



NORTH FALLS

Offshore Wind Farm

**CONSULTATION
REPORT
APPENDIX F.14
PART 2**

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Offshore Wind Farm

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NORTH FALLS

Offshore Wind Farm

APPENDIX F

F.14

*Stage 3 (statutory) consultation feedback
and Applicant's regard (section 42)*

Consultee reference	Summary of comments	Code/ theme	Code/ theme	Applicant's response	Project change (Y / N)
NFOWFS3_001_001_130 623	Further to the request for feedback for the consultation on the Northfalls Wind Farm, our council met on the 8th June and agreed that their response to this consultation would be in the same vein as the feedback provided to the Five Estuaries consultation. I have copied this feedback below.	Introduction		Noted.	N
NFOWFS3_001_002_130 623	In addition to the feedback provided below, if the Minister is mindful of approving the National Grid East Anglia Green Proposal, our Members would like strong consideration given to making the proposed temporary road a permanent road, as this would aid congestion issues that have been long seen in the village of Thorpe le Soken but in having a permanent bypass road, the issues would be somewhat if not completely alleviated. Such disruption that this scheme would cause has to benefit our residents in some way. Kindly please ensure this request is included. This Council objects to the above project for several reasons.	Traffic and Transport		The haul road for North Falls is temporary and would be removed upon completion of construction.	N
NFOWFS3_001_003_130 623	Why does it not make landfall via Aldebrough and the Atomic Power Stations? The volume of Electricity can only be handled by a new power line. The scheme from the National Grid is called East Anglia Green. From Power Station to switch using overhead cables, means a loss of 40% of electricity generated.	Infrastructure and Other Users		Noted. The onshore Project area and onshore substation works area have been defined following an extensive site selection process, which has sought to take account of landscape and visual, other environmental, engineering, planning and land requirements to seek to identify the project location. The site selection process is described in detail in Chapter 4 Site Selection and Assessment of Alternatives (Volume I) (document reference 3.1.6) of the ES.	N

NFOWFS3_001_004_130 623	An alternative scheme to use undersea cabling has been asked for by not only the Tendring District Council, but also The County Councils of Norfolk, Suffolk and Essex, who are all opposed to the overhead Pylons.	Site Selection and Assessment of Alternatives		Noted.	N
NFOWFS3_001_005_130 623	The Government has made a tentative submission for all wetland sites on the east coast, the application was submitted in July 22 by the RSPB, WWT(Wetlands Wildlife Trust) and NT(National Trust), to UNESCO for consideration as a World Heritage Site. The Hamford Backwaters are considered to be the 2nd most important site in Europe for overwintering birds. It is well known that pylons and overhead cables are not compatible with migrating birds.	Onshore Ornithology		<p>The importance of the onshore ornithology study area for breeding and non-breeding bird assemblages has been carefully considered in the Project design and assessment.</p> <p>A range of mitigation measures is proposed to minimise the risk to species of key conservation concern, including migratory species which utilise wetlands that form part of the SPA/Ramsar/SSSI network in southeast England, including Hamford Water. No pylons or overhead cables are included within the design envelope for North Falls.</p> <p>Main migratory locations are designated sites and are fully assessed in the HRA and in Chapter 24 Onshore Ornithology (Volume I) (document reference 3.1.26) of the ES.</p>	Y
NFOWFS3_001_006_130 623	<p>We do understand that Wind Farms must connect, where they are told to by National Grid. Both 5 estuaries and North Falls have applied for up to £100m from an Early Opportunities Co-Ordinating Scheme, so that they can join up to the National Grid. This is Government money. Yet we, who are affected are offered nothing.</p> <p>If an alternative scheme is to be used then there is no need to go across our Parish bounds.</p>	Site Selection and Assessment of Alternatives		Noted.	N
NFOWFS3_001_007_130 623	This Consultation will be one of 2 we will respond to. As another very similar scheme from Five Estuaries is proposing a very similar route to the proposed sub station, where the 400Kva will be able to access the power lines for London. These schemes will have no positive	Site Selection and Assessment of Alternatives	Land Use and Agriculture	Noted.	N

