and there is strong precedent authority for its inclusion demonstrated by DCOs in English

			waters on this position which has been repeatedly adopted by the Secretary of State and has not been subject to legal challenge as to its competency. The drafting in the dDCO reflects a long established precedent regarding the transfer of DCO powers and deemed marine licences that has been considered acceptable by the Secretary of State many times, including most recently in the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024. Where a transfer of a deemed marine licence is sought under Article 7(2), the Secretary of State would consider the context of all the provisions of the DCO being transferred. That process would be robust in ensuring a suitable approach is being taken. In that context, it is appropriate that the Secretary of State has the ability to approve the transfer or grant of a deemed marine licence such that the transfer or grant can fully reflect the relevant DCO and deemed marine licence powers. As has been previously submitted, the undertaker is required by statute to transfer the transmission assets to an OFTO and cannot retain those in the same ownership as the generation assets. A transfer of some of the benefit of the Order and one of the DMLs at an early stage is therefore not only known to be required, but is a statutory necessity. It is undesirable to separate the transfer of the benefit of the order generally and the transfer of the benefit of the deemed marine licence as doing so could result in transfers occurring at different times and inconsistency in position. Having deemed the marine licence in the Order it is also appropriate that any transfer under that order include the deemed marine licence as part of the wider transfer – it is one element of the wider order powers and should not be separated out from the authority to construct, operate and maintain the NSIP granted by the order. With reference to the request to refer to the list of DCOs in Q DCO.2.01: • Awel y Môr Offshore Wind Farm Order 2023- this OWF is in Wales and cannot contain a DML so is not a relevant precedent on this point. • Hornsea Four Offshore Wind Farm Order 2023 – the same provision as sought is included in Article 5 • East Anglia ONE North Offshore Wind Farm Order 2022 – the same provision as sought is included in Article 5 • Hornsea Three Offshore Wind Farm Order 2020 – the same provision as sought is included in Article 5 • Norfolk Vanguard Offshore Wind Farm Order 2022 - the same provision as sought is included in Article 6 • Norfolk Boreas Offshore Wind Farm Order 2021- the same provision as sought is included in Article 6 • Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024 – the same provision as sought is included in Article 5.

DCO.2.04	Tendring District Council	**Requirement 5 (Onshore substation works)** Putting aside some 'legacy' drafting issues in the version of the dDCO submitted at Deadline 1 [REP1-008] following the merging of former Requirement 6 (Landscaping) with Requirement 5, which the Applicant has submitted it will be addressing when the next version of the draft DCO is submitted, do you consider Requirement 5 would provide an appropriate mechanism for determining the detailed design for the proposed onshore substation? If you consider that Requirement 5 is deficient in any way, explain why that is the case.	This question is not directed to the Applicant.
DCO.2.05	Tendring District Council and East Suffolk Council	**Drafting of the proposed Articles and Schedules 1 and 2** Do you have any concerns about the drafting of any aspects of the Articles and/or Schedules 1 and 2 in the dDCO? If you have any such concerns submit wording that you consider would address those concerns.	This question is not directed to the Applicant.
DCO.2.06	Applicant	**Wording of the Force majeure conditions in Schedules 10 and 11** Further to the Applicant's response to ExQ DCO.1.25, apart from adverse weather conditions, what other circumstances might cause the master of a vessel to deposit authorised deposits within or outside the Order Limits.	The Applicant understands the question to be "other than weather what else can be considered Force Majeure" in relation to offshore vessels. The test of what is force majeure and what is not may be examined in courts on the specifics of the event. The party claiming force majeure must typically demonstrate the event was beyond their control and unforeseeable. Example of this in the maritime environment include: ➢ Unforeseeable pirates / civil unrest ➢ Governmental interference (e.g. hostile navies) ➢ Unforeseeable allision / collision with a vessel drifting and uncontrollable ➢ Natural disaster unrelated to weather (i.e. earthquakes or underwater mud volcano causing a tsunami) ➢ Unforeseeable interaction with a sea creature ➢ Third party labour disturbance such as blockade of port facilities ➢ Unforeseeable vessel malfunction that results in dangerous situation. Examples are explosion, cyber security, loss of information or power systems. Issues with regular maintenance and negligence are not allowed. ➢ Plague / epidemic, biological weapons attack or contamination. Business risks due to market fluctuations are not typically covered.
DCO.2.07	Applicant and MMO	**Deemed Marine Licences (DML) Schedules 10 and 11** A Site Integrity Plan does not form a standalone condition within the DMLs. On a without prejudice basis, submit wording that would secure the inclusion of a Site Integrity Plan within the DMLs.	This has been updated and submitted in the 3.1 Draft Development Consent Order – Revision E, submitted at Deadline 4.
DCO.2.08	Applicant	**Condition 6(16) (Notifications and inspections) of Part 2 of Schedule 10 (Deemed marine licence – Generation Assets)** What type of materially false or misleading information is being referred	The Applicant notes that this is the wording sought by the MMO and is not its own drafting. The Applicant has no intention to provide any incorrect information but included the wording at the request of the MMO,

		to in subparagraph (16) of condition of the DML for the generation assets?	presumably to cover the scenario where information is mistakenly incorrect. The Applicant notes that the MMO routinely includes this wording and suggests that they would be better placed to explain the background to it than the Applicant.

5. LAND RIGHTS (COMPULSORY ACQUISITION (CA) AND TEMPORARY POSSESSION (TP) ETC) (LR)

Ref	Question to:	Question	Applicant's response
LR.2.01	National Highways	**Directional drilling and cable pulling activities under the A120** During ISH4 the Applicant responded to a question from the ExA regarding NH's concerns in its Deadline 1 submission (section 6.1 in [REP1-066]) in respect of the Compulsory Acquisition powers sought with respect to the proposed trenchless cable crossing underneath the A120. The Applicant indicated that it had discussed the matter with NH and the plot in question was included in the Book of Reference (BoR) [REP1-012]. a) Are you satisfied that the crossing point under the A120 has been included in the BoR? b) Do you expect to reach an agreement with the Applicant in relation to land rights for the crossing point under the A120 by the close of the Examination?	This question is not directed to the Applicant.

6. MARINE ECOLOGY

6.1 BENTHIC ECOLOGY

Ref	Question to:	Question	Applicant's response
ME.2.01	Applicant	**Without prejudice derogation case – Margate and Long Sands Special Area of Conservation (MLS SAC)** A without prejudice derogation case [AS-003] has been submitted in respect of MLS SAC, with the preferred compensation measure being strategic compensation in the form of a new site designation or extension for Annex I sandbanks. Can any update be provided on the Defra-led strategic benthic compensation programme under which compensation for the MLS SAC would be delivered, including the expected timing of any guidance or statements? Can the Applicant also comment on what level of confidence the ExA can place on the delivery of this compensatory measure.	As the strategic compensation scheme is a Defra led programme, the exact timing the programme is with Defra and the relevant ministers. However, following a Project catch-up call with Defra and reconfirmed by a response by Natural England [REP2-059], it is expected that the ministerial statement will be issued in the very near future. The Applicant would like to stress that the delivery of the strategic compensation measure is Defra's responsibility. Confidence in the ability to deliver the strategic compensation measure should be sought directly from Defra, whilst noting that this measure is also supported by Natural England. The Applicant has provided for project-led measures that would, on a without prejudice basis, suitably compensate for the long term impacts of using cable protection.
ME.2.02	Natural England	**Technical Note – Methodology for Determining Maximum Design Scenario** The Applicant has provided a Technical Note – Methodology for Determining Maximum Design Scenario (Offshore) [REP2-027]. Is Natural England content with what is stated in that technical note? If not, by Examination Deadline 4 identify any outstanding concerns and explain why you have those concerns.	This question is not directed to the Applicant, however this technical note has been updated in response to the ExA's request in ME.2.05 and therefore may benefit from a response from Natural England at Deadline 5.
ME.2.03	Natural England	**Margate and Long Sands Special Area of Conservation – conservation advice** At E26 in [PD2-007] you have advised that the conservation advice package for MLS SAC was due to be updated as draft in autumn 2024. Can you provide an update on timescales for this forthcoming advice. Is there any relevant interim advice in its absence?	The Applicant notes that a search online has provided no further information with regards to the update, or its likely timing of delivery to the conversation advice package for the Margate and Long Sands SAC.
ME.2.04	Natural England	**Seagrass habitat creation/restoration compensatory measure** At F32 in [PD2-008] you have stated that you would submit further comment on the technical feasibility of the proposed seagrass habitat creation/restoration compensatory measure included within the Applicant's without prejudice derogations case at Deadline 1. This does not appear to have been provided to date. Natural England should therefore submit this information by Deadline 4.	The Applicant notes that Natural England provided a response to this question in their cover letter at Deadline 3 [REP3-031]. The position of Natural England that seagrass restoration would only be considered as part of a package of project-led measures is accepted. The Applicant and Natural England are aligned that the primary benthic compensation measure (should an adverse effect on integrity be concluded) would be the strategic measure of SAC extension. The Applicant's project-led measures provide a suitable back-up for the very limited impact any cable protection (if used) would have on the Margate and Long Sands SAC.
ME.2.05	Applicant	**Technical Note - Methodology for Determining MDS (Offshore)** The Applicant is requested to submit an updated version of its Technical Note - Methodology for Determining MDS (Offshore) [REP2-027] by Deadline 4. This must address the following: a) Paragraph 1.1.12 states that some information is not provided as the Applicant considers it to be confidential or propriety information that is sensitive. The ExA requests confirmation as to whether this information could be submitted on a confidential basis or in part. If	These points have been updated in the 10.20.1 Technical note - Methodology for Determining MDS (Offshore) – Revision B, submitted at Deadline 4.

		not, the Applicant is requested to explain the level of confidence the ExA can have in the MDS used in the absence of full information. b) Paragraph 2.1.3 restates that the maximum number of cable crossings has been set at 56. The Applicant must present a detailed explanation of how this parameter has been established, including any assumptions made. c) Paragraph 2.2.2 refers to the potential for a very small volume of sediment being trapped within rock voids and/or accumulating on the updrift side of berms of the cable protection, if required. The Applicant is requested to quantify the volume or provide an estimate of the maximum expected volume of such sediment. d) Paragraph 2.2.4 states that monitoring and observation of operational offshore wind farms shows that large scale morphological features are not affected by the presence of assets (cable protection) and that scour impacts would be very small. The Applicant is requested to submit evidence in support of this assertion and to clarify the predicted maximum distance of impacts based on this evidence. e) Paragraph 2.4.2 states that a 50% assumption has been applied to sediment disturbed from fluidised material dispersed during cable trenching. This information seems to contradict the Applicant's response at Deadline 1 [REP1-051] that an assumption of 100% of material is fluidised and displaced. The Applicant is requested to clarify what has been considered in the assessment. The ExA notes that Table 2.8 in [APP-071] states that a sensitivity check on 100% of material ejected in local areas was undertaken. The Applicant is requested to confirm where this is presented in the Application documentation. f) A full response to the matters raised by Natural England in items B13 [PD2-004] and E6 and E7 in [PD2-006] should be provided in terms of how seabed disturbance from operational cable repairs and replacement has been calculated drawing on experience (including analysis from operational offshore wind farms) and ground type information.	
ME.2.06	Applicant	**Adverse Effect on the Integrity of the MLS SAC** Can any examples be provided where a conclusion of no Adverse Effect on Integrity has been reached by the relevant Secretary of State following the loss or disturbance of habitat on a scale similar to that predicted for MLS SAC as a result of this Proposed Development?	The most analogous example relates to the Triton Knoll Electrical System DCO and the export cable corridor which is, in part, routed through the Inner Dowsing, Race Bank and North Ridge (IDRBNR) SAC (SCI at the time at the DCO award) sandbank feature. The Triton Knoll application included an export cable corridor that extended into the SAC and over 0.01% of the sandbank feature, and included the potential use of cable protection within the designated site. The ExA recommended that adverse effect on the IDRBNR SCI could be excluded from the project alone and in-combination with other plans or projects, when considering the qualifying features in view of the site's conservation objectives and having regard to the mitigation and

			monitoring measures secured as recommended to the SoS[1]. The recommendation report also noted Natural England's agreement of no Likely Significant Effects on the sandbank feature of the IDRBNR either alone or in-combination. The Development Consent Order made by the SoS[2] does not include any need for compensation and only contains mitigation in terms of a Construction Method Statement requiring approval by the MMO after consultation with the SNCB (as was agreed with NE during the examination). In addition the Applicant committed to undertaking bathymetric monitoring of the site. The Applicant would like to note, that whilst Natural England's approach to what they consider to constitute an AEoI has changed over time, this is not due to any legislative change and it is still possible and entirely proper to conclude a direct effect on a qualifying site feature does not automatically equate to an AEoI of the site. As the Proposed Development has a very limited impact on the SAC (0.0008%) we do not consider the Project will have an adverse effect on the integrity of the site.
ME.2.07	Applicant	**Margate and Long Sands Special Area of Conservation Benthic Mitigation Plan** In response to Natural England's comments regarding potential for impacts for Section 41 Natural Environment Research Council habitats and species (Items E5 and E17 in [PD2-007]), a commitment has been added to Margate and Long Sands Special Area of Conservation Benthic Mitigation Plan – Revision B [REP2-020] regarding the use of micro siting. Would this mitigation be effective for each of the habitats and species identified by Natural England in the aforementioned Relevant Representation? If so, what level of confidence can be placed on the mitigation and why?	Natural England reference Annex I reef (Item E17 in [PD2-007]). There are three types of Annex I reef, these are: • bedrock reef; • stony reef; and • biogenic reef. The full cover geophysical data does not identify any bedrock reef and as this will not develop over time, it can be discounted. There are isolated rock features, that have been assessed as 'low' reef, as well as a number of locations with *Sabellaria spinulosa*, which were assessed as not reef forming (Main Array and Export Cable Route - Environmental Features Report [APP-102]). Should the post-consent survey identify any additional areas that are classified as Annex I stoney reef or biogenic reef, micro siting is an effective and established industry method to avoid these features wherever practicable. Natural England reference Section 41 Natural Environment and Rural Communities (NERC) Act 2006 Habitats (Item E5 in [PD2-007]). There are a number of habitats listed as Section 41[3], however only a subset of these are potentially present at the Proposed Development site. These include: • Peat and clay exposures with Piddocks; • *Sabellaria spinulosa* reefs; • Subtidal chalk;

[1] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020019/EN020019-004772-Examining%20Authority%20Recommendation%20Report.pdf
[2] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020019/EN020019-004778-Development%20Consent%20Order%20made%20by%20the%20Secretary%20of%20State.pdf
[3] List of priority habitats and species in England ('Section 41 habitats and species') for public bodies, landowners and funders to use for biodiversity conservation. Available at: https://www.gov.uk/government/publications/habitats-and-species-of-principal-importance-in-england

			• Blue mussel beds on sediment; and • Subtidal sands and gravels. As well as the *S. Spinulosa* clumps noted above, some isolated patches of 'A4.231 Piddocks with a sparse associated fauna in sublittoral very soft chalk or clay' were identified in both the offshore area of the ECC, as well as one site classified as Subtidal sands and gravels (Main Array and Export Cable Route - Environmental Features Report [APP-102]). Should the post-consent survey identify any additional areas that are classified as Section 41 habitats, micro siting is an effective and established industry method to avoid these features wherever practicable. In summary, limited evidence of Annex I reef and Section 41 NERC habitats and species were identified through pre-application surveys suggesting that avoidance through micrositing (where such features are identified during pre-construction surveys) is an appropriate approach. This mitigation would be effective as it avoids primary impact on the habitats or species and it is an established technique. It is also noted that micrositing of cables may be used to avoid archaeological features, potential UXO and other seabed obstacles, and is therefore a routine part of detailed cable routing.
ME.2.08	Applicant	**Geotechnical surveys** In its response to ExQ1 ME.1.08 in [REP2-039] the Applicant has stated that soil data currently held is sufficient to confirm that the cable could be buried and that further geotechnical surveying is not required prior to any consent. Have any other comparable developments followed a similar approach in relation to the timing of geotechnical surveys?	The Applicant provides the example of Awel Y Mor as a project that recently received a recommendation of approval for the DCO from the ExA and that did not have geotechnical data along the cable route. For the Five Estuaries project there is project specific geophysical data for the Array Area and Export Routes that includes sub bottom profiling allowing understanding of the stratification below the seabed. This data demonstrates the ground conditions are London Clay with some Channel Infill and Surface Sand. The units are well documented from a geotechnical perspective and hence there is no need to obtain project specific geotechnical data for engineering purposes pre consent. It should also be noted that the neighbouring wind farms of Galloper and Gabbard had the same ground conditions and managed to install the cables in the London Clay. For consenting purposes the description of the surveys being conducted post consent is contained in the 9.32 Offshore In Principle Monitoring Plan – Revision B [REP1-045].