	effect for this Council. The land owners that the cabling will travel under and across will receive some form of compensation. What is in this scheme for FWTC? Where is the planning gain? We are already a Green Parish. The Gunflete Wind Farm provides enough energy for all of Tendring and up to a 3rd of Colchester. We get no gain from this scheme. that comes ashore at Holland Haven and then underground to the power grid, where its 132 Kva can be used locally.				
NFOWFS3_001_008	Planning gains: The PROW and Cycle Route 150 from Holland Haven to Frinton beneath the Sea Wall be made good and brought up to an acceptable standard to be adopted by Essex Highways.	Tourism and Recreation		Noted.	N
NFOWFS3_001_009	A small charge be placed upon the electricity passing through the Parish per, say .01p, KWH generated.	Socio-economics		Noted.	N
NFOWFS3_001_010	A Community based scheme: North Falls create a local Electricity supply company for the FWTC area. It will sell electricity to the Residents at a substantial discount to the average tariff available locally.	Socio-economics		Noted.	N
NFOWFS3_001_011	Discuss with the Environment Agency compensation for affecting the integrity of the seawall, so that they will hold the line for the seawall from Holland Haven to Frinton-on-Sea for epoch 3 of the Shoreline Management Plan	Infrastructure and Other Users		Noted.	N

NFOWFS3_001_012	National Grid's East Anglia Green Project, proposes an energy transmission route consisting of the construction of 180km of 50m tall pylons carrying 400kV cables through the entire central length of our County (as well as through our neighbours, Norfolk and Suffolk), save for a section of undergrounding at Dedham Vale. This Council has already expressed declared a climate emergency and an ambition to be net zero by 2050 so plans for renewable wind farms off the East Anglian coast are welcomed.	Climate Change	Need for the Project	Noted.	N
NFOWFS3_001_013	However, this Council has serious concerns about the nature and short-period of consultation, the route, and how carbon-heavy the proposed scheme of overhead pylons are which rely on 100 year-old technology.	Technical Consultation	Site Selection and Assessment of Alternatives	Noted.	N
NFOWFS3_001_014	Furthermore, this Council believes that: · There has been insufficient consideration of alternative approaches which would allow for the required infrastructure but without the sheer scale of the damage to the environment, landscape and the difficulties of this project going ahead, all at the same time as multiple large-scale infrastructure projects which have the potential to cause major disruption across the East of England.	Site Selection and Assessment of Alternatives	Landscape and Visual Impact Assessment (LVIA)	Noted.	N
NFOWFS3_001_015	· New offshore generated electricity should be transmitted offshore, which is why an offshore grid is needed. This is firmly in the interests of both residents and business, offshore windfarms themselves and wider interests e.g. Freeport East. Such an alternative approach would future-proof the network and could avoid	Site Selection and Assessment of Alternatives	Infrastructure and Other Users	Noted.	N

	all the physical constraints of an above or below-ground solution, retain ease of access for ongoing maintenance and provide a more direct point of connection for any current or future off-shore wind farms.				
NFOWFS3_001_016	<ul style="list-style-type: none"> This pylon infrastructure is neither wanted nor needed considering the viable option of undersea power cables. These cables could transport power to where it is needed, helping future proof energy supplies and boost energy security, without adversely impacting on residents, businesses and communities across Essex. 	Site Selection and Assessment of Alternatives		Noted.	N
NFOWFS3_001_017	<p>This Council therefore calls upon:</p> <ul style="list-style-type: none"> Both the Government and National Grid to refocus the East Anglia Green Proposals on an offshore solution and engage in meaningful discussions with Essex and its neighbouring County Councils to achieve this. 	Site Selection and Assessment of Alternatives	Technical Consultation	The Applicant has cooperated with the Department of Energy Security and Net Zero to explore grid connection options, as part of the Offshore Transmission Network Review (OTNR). Additionally, the Applicant has applied to the Offshore Coordination Support Scheme (OCSS) in consortium with NGET and Five Estuaries for an offshore connection to Sea Link, a marine cable between Suffolk and Kent proposed by NGET as part of its Great Grid Upgrade. The Applicant continues to engage with government, Office of Gas and Electricity Markets (Ofgem) and other developers to explore the potential options. More information can be found in Chapter 5, Project Description, of the ES (document reference 3.1.7)	N
NFOWFS3_001_018	<p>National Grid to:</p> <ul style="list-style-type: none"> Provide this Council with all the information asked for in our response of 16 June by 30 August 2022. 	Technical Consultation		Noted.	N