6.2 MIGRATORY BATS

Ref	Question to:	Question	Applicant's response
ME.2.09	Applicant	**Habitats Regulation Assessment Screening Report – Zone of Influence** Paragraph 3.6.1 of the Applicant's HRA Screening Report [APP-042] states that there are no European sites designated for bat features within 25 km of the on-shore export cable corridor.	As the ExA has highlighted, there are no European sites designated for bats within 25 km of the onshore ECC. Similarly, for European designated sites offshore, there are no sites, either European or national, with bats as a designated feature. Therefore, as there are no bat features for the offshore designated sites, there are no potential impact pathways and thus no zone of influence has been used.

		Noting the comments of the German Government at [RR-035] has the Applicant considered a zone of influence for European sites in the UK designated for bat features that could be affected by off-shore pathways? If so, can the Applicant confirm the zone of influence used, and reasons why, and if any bat features of sites within the zone are migratory. If this assessment has not been performed, can the Applicant explain why that is the case?	Regardless, if the zone of influence of 15 km for the onshore ecology study area was applied to the Eversden and Wimpol Woods SAC (the nearest onshore site designated for bats in relation to the onshore ECC) is over 147 km away from the VE array area. The bat feature designated at this SAC is Barbastelle, which is not considered to be a migratory species. Additionally, it should be noted that this site was screened out of the onshore assessment.
ME.2.10	Natural England	**Effects on migratory bats** It is noted that Natural England's response to ExQ1 ME. 1.15 at [REP2-058] states that matters in relation to migrating bats are for Statutory Nature Conservation Body to consider. Nevertheless, as the Government's advisor, the ExA requires Natural England to clarify its own position in this regard so that the ExA can inform the Secretary of State when it submits its recommendation following the conclusion of the Examination. As such, can Natural England confirm whether or not it considers that the Proposed Development would result in any adverse effects on migratory bats. If not, why not? If so, what mitigation would be required?	This question is not directed to the Applicant.

6.3 COMPENSATORY MEASURES – ORNITHOLOGICAL SPECIES

Ref	Question to:	Question	Applicant's response
ME.2.11	Applicant	**Marine Recovery Fund (MRF)** As a result of possible effects on the kittiwake, guillemot and razorbill features of the Flamborough and Filey Coast Special Protection Area, it would appear that the Applicant proposes (without- prejudice) the option to participate in Defra's strategic compensation via the MRF. What strategic compensation projects does the Applicant envisage that the Proposed Development could contribute to under the MRF if chosen as an option? What would be the timescales for the delivery of such projects?	Two strategic projects are ongoing to develop implementation and monitoring plans for offshore artificial nesting structures for kittiwake and predator reduction measures for auks. These are being developed under the COWSC groups (Collaboration on Offshore Wind Strategic Compensation) through OWIC (Offshore Wind Industry Council) with members including developers, SNCBs, The Crown Estate and Defra. These are projects that are planned to be delivered through the MRF which is still scheduled for implementation at the end of 2025. It is unlikely that the MRF or any associated projects will be implemented prior to 2026, however the Applicant would like to maintain the option to contribute to the MRF if the option arises. It should be noted that the Applicant is not relying solely on the MRF to deliver compensation for any species.
ME.2.12	Applicant	**Compensatory measure delivery** a) Explain which compensatory measures for various bird species require landowner consent and update the ExA in relation to any relevant on-going discussions in that regard. Noting that some compensatory measures would not be in the Order Limits, and without prejudice to the Secretary of State's decision, what are the mechanisms that could be incorporated into a made Order to secure these compensatory measures?	Lesser black backed gull – Orford Ness - Requires land for access and installation of predator proof fencing. Engagement with the landowner is ongoing and heads of terms have been issued. The land is within Order Limits and subject to compulsory acquisition powers. Lesser black backed gull – Outer Trial Bank - The Applicant would require landowner consent for the rights under licence to undertake the compensation measure, although it is not expected that any leasehold or freehold rights would be required. The Applicant is engaging with The Crown Estate (as freeholder) on this matter. It should be noted, only one of Orford Ness or Outer Trial Bank will be taken forward. Kittiwake – Gateshead Kittiwake Tower (without prejudice) - No additional land rights are required. The Applicant is progressing a commercial agreement with Dogger Bank South for the use of part of the existing tower. Guillemot and Razorbill disturbance reduction (without prejudice) - Although measures in the southwest to reduce human disturbance at auk colonies are unlikely to require securing land, they may require some form of landowner consent. The Applicant is in discussion with several different organisations with the aim to partner with organisations that have existing relationships with landowners and the

			required consents at the shortlisted colonies. However, where necessary additional consents may be sought. With regard to securing without prejudice measures, the Applicant will submit by Deadline 5 without prejudice DCO schedule wording, should it be concluded that compensation is required. For measures that are without prejudice there is naturally a limit to which the Applicant can reasonably progress or seek to secure measures that it does not consider are required. Nonetheless all such measures have been developed sufficiently that the Secretary of State can have confidence that they would deliver the required quantum of compensation for the very limited impacts from VE. The DCO drafting would achieve the necessary level of control by preventing the impact arising (for birds by preventing any operation of the wind turbines) until suitable compensation has approved by the SoS and implemented.
ME.2.13	Applicant	**Guillemot and Razorbill Implementation and Monitoring Plans** It would appear that the Applicant is still in discussion with relevant stakeholders regarding the updated Guillemot and Razorbill Implementation and Monitoring Plans [REP2-016]. How would stakeholder participation be secured and through what mechanism? Could a draft agreement be submitted into the Examination?	The Applicant is exploring collaborative opportunities, alongside other OWF projects, with a number of nature conservation bodies. Discussions are at an advanced stage and the Applicant is hoping to have a MoU signed as soon as the method for agreeing the compensation options is determined. Further details will be submitted into the examination at a future Deadline. As an MoU is currently under discussion with the relevant parties the Applicant does not consider it appropriate at this time to submit a draft agreement into the examination.

6.4 HABITATS REGULATIONS ASSESSMENT

Ref	Question to:	Question	Applicant's response
ME.2.14	Applicant	**Screening Matrices** The Applicant should submit updated Habitats Regulation Assessment Screening Matrices [APP-043] that are consistent with the outcome of its screening assessment and European sites, qualifying features and impact pathways considered at appropriate assessment in [REP1-016] by Deadline 5.	The Applicant will update the HRA Screening Matrices [APP-043] for Deadline 5 as required. The Applicant has noted a few discrepancies in the screening matrices, but these will not impact the screening assessment or the Report to Inform Appropriate Assessment conclusions.

6.5 MARINE MAMMALS

Ref	Question to:	Question	Applicant's response
ME.2.15	Natural England	**Marine noise policy paper** Issue H10 of Natural England's risk and issues log [REP2-058] states that a marine noise policy paper is due to be published soon, to take effect from January 2025. Can Natural England update the ExA on the timescale for the publication of this document.	This question is not directed to the Applicant.

7. ECOLOGY ONSHORE (EO)

Ref	Question to:	Question	Applicant's response
EO.2.01	Tendring District Council (TDC) and Applicant	**TPO Trees and Veteran Trees** Table D Tree Preservation Orders (TPOs) in Arboricultural Report [APP-255] provides only a reference number, with a broad description identifying only the number of trees present. Appendix B (Tree Constraints Plans), Drawing Number 2 Sheets 28 of 47 and 37 of 47 illustrate the presence of TPO trees with a non-specific Tree Preservation Order Location (yellow star) or Tree Preservation Order Tendring District Council 2023 (cross-hatched yellow). • **For TDC** - in respect of Sheets 28 and 37 only, provide drawings at a scale 1:500 identifying any specific trees, by identification number/mark, which are likely to be impacted or subject to mitigation. • **For TDC** – in respect of Sheets 28 and 37 only, are any of the trees identified as Veteran? • **For Applicant** - where impacts are likely to occur on the TPO trees referenced above, whether in the form of pruning, lopping, root reduction or felling, provide reasons/justification for these actions and details of mitigation proposals to minimise the level of impact likely to occur.	Table D within the Arboricultural Report [APP-255] provides details of the five Tree Preservation Orders (TPOs) that may be affected by the project and identifies potential impacts at parts of two of these, noting that tree removal is not anticipated: • 77/00035/TPO – the Northern boundary of this woodland abuts an operational and maintenance access route with agricultural land (refer to Drawing 2 sheet 16 (page 53 of pdf) of the Arboriculture report [APP-255]). A potential impact has been identified on the root protection area (RPA) such that no dig construction is required. • 23/00005/TPO – T1, T2 and G2 are situated between Stones Green Road and an operational and maintenance access route (refer to Drawing 2 Sheet 28 (page 65 of the pdf) of the Arboriculture report [APP-255]) such that mitigation may be required. Impacts are not anticipated to any of the other TPOs identified; this includes 21/00091/TPO adjacent to Bentley Road, shown on sheet 37 and referenced in the ExA Q EO.2.01. Although the powers to lop branches and encroach on the RPA's has been included as the TPOs are adjacent to the AIL route. Impacts to all trees, including TPO trees, will be kept to a minimum but where necessary will be completed in accordance with the prevailing best practice and controlled by the Code of Construction Practice (CoCP) – Revision B [REP1-041] and the OLEMP – Revision C [REP2-022] both of which will be secured within the DCO. The default position is that high and moderate quality trees should be retained and protected where possible. Section 5 of the OLEMP – Revision C [REP2-022] includes outline provisions for protection of retained habitats, including all trees (TPO trees are not explicitly stated). Section 5.1.3 notes that: *Following more detailed design development, pre-commencement/ pre-construction full survey will be undertaken by an appropriately experienced arboriculturist, and the guidance set out in BS5837:2012 Trees in Relation to Construction will be adhered to where applicable. For trees which cannot be avoided, the survey will define specific mitigation measures required for trees situated in or immediately adjacent to the working width, including where practical, measures such as the erection of protective fencing in order to minimise the impacts on trees and their roots. These will be specified in the final LEMP, once the final scheme design is known.* Power to remove TPO trees is not sought.

8. NAVIGATION AND SHIPPING (NS)

Ref	Question to:	Question	Applicant's response
NS.2.01	Harwich Haven Authority	**Update with regards to the Statutory Harbour Authority's views about the submitted application** Further to the submission of your Relevant Representation [RR-043], update the ExA as to whether the Statutory Harbour Authority considers for the construction and/or operation of the proposed Five Estuaries Offshore Wind Farm there would or would not be adverse effects for: a) The safe navigation and passage for ships in the Sunk area. b) The safe navigation and passage for ships within the Harwich Haven Authority's harbour limits. c) The safe navigation and passage for ships within the approaches to the Harwich Haven Authority's harbour limits. d) The safe navigation and passage for ships within waters adjacent to the Harwich Haven Authority's harbour limits. e) The safe and continued operation of the pilot boarding and landing stations within the Sunk area. If the Statutory Harbour Authority considers there would be any adverse effects, it should explain why that is the case and indicate whether such effects could be alleviated by any mitigation measures, including through the incorporation of Protective Provisions in favour of the Authority. Should the Harwich Haven Authority consider Protective Provisions would address any concerns it might have then it should submit wording for any such Protective Provisions.	The Applicant notes this question is for Harwich Haven Authority but has provided some commentary below. Given the sensitivity of the area within which the offshore ECC is located, extensive consultation has been ongoing with relevant IPs including HHA since before the Scoping Report was submitted as described in Section 6.1.1.2 of the NRA [APP-240]. This has resulted in a refined offshore ECC which was welcomed by HHA during post PEIR consultation as summarised in Table 9.2 of the shipping and navigation EIA chapter [APP-078]. The HHA have also been involved in the development of the outline NIP [REP1-039] and are identified as one of the IPs for discussion and initial approval of the NIP pre construction as well as subsequent updates. The Applicant met with HHA on 18 November 2024 to progress the Statement of Common Ground and expects to receive initial responses shortly. For works with the HHA harbour limits, a works licence will be required. It is the Applicant's understanding that, subject to provision of all reasonable and necessary details to support the works licence application, that there is no reason in principle why this would not be capable of being granted by HHA.
NS.2.02	Applicant	**Speed of cable burial within the export cable corridor** During the discussion relating cable burial within the export cable corridor under agenda item 3.3 of Issue Specific Hearing 3 the Applicant intimated that the deeper the burial of cables the more time that is required and that there is a balance to be struck between the speed and depth of cable burial. Provide an indication of how much additional time is required for each additional metre of burial depth.	There is no simple generic numerical answer that can be provided in response to this question as burial speeds vary in different ground conditions, generally it takes longer to dig deeper trenches/bury cables than it takes to dig/bury cables in shallower trenches. The Applicant understands the question specifically relates to the Deep Water Routes (DWR). In this area the ground conditions are known to be predominantly London Clay at Trinity DWR, and Channel infill at Sunk DWR. The water depths in these channels vary in region of 18 to 20m CD, hence the cable will have to be buried at below 2-4m current water depth (indicative depending on the final route within the channels). To achieve these depths in these ground conditions, either the seabed must be lowered; this would be achieved with either dredging or controlled flow excavation, or through the use of specifically designed tools for deep burial; or a combination of the two. These approaches will typically take longer than more common burial tools that are aiming to achieve common burial depths of 1-2m in London Clay and Channel infill. Nonetheless it will be essential to ensure the required installation depth is achieved in these areas, and to do so without the need for any remediation or further works during operation will ultimately lead to the lowest impact on shipping traffic. The works will be coordinated with relevant ports through the protocols set out in the NIP.

NS.2.03	Applicant	**Fisheries Liaison and Coexistence Plan (FLCP)** Further to the concerns expressed by the National Federation of Fishermen's Organisations in their Deadline 2 submission [REP2-088] regarding the outline FLCP [REP1-037] respond to those comments, explaining your reasoning if you do not agree with any of the points and for those points you agree with, how and when you will update the FLCP to address them?	The Applicant has updated the outline FLCP in response to NFFO feedback (see 9.16 Outline Fisheries Liaison and Co-existence Plan – Revision B [REP1-037]). The Applicant received the NFFOs feedback prior to examination commencing and held a meeting to discuss the content of the comments with the NFFO in August. The updated outline FLCP was issued to the ExA at Deadline 1 containing amendments in line with the submission by the NFFO. The Applicant has also responded to the NFFO's Written Representations within 10.26 Applicant's Comments on Deadline 2 Submissions [REP3-024] and is entering into a Statement of Common Ground to discuss those remaining points which The Applicant hopes to reach agreement on. It should be noted that the Outline FLCP [REP1-037] will be further updated and submitted at a future deadline following meetings arranged with both the NFFO and the Commercial Fisheries Working Group to discuss the content of the Outline FLCP. The Final FLCP will be finalised post-consent following continued engagement with fisheries stakeholders prior to construction commencing.
NS.2.04	Applicant	**Cable Burial Risk Assessment (CBRA)** Further to the concerns expressed by the National Federation of Fishermen's Organisations in their Deadline 2 submission [REP2-088] that the outline CBRA [APP-239] is lacking in detail on how the risk associated with cables and fishing will be addressed, do you intend to update the CBRA? If so, when will an updated version of the2 CBRA be submitted?	It should be noted that the Cable Burial Risk Assessment (CBRA) submitted at application [APP-239] is an outline submitted as information only. A full CBRA will be produced to inform the final CSIP during the pre-construction phase. Within a CBRA it is typical to assess the burial required to protect the cables from trawling (it is advised that trawling can cut 0.3m into the seabed and hence a burial of at least 0.5m should be achieved to allow for trawling). The concern expressed by the National Federation of Fishermen's Organisations is understood by the Applicant to refer to cables in areas of seabed movement, where over time the cable becomes exposed in areas as the seabed moves. The Applicant will endeavour to bury the cable in areas of stable seabed to reduce the risk of exposures in the longer term, however in the array area this may not always be possible; hence a monitoring approach must be taken as is common with other offshore wind farms in similar ground conditions.
NS.2.05	East Anglia Two Limited	**Assessment of shipping and navigation risk** Your Deadline 2 submission [REP2-079] notes that you are still evaluating the potential consequences of any navigational risks created by this project. When can the ExA expect to see your analysis, noting that we are almost a third of the way through the six month Examination period?	The Applicant notes that this question is for East Anglia Two but has provided further commentary below. The Applicant acknowledges that EA2 ltd are undertaking analysis in relation to the corridor between the northern array of VE and EA2. The Applicant notes that a full safety case has already been carried out in relation to this and can be found within Section 17 of 9.10 Navigational Risk Assessment [APP-240]. This assessment has considered the following:

			> Existing and future navigational features including other wind farms; > Potential corridor users; > Relevant guidance and legislation including MGN 654, PIANC guidance, MARIN guidance, and the COLREGs; and > Consultation undertaken with relevant stakeholders including Regular Operators. Following this assessment and consultations the Applicant can confirm there were no outstanding points raised from consultees and that the navigation corridor was ALARP.
NS.2.06	All IPs with a navigation and shipping interest	**Depth of cable burial within the export cable corridor (ECC)** There appears to be a consensus of opinion between all parties in this Examination that where the ECC crosses the Sunk and Trinity Deep Water Routes (DWRs) the cables would need to be installed and maintained at a depth that would allow for the DWRs to be dredged and deepened in the future to a depth of at least 22 metres below Chart Datum. Does any party disagree that 22 metres depth is appropriate? If yes, please explain why?	The Applicant notes that this question is for IPs but has provided further commentary below. The need for a depth of at least 22m below Chart Datum was first established at the Hazard Workshop undertaken in October 2022. Relevant IPs were present at the workshop and detailed discussion was held in relation to future vessel sizes with potential draughts of 20m plus 10% under keel clearance raised by HHA and London Gateway (see Table 15.1 of the NRA [APP-240]). Consultation pertaining to cable burial has continued with relevant IPs in the NRA process and during examination, and the 22m below Chart Datum requirement in proximity to the DWRs has been incorporated Into the Outline CSIP Rev B submitted at Deadline 4.

9. SOCIO ECONOMIC EFFECTS (SEE)

Ref	Question to:	Question	Applicant's response
SEE.2.01	Tendring District Council and Essex County Council	**Vibration impacts from HGV construction traffic** Vibration impacts from HGV construction traffic have been scoped out of the assessment undertaken by the Applicant in [Table 9.11, page 36 in APP-091]. Given Applicant's intention to use Bentley Road as a route for Abnormal Indivisible Loads of up to 400 tonnes, do you consider the scoping out of vibration impacts from HGV construction traffic is appropriate for Bentley Road? If you do not agree with the scoping out of that effect from the Applicant's assessment, explain why that is the case and advise on what you consider the Applicant should do to address this matter.	This question is not directed to the Applicant.
SEE.2.02	Tendring District Council and Essex County Council	**Mitigating construction noise via the submitted Code of Construction Practice (CoCP)** Do you consider adequate measures for mitigating construction noise to an acceptable level would be available within the proposed CoCP [REP1-041] and could be secured through the provisions of the draft Development Consent Order [REP1-008]? If you consider the noise mitigation measures included in the CoCP would be inadequate, what additional measures do you consider should be included in the CoCP or secured by other means in any made DCO for the Proposed Development?	This question is not directed to the Applicant.
SEE.2.03	Tendring District Council	**Cumulative construction noise effects in Bentley Road** In paragraph 9.12.26 of the Airborne Noise and Vibration assessment [APP-091] the Applicant has acknowledged that the cumulative construction traffic noise in Bentley Road may not be adequately mitigated by the implementation of the proposed 40mph speed limit and that further mitigation in the form of: a speed limit below 40mph, the re-routing of HGV construction traffic; and undertaking sound insulation works for the affected dwellings. How practical and/or effective do you consider the implementation of additional mitigation measures such as lowering the speed limit below 40mph, the re-routing of HGV construction traffic; and undertaking sound insulation works would be?	This question is not directed to the Applicant.
SEE.2.04	Tendring District Council and Essex County Council	**Assessment of cumulative operational noise for the Proposed Development onshore substation and the substations proposed for North Falls and the East Anglia Connection Node** With respect to the assessment of cumulative operational noise from all three proposed substations, are you content that the Applicant has used suitable data and undertaken an appropriate assessment to reach the conclusion in paragraph 9.12.33 of [APP-091] that there would be a *"minor effect"* that would not be significant for noise sensitive receptors?	This question is not directed to the Applicant.
SEE.2.05	Harwich Harbour Fishermen's Association	**Outline Fisheries Liaison and Co-existence Plan** Do you consider the measures included in the Outline Fisheries Liaison and Co-existence Plan [APP-247] would or would not be effective. If you consider the Co-existence Plan would be ineffective explain why	The Applicant notes that this question is for the Harwich Harbour Fishermen's Association but has provided further commentary below.

		that is the case and could any changes be made to the Liaison and Co-existence Plan to make it more effective?	The Applicant has held several Commercial Fisheries Working Group (CFWG) meetings with the local fishermen's associations since the Pre-Application phase and will maintain this dialogue throughout the lifetime of the project. To date engagement has been positive and constructive, and the Applicant welcomes further feedback from Harwich Harbour Fishermen's Association. The concerns of the CFWG have been recorded and considered in undertaking the commercial fisheries impact assessment for Five Estuaries, and in developing the outline Fisheries Liaison and Co-existence Plan (FLCP) [REP1-035]. The Applicant has been and remains keen to learn from experiences which the CFWG have expressed through regular meetings in relation to the development of the FLCP and Five Estuaries is committed to a number of project-specific measures to manage potential impacts on commercial fisheries. A further CFWG is scheduled for 11 December 2024, and the FLCP will be updated as required following this meeting.

10. SEASCAPE AND LANDSCAPE AND VISUAL (SLV)

Ref	Question to:	Question	Applicant's response
SLV.2.01	Applicant	**Seascape - difference between the installation of 41 large or 79 small wind turbines** With respect to seascape effects, explain what differences there might be between an offshore development of either 41 *"large"* or 79 *"small"* wind turbine generators.	The Applicant wishes to again clarify that the proposal is not to develop either 41 'large' or 79 'smaller' WTGs. Wireline visualisations showing a 79 'smaller' WTG layout (324m) [PD4-010 to PD4-012] and a 41 WTG layout at 370m [REP2-031 to REP2-038] were submitted at Procedural Deadline D and Deadline 2 to illustrate the differences between the relative height of WTGs, but cannot be taken to mean that the Applicant is proposing an either or between these configurations. The commitment in the DCO is that the number of WTGs will not exceed 79 and the maximum tip height will not exceed 370m LAT. The controlling parameter is therefore total swept area, which allows for a sliding scale between these two extremes (maximum no. WTGs and maximum height). For the purposes of EIA two indicative array layouts were produced, one with the maximum number of larger turbines allowed within the swept area calculation (which equated to 41 at the original tip height of 399m LAT), and one with the maximum number of turbines at a nominal lower height (noting that the turbines could ultimately be shorter than the 324m tip height referred to but could never be more numerous than 79). On that sliding scale there could be up to 46 WTGs at 370m LAT tip height, a figure that has always been within the assessed maximum design scenario, and therefore does not affect the worst case assessment. This point is further elaborated in Document 10.20.5 – Technical Note: Number of Wind Turbine Generators [RE{3-020] submitted at Deadline 3. The 'range of configurations' or differences in effects resulting from the two extremes of the project design does not need to be assessed, as the worst-case scenario has been assessed under the Rochdale Envelope approach. The Applicant considers that the effects of 79 WTGs at the minimum height (324m) is likely to be of slightly lower magnitude than 41 turbines at the assessed 399m tip height, due to the smaller apparent height of the 324m WTGs (in comparison to 399m); scale comparisons with operational WTGs; and the lesser extent of the ZTV, however the difference is relatively subtle and unlikely to change the effects below the thresholds already assessed for the worst-case scenario 'larger' WTG layout in the ES. These effects are already assessed as generally being of low magnitude and no greater than moderate/minor and not significant EIA terms for, and this is accepted by IPs.
SLV.2.02	NGET	**Cumulative effects for the proposed onshore substations for Five Estuaries, North Falls and the East Anglia Connection Node** What would be the likely height of any pylons supporting overhead wires transmitting electricity to and from the proposed East Anglia Connection Node substation and how would the height of those pylons compare with any existing NGET and UK Power Networks pylons in the area?	This question is not directed to the Applicant.
SLV.2.03	Applicant	**Screen planting for the proposed onshore substation** Further to the discussion relating to the screen planting proposals for the proposed onshore substation at Issue Specific Hearing 3, submit	Indicative cross sections have been prepared to illustrate the potential mix of screening planting, their structure and size over 5, 10 and 20 years to form, not only a robust screen to the onshore substation, but also an

		indicative cross sections for the screen planting for the proposed substation.	attractive landscape feature in their own right. These have been included in 10.20.8 Technical Note - Screen Planting Options For Land Plot 17-024 submitted at Deadline 4.
SLV.2.04	Applicant and North Falls Offshore Wind Farm Limited (NFOWFL)	**Differences in approach to designing the onshore substation zone** The ExA has become aware through the submission of the Written Representation from T Fairley and Sons Limited, Robert Fairley Limited and T and R Fairley Farming Partnerships [REP2-095] that the Applicant and NFOWFL in submitting their respective applications have taken different approaches for the onshore substation zone, with North Falls, amongst other things, relying on less land take. Explain: a) the rationale for the differences in approach that have been taken to designing the onshore substation zone that have arisen through the submission of the respective applications; and b) how any issues of incompatibility between the different designs could be reconciled were two DCOs to be made and both projects were to be implemented.	a) The approach to designing the mitigation planting for VE and North Falls differs slightly as two separate environmental consultancies have developed indicative designs independently for their respective project. However, they use a similar method and achieve a similar outcome, with both Projects aligned in their approach to minimise landscape and visual effects through the use of robust screen planting around both onshore substations. The outcomes of this are evident in the broadly similar plans that have been produced, albeit with differences in the area to the north and to the south-east of the substations. To the north, the North Falls design includes tree planting positioned between wayleaves associated with overground and underground cables, while the VE design includes a traditional orchard comprising small trees that are permitted over and under cables. Both designs seek to screen the northern side of the onshore substations through tree planting but of differing heights / densities. To the south-east, both projects use tree planting to screen the southern side of the onshore substations, but with the difference that the VE design has extended the Order Limits to Ardleigh Road to enable screening closer to the receptors that will mitigate significant landscape and visual effects in a shorter time period. This also keeps the adjacent field largely intact reducing the overall agricultural disruption / BMV land take. b) A summary of the Applicant's process regarding the design of the OLEMP (including landscape screening) is as follows: • Engineering considerations were applied first, following which, landscape screening was designed. Biodiversity compensation and enhancements were then added to, or within the landscape design to comply with the existing legislative and policy requirements to deliver biodiversity mitigation and enhancement. The provision of permanent landscape and ecological mitigation, compensation and enhancement in the same location represents an efficient mitigation proposal that reduces the overall long-term land-take of the project. • The Statutory Metric is a tool to quantify the change in biodiversity following a change of land use. The Applicant used this tool to meet the requests of consultees to provide a measure of the overall biodiversity benefit. Once the design had developed to an appropriate stage, the starting and outcome positions were assessed through the metric.

			• The Applicant has committed to deliver as much biodiversity enhancement within the OnSS order limits as it can. If the project does not achieve 10% BNG (using the Metric together with the relevant assumptions that are set out in the BNG Report [APP-149]) then the Applicant will seek to deliver the difference off site. The Applicant's OLEMP or North Falls' OLEMS design remain outline at this stage, and the coordinated final designs, based on the principles secured within the VE Onshore Substation Design Principles Document [APP-234] and North Falls Design Vision, will be described within the LEMPs submitted to discharge DCO Requirements for both projects. The Applicant and North Falls will continue to work together to produce a final landscaping design, this collaboration is set out in section 2.2 of 9.4 Onshore Substation Design Principles Document [APP-234]. This will result in final LEMPs that meets the requirements of both projects DCOs. It is also noted that the North Falls OLEMS states: *"The intention is for the Design Guide to be prepared* joint*ly* with Five Estuaries, to support collaboration and good design across the two projects. The Design Guide will be subject to consultation with key stakeholders." This response has been agreed with North Falls.
SLV.2.05	Essex County Council and Tendring District Council	**Approach to identifying landscape value within the vicinity of the proposed substation zone** In your Local Impact Report [paragraph 9.1.2 in REP2-043] you have expressed concerns about the Applicant's approach to identifying landscape value within the vicinity of the proposed substation zone, i.e. within Landscape Character Area 7a Bromley Heaths. *C*larify what your concerns are in this regard and if you do not agree with the medium landscape value attributed to this area by the Applicant explain why that is the case.	This question is not directed to the Applicant.

11. TERRESTRIAL TRANSPORT AND TRAFFIC (TT)

Ref	Question to:	Question	Applicant's response
TT.2.01	Suffolk County Council and Applicant	**Use of roads within Suffolk** a) **For Suffolk County Council** – 1) Identify the roads which would be of concern to the Council if they were to be used by traffic associated with the construction of the Proposed Development and 2) explain why their use would be of concern. b) **For the Applicant** – Identify which: 1) ports other than the Port of Harwich that could potentially be used during the construction phase for the Proposed Development; and 2) any roads within Suffolk that might need to be used in association with the use of the ports identified under part 1) of this question.	Any ports along the east coast of the UK, along with ports within Europe could be used to support the construction of the proposed development. Any restrictions or additional barriers on the use of UK ports, such as the approval of port management plans, is likely to encourage suppliers to prefer European ports. This has been experienced on other RWE projects. The two main ports within Suffolk that have the potential to be used by vessels supporting the construction of the proposed development are Lowestoft (accessed using the A-road network such as A12 or the A143), Felixstowe (accessed using the A-road network such as A12 or the A14). To a lesser degree it is possible that Ipswich port could be used but it is considered unlikely given the capabilities of the other ports in and outside of Suffolk. It should be noted that no single port would be identified as the construction port, with vessels utilising different ports for mobilisation depending on their operations. Nonetheless the Applicant reiterates that these are existing operational ports, designed and operated on the basis of traffic will access the ports to use their facilities in the same way that any ancillary facility, be that a quarry, waste disposal site or factory, would allow for. Were this not the case there would need to be a new specific traffic assessment and management plan for any new customer of the ports, even in the case of using a single berth to mobilise a vessel. It cannot be the case than any and all traffic movements to an operational port requires a port traffic management plan. It should also be clarified that traffic movements associated with the offshore works would not involve the movement of major components, which the Applicant has explained would come by sea, and that the limited local traffic movements would be associated with crew driving to the port and using existing car parking facilities.
TT.2.02	Applicant	**Outstanding concerns of National Highways** National Highways (NH) in its Deadline 2 submission [REP2-062] set out the following six outstanding concerns in relation to the Transport Assessment: i) A summer sensitivity test must be assessed for all junction assessments. ii) The vehicular impact of the construction activity must be assessed based on a worst-case scenario at each junction individually as opposed to a network wide likely worst-case scenario. iii) Evidence is required that explains why a workforce occupancy rate of 1.5 people per car is a realistic assumption. iv) The method used to assign the vehicular trips to the Strategic Road Network (SRN) should be clarified. When assigning the trips to the	The Applicant provided National Highways (NH) with a response to these points on the 13th November followed by a meeting on the 14th November 2024, including its consultants, AECOM. The Applicant provided some further supporting information relating to points i), ii), iv) and vi) following the meeting and is awaiting further feedback from NH on these points which will inform the junction capacity assessments referred to in point v). In terms of point iii), the Applicant has provided updated drafts of the Outline Construction Traffic Management Plan [AS-055] and Outline Workforce Travel Plan [APP-259] which include additional control measures to NH and Essex County Council for comment before planned submission of these into the examination at Deadline 5.

		network, the temporary construction compounds must be used as a destination to inform the trip assignment. v) A junction capacity assessment must be undertaken at the A120/Harwich Road junction, the A120/Bentley Road junction, the A120/B1035 junction and any other A120 junctions experiencing over 30 additional vehicle movements during the peak hour. Additionally, should the required changes to the trip assignment result in greater impacts at other SRN junctions (over 30 vehicles), these should also be assessed through junction capacity assessments. vi) Peak period growth rates should be used in the assessment of any junctions. Provide an update on the progress that is being made to address each of the six issues of concern to NH.	
TT.2.03	Applicant	**Assessment of cumulative effects** At paragraph 8.12.16 of the Traffic and Transport chapter (Revision B) of the Environmental Statement [REP1-018] in relation to the National Grid Norwich to Tilbury Reinforcement Project you state: *"To inform the cumulative Traffic and Transport assessment, National Grid has provided some indicative HGV and construction workforce vehicle movements…"* Can you confirm that the vehicle movement information you were provided is consistent with that set out in the Norwich to Tilbury Preliminary Environmental Information Report (Appendices 16.1 to 16.3) published by National Grid for consultation between 10 April and 18 June 2024?	The Applicant confirms that the information used does not align with that set out in the Norwich to Tilbury Preliminary Environmental Information Report (Appendices 16.1 to 16.3) published by National Grid. The information used in the assessment represents an evolution of the National Grid data to represent a more realistic "worst case" peak. This has been discussed and agreed between National Grid and the Applicant.
TT.2.04	Applicant	**Use of Little Bromley Road and Ardleigh Road by construction traffic** In the updated Chapter 8 of the ES (Traffic and Transport) [REP1-018] reference is made to Little Bromley Road and Ardleigh Road being used by construction traffic. During the course of ISH3 you explained that the use of those roads would be required so that the Proposed Development's construction traffic could avoid passing through the construction site for the proposed East Anglia Connection Node's substation. In order to make use of Little Bromley Road and Ardleigh Road it appears construction traffic would also need to make use of other roads (links) in order to get to or from any of the A class roads in the area. Chapter 8 of the ES does not provide details of the intended entire route between any of the A roads in the area and Little Bromley Road and Ardleigh Road, accordingly the Applicant should: a) submit a plan showing the entirety of the proposed construction traffic route that would utilise Little Bromley Road and Ardleigh Road; b) provide daily construction traffic movement projections for the entirety of this proposed construction traffic route; and	a) Figure 3.1 sheet 5 of 5 (page 20) in the Outline Construction Traffic Management Plan (AS-055) shows the proposed section of Ardleigh Road and Little Bromley Road that would connect traffic from Bentley Road, along the haul road to AC-12 (shown in orange as Local Access Route to TCC – All Vehicles). From where it would use the existing roads to access AC-13 or the EACN substation site. There are no proposals for an additional access route from the A class roads. This figure revision was also included in the traffic and transport document updates submitted with the change request (AS-043 to AS-046). b) The forecast maximum daily two-way VE vehicle movements between AC-12 and the proposed EACN substation site are shown in Table 6.10 of 6.6.8.1 Traffic and Transport Baseline Report - Part 1 [AS-045] and Table 8.26 of 6.3.8 Traffic and Transport [AS-043]. The forecast average daily two-way VE vehicle movements between AC-12 and the proposed EACN substation site are shown in 6.6.8.1 Traffic and Transport Baseline Report - Part 1 [AS-045]. The HGV movements are programmed across six months out of the total construction programme.

		c) explain whether it would or would not be possible for the construction sites within the proposed substation zone to be designed so as to avoid the need for the Proposed Development's construction traffic to route through the site for the proposed East Anglia Connection Node.	c) The Applicant is not clear on what is being asked. There are no proposals to route traffic through the OnSS site directly to the EACN Substation. All traffic associated with VE accessing the EACN substation site will travel down Ardleigh Road to a construction access point identified, consented and constructed by NGET, under their Development Consent Order.
TT.2.05	Suffolk County Council and Applicant	**Cumulative effects of other projects** a) **For Suffolk County Council** - in your Local Impact Report (LIR) at paragraph 8.12 of [REP2-046] you highlight that the A12 Major Road Network scheme, a programme of improvement works between the A12/A14 junction at Seven Hills and the A12/A1152 junction at Woods Lane in Suffolk, may overlap temporally with the Five Estuaries project and therefore should be included in the assessment of cumulative effects. Could you confirm your understanding of the timetable for the A12 Major Road Network scheme? **For the Applicant** – do you consider that A12 Major Road Network scheme should be included in the assessment of cumulative effects for the Five Estuaries project? If not explain why that is the case.	The A12 Major Road Network scheme between the A12/A14 junction at Seven Hills and the A12/A1152 junction at Woods Lane in Suffolk is outside of the agreed study area for the assessment of traffic and transport impacts associated with the construction of VE. Using the agreed methodology with Essex County Council and National Highways for the distribution of the construction workforce vehicles for VE, only 1.4% have been assumed to arrive from Suffolk Coastal district, which could use the section of the A12 between the A14 and A1152. There may be some HGVs that would use this section of the A12 for the construction of VE; however, this is likely to be limited. Taking this into consideration, the Applicant does not agree that the A12 Major Road Network scheme should be included in the assessment of cumulative effects for VE.
TT.2.06	Applicant	**Use or otherwise of the A137 within Suffolk** Suffolk County Council in its Local Impact Report [REP2-046] highlights that special order vehicular movements across the A137 Ostrich Creek bridge require a temporary structure, the installation and removal of which creates significant disruption to local traffic. Given this concern from Suffolk County Council, can the Applicant confirm that it will not use the A137 within Suffolk for transporting Abnormal Indivisible Loads?	The A137 Ostrich Creek bridge relates to the use of Ipswich port and would not be used by special order AIL deliveries. The Applicant however notes, again and as set out in the AIL technical note [REP2-029] that separate consent is already required by legislation for AIL movements from the relevant highway authority.
TT.2.07	Suffolk County Council and Applicant	**Vehicle movements associated with the Lesser Black-Backed Gull compensation area** a) **For Suffolk County Council** - In your LIR [REP2-046] you set out concerns that duration and intensity of vehicular activity at Orford Ness associated with the Lesser Black-Backed Gull compensation area is not known. What volume of traffic generation do you consider would cause an adverse effect in this location? **For the Applicant** - Do you have a view on this matter?	The Applicant notes its response on this point to the SCC LIR points SCC.16 within 10.26.1 Applicants Comments on Local Impact Reports [REP3-025]. The Applicant does not see any need for a control document such as a Construction Traffic Management Plan for the scope of the works at Orford Ness and associated likely vehicle movements. The Applicant does not accept that the traffic movement numbers generated for the construction of the fence would be of a level where any likely significant effect could occur (a point that SCC appears to agree, subject to a commitment on timing). Therefore traffic controls are not necessary or justified. The Applicant notes that as well as space on the quay there is a large car park (The Orford Quay Car Park) already in situ where vehicles could park in order to access the boat to Orford Ness. Whilst the Applicant notes SCC's suggestion of a commitment on timing, this can cannot be committed to at this stage as the exact length of the works will be subject a number of factors including weather and availability of vessels (noting the LBBG EIA states that 'Fence installation and any installation works would be expected to take around three weeks'). As the dDCO [REP3-005] already contains Requirement 18 that requires details of vehicular and pedestrian access for construction and a construction method statement to be approved by the relevant authority (in

			this case East Suffolk Council) and given the scale of the works, this is sufficient for controlling the potential minor impacts. The Applicant also notes the local planning application for the near-identical proposal at Orford Ness for the Norfolk Projects (DC/22/3447/FUL). In the officer's report consideration was given to traffic impacts, with the conclusion being that "Given the small-scale of the construction works, using standard construction vehicles, and the good existing road links to Orford Quay, there is not anticipated to be any potential for any traffic disruption to arise as a result of the installation of the predator-proof fence, and no likely significant effects, related to traffic and transport, are anticipated.". As such no condition for a traffic management plan was imposed and the Applicant sees no reason it's proposal would differ from this approach.

12. ONSHORE WATER, HYDROLOGY AND FLOOD RISK (WE)

Ref	Question to:	Question	Applicant's response
WE.2.01	Environment Agency and Essex County Council as Lead Local Flood Authority	**Infiltration/Soakaway Testing** Table 6-12 in [APP-088] states '*The detailed (post-consent) design of the surface water drainage scheme would be based on a series of infiltration/soakaway tests carried out on site and the required attenuation volumes will be outlined in the supporting OnSS FRA. The tests will be undertaken prior to construction and in accordance with the BRE Digest 365 Guidelines in order to determine the suitability of ground for accepting a drainage discharge*'. (a) Are BRE Digest 365 Guidelines the most appropriate for a project of this scale, both individually and cumulatively with other proposed projects in and around the proposed Onshore substation? (b) If BRE Digest 365 Guideline are not appropriate for this project individually or in combination with other proposed projects what would be the most appropriate test or tests to accommodate, to date unknown, attenuation volumes?	This question is not directed to the Applicant.
WE.2.02	Environment Agency	**Hydraulic Conductivity** The Environment Agency (EA) in [RR-026] in referring to [APP-088] commented *"If dewatering during construction requires a licence a more rigorous approach to assessing hydraulic conductivity will likely be required".* *The applicant responded in [PD4-006] "following completion of the water features survey, ground investigation and groundwater monitoring (as proposed within Section 4.3 of the assessment) it is considered that there is likely to be a need for dewatering and to obtain an abstraction transfer licence then further location specific site investigations would be completed (pump test or slug tests, as considered appropriate) to allow for further refinement of the hydraulic conductivity in the vicinity of the proposed works."* *The EA provided further comment in [RR-026] stating that "The applicant has submitted a thorough list of potentially impacted abstractions (licensed and unlicensed) and risk assessments to those abstractions. Those that have been deemed potentially impacted by trenched and trenchless cable replacement and substation have been noted and steps to improve the impact assessment have been added in 4.3.1 Water Features Survey. We look forwards to seeing the results of this survey and subsequent risk Assessment."* *The EA in [RR-026] in referring to the Code of Construction Practice [APP-253, which was extant at the time] states that "the earlier the risks can be assessed in the event an abstraction licence is required for these works."*	This question is not directed to the Applicant.

		In the absence of survey, ground investigation and monitoring data relating to actual hydraulic conductivity in and around the Proposed Development, are you content that that adequate mitigation measures could be put in place to control ground water flow? If not explain why that is the case and advise on how your concern could be addressed.	
WE.2.03	Applicant	**Springs** In the Applicant's response in [PD4-004] to Environment Agency's [RR-026] you have stated *"A walkover of the route by a hydrologist and a review of Ordnance Survey mapping was undertaken to identify any marked springs, none were identified within the 250m search radius."* a) During which months of the year were the walkovers by a hydrologist undertaken? b) If the answer to a) is during the summer period what certainty can there be in the "*marked springs*" not being evident during the winter months?	a) Site surveys were undertaken by the Applicants hydrologist in October 2022. b) As stated in the response to the EA Relevant Representations [RR-026], *a review of Ordnance Survey mapping was undertaken to identify any marked springs, none were identified within the 250m search radius.* The lack of any springs was subsequently confirmed during the site surveys. Although it is noted that the survey was completed in Autumn when groundwater levels will likely have been lower than the winter peak, the lack of any marked springs on Ordnance Survey mapping indicates that the level of survey effort was appropriate with the low likelihood of springs being present.
WE.2.04	Applicant	**Abstraction – Horizontal Directional Drilling (HDD)** The EA in [RR-026] has stated "*The HDD process will require a supply of water - the applicant suggests wither tinkering or abstracting surface water for this purpose …Please check the local Abstraction Licensing Strategy for current water availability in the relevant catchments*." a) What is wither tinkering? b) Has the Abstraction Licensing Strategy been checked and does it confirm currently that there is sufficient availability at the locations where HDD is proposed?	a) "Wither tinkering" should read "water tankering" which is the process of bringing water to site needed for use in construction works, such as during horizontal direction drilling in water tankers where mains or surface water is not available or cannot be used to support construction. b) The Applicant requires a supply of water to undertake horizontal directional drilling. The Abstraction Licensing Strategy has not been checked. It is proposed to use a hybrid of abstraction from local water source(s) if available of up to 20m^3 per day, and tankering in any additional water over and above this, which avoids the need for an abstraction licence. Abstraction Licences if required would follow the Environmental Permitting (England and Wales) Regulations 2016 and would be applied for by the Contractors. This approach seeks to reduce the number of HGVs arriving at site with balancing the impact on local water supplies. If there are issues with abstracting from local water sources the project will only use tankered water. This has been considered within the HGV numbers for the HDDing activities.
WE.2.05	Environment Agency	**Hydraulic continuity** The EA in [RR-026] has made reference to *"a request for inclusion of an assessment of any works at the landfall stage will not create any hydraulic continuity between the sea and underlying strata … and … the implied possibility of hydraulic continuity between the two is not mentioned for the jointing bays or HDD"*. The Applicant has	This question is not directed to the Applicant.

		stated in [PD4-006] that *'The assessment notes that the geology at this location is alluvial silts and clays with little or no groundwater and no risk to the SSSI is identified.* Has the Applicant's response addressed the EA's concern or does the EA consider there is a need for any further assessment?	
WE.2.06	Applicant	**Flood Risk Assessment (FRA)** The EA in [RR-026] has stated "*to comply with national policy the application is required to pass the Sequential* [test] *and be supported by a site specific Flood Risk Assessment (FRA)'.* Will a site-specific FRA be produced and submitted, before completion of the Examination, in respect of all areas subject to fluvial and tidal Flood Zone 3a?	A site-specific FRA has been prepared and submitted with the application for the onshore export cable corridor [APP-038] which includes all areas subject to fluvial and tidal Flood Zone 3.
WE.2.07	Essex County Council as the Lead Local Flood Authority	**Other Flood Risk** The EA in [RR-026] has stated *"the site may be within an area at risk of flooding from surface water, reservoirs, sewer and/or groundwater".* Has the Applicant adequately addressed matters relating to risk of flooding from sources that are not under the EA's jurisdiction?	This question is not directed to the Applicant.

13. LAND USE AND AGRICULTURE (LU)

Ref	Question to:	Question	Applicant's response
LU.2.01	Farming Interested Parties and Applicant	**Cable laying depth with the onshore cable corridor** Multiple Interested Parties who are farmers in their Relevant Representations and/or subsequent written submissions and during ISH3 have contended that it would be more appropriate within the onshore cable corridor for cables to be buried at a depth of not less than 1.2 metres rather than 0.9 metres as proposed by the Applicant. a) **For Farming Interested Parties** - Explain why you consider a cable depth of 1.2 metres would be necessary; b) **For the Applicant** - explain why an indicative minimum soil cover of 0.9 metres above the buried cable rather than 1.2 metres has been identified for the Proposed Development; and **For the Applicant** - advise on whether you would be prepared to bury cables at a minimum depth of 1.2 metres and if not explain why that is the case.	Where ploughing is carried out, this involves the deep inversion of soils, typically carried out to depths of 0.20m to 0.40m. Soil loosening is a standard practice carried out to repair soils, either from compaction due to agricultural traffic and/or to maintain permeability. Subsoiling and mole ploughing are common practice, generally reaching a maximum depth of between 0.45m and 0.60m respectively and as such these operations would be unaffected by the proposed minimum depth. The soil cover of 0.9 metres to the top of the warning tape allows for the continuation of standard cultivation and soil repair operations carried out as routine farming practices. As shown in Figure 1.11 of the Onshore Project Description [APP-083], 0.9m depth of cover is the distance to the warning tape,1.2m is provided as an indicative distance to the top of the cable ducting. The applicant will endeavour to reach a depth of burial of 1.2m although in certain ground conditions, for example presence of large rocks, this may be overly time consuming or onerous. There is a reasonable balance that must be met for the depth of burial, a deeper burial of the cable will increase construction time and reduce the cable rating with little to no benefit to for standard farming practices.
LU.2.02	Applicant	**Temporal Impacts – Export Cable Corridor (ECC)** In paragraph 3.1.12 of [REP2-030] it is stated *"enabling works such as site preparation and access are conducted, then the trenches are excavated, the ducts are installed, the backfilling is conducted (but not all the topsoil), the cables are pulled (potentially by a separate contractor than the trenching), testing & commissioning are completed (but this must occur after the OnSS is complete), then final topsoil and reinstatement is conducted".* Paragraph 3.1.13 in [REP2-030] goes onto state "*The cables may only be installed and connected immediately in advance of the project energization and therefore cable ducts for all sections needs to be installed in advance of this and access to joint bay locations within all sections retained for cable installation. As noted within paragraph 1.4.10 of the Onshore Project Description* [AS-004] *within some area's reinstatement can occur as soon as cable ducts are installed, such as between joint bays.* In paragraph 3.1.14 of [REP2-030] it is concluded "*Seasonal restrictions for works in particular areas may be identified due to ecological or other receptors and avoidance of working within wet weather windows may be required (for example to protect soils). Therefore, the construction sequence of the works would also need to take account of these*	The Applicant notes that the approach is to define the worst case in all scenarios. a) The project may install the ducts, then backfill with the cement bound sand (CBS) and then well compacted thermally rated indigenous fill (the subsoil). There is then a choice whether to reinstate the topsoil or not. Having to topsoil reinstated does not impact on the cable pulling and commissioning. When considering the backfilling it may be that the trenches are backfilled in stages (i.e. backfilling with CBS and subsoil immediately after duct installation, and waiting to reinstate the topsoil, or backfilling the topsoil immediately after the subsoil). The choice will depend on the installation program and will be made with the Contractor / Agricultural Liaison Officer (ALO). Factors that will be considered will be: ➢ The length of time before cable pulling and commissioning

		restrictions.' That statement is to an extent ameliorated by what is stated in paragraph 4.4.6 of [REP2-030] *"the equipment for conducting the HDDs, trenching and ducting is likely to be similar. It is hence efficient for the projects to conduct this work on each other's behalf and will result in lower level of impact as the various equipment is only being moved to site and used once".* However, continuing in paragraph 4.4.9 the Applicant has stated *"… the programme and timing of cable installation would be different for the two Projects".* Consequently, there is potential that any delays in cable pulling and construction of the proposed onshore substation could result in large areas of exposed soils and open trenches bisecting agricultural land, which could be further compounded by the need to test and commission the installed cables. a) For clarity, could substantial sections of the export cable corridor (ECC) only be backfilled with sub-soil, pending commissioning as suggested above? It was stated during ISH3 in relation to time scales that the trenching and ducting would take "six to nine months". b) Does that timescale relate to each discrete section of the ECC i.e. between joint bays and the works to engineer the joint bays, trench and install the ducts?	➢ The status of the topsoil (likely to be stored, potentially seeded etc). ➢ The volume of topsoil that comes from the cable trench area in comparison to the haul road ➢ The time until the temporary haul road would be removed ➢ The preferences of the landowner / tenant farmer. There may be circumstances where the choice is made to backfill and reinstate topsoil immediately (for example if the project installs ducts for North Falls who's program may be significantly behind Five Estuaries, or there may be circumstances where the preference is for the topsoil to be reinstated after the cable pulling (to remove the risk of double handling of topsoil) if the cable pulling and commissioning is planned to occur very close to after duct installation. b) A detailed description of durations is provided in 10.20.4 Technical note - Onshore Civils and Electrical [REP2-030]. These durations relate to each specific section of the cable route. The exact duration for each section will vary from section to section depending on factors such as the length, ground conditions, obstacles, ecological constraints, unknown archaeology, number and complexity of trenchless crossings, access arrangements.

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