	<p>· Make publicly available full, open and transparent information on all options, including offshore and undergrounding, to enable evaluation and comparisons to be made by Essex residents, businesses, Councils and other stakeholders. This information to be publicly available for a period of at least 6 months before any Development Control Order (DCO) application is made.”</p> <p>Councillor Stock OBE formally moved the Motion, which was then seconded by Councillor G V Guglielmi.</p>				
NFOWFS3_002_001_190 623	<p>Given the potential landscape and visual impact of the proposed development, it is recommended a Landscape & Visual impact Assessment be submitted as part of any formal submission (a requirement of the EIA). This in order to guide the design proposals enough to help ensure the development does not have an adverse impact on the administration area of CCC. Any such Appraisal should fully comply with the relevant Landscape Institute’s Guidelines for Landscape & Visual Impact Assessment (3rd edition) and any relevant Technical Guidance Notes (including TIN 06/19).</p>	Landscape and Visual Impact Assessment (LVIA)		Noted.	N
NFOWFS3_002_002_190 623	<p>Initial assessment of the proposal @ Development - North Falls Offshore Wind Farm would indicate that an additional viewpoint should be considered from West Mersea foreshore on Mersea Island, where the southern tip of the development may be visible.</p>	Seascape, Landscape and Visual Assessment (SLVIA)		<p>The ZTV (refer to ES Figure 29.1.2, Document Reference: 3.2.25) indicates some theoretical visibility from Mersea Island. However, this area is on the edge of the 60km study area and significant visual effects at this viewing distance are unlikely. The assessment includes an assessment viewpoint from Clacton on Sea (VP15) which provides a similar viewing angle (and is closer). Refer to Table 29.36 in Section 29.6.3 (Document Reference 3.2.25)</p>	N

<p>NFOWFS3_003_001_240 523</p>	<p>Dear Mr. Crawford, Thank you for the opportunity to comment on the proposed development at subject. We note the contents and the issues that will be addressed and wish to clarify several matters that are covered in the report. Aviation Obstacle Notification The CAA requires notification of a change to aviation obstacles if it or they are 100 metres or more above sea level, in accordance with Article 225A of the Air Navigation Order (2016) Additional consideration of the aviation obstacle environment may be required during the initial build phase and the temporary use of cranes that may extend above a height of 100 metres or in the case of pre-built turbines being towed from shore to final generating position.</p>	<p>Aviation and Radar</p>		<p>The requirements of Article 225A are noted and outlined in Section 17.3.3.1 of ES Chapter 17 (Document Reference 3.1.19). Consideration of the notification of temporary cranes and the towing of WTG components during construction is now included in the embedded mitigation outlined in Section 17.3.3.</p>	<p>N</p>
<p>NFOWFS3_003_002_240 523</p>	<p>Aeronautical Obstacle Lighting and Marking A Lighting Management Plan (LMP) must be agreed and implemented in consultation with the CAA in order for the UK to meet its international obligations under the Chicago Convention. The CAA uses requirements set out in Article 223 of the Air Navigation Order (2016) as the basis for its requirements.</p>	<p>Landscape and Visual Impact Assessment (LVIA)</p>		<p>The requirement for an LMP is now included as embedded mitigation in Section 17.3.3.2 of ES Chapter 17 (Aviation and Radar). Lighting would be in accordance with Article 223 of the Air Navigation Order (2016).</p>	<p>Y</p>
<p>NFOWFS3_003_003_240 523</p>	<p>Instrument Flight Procedures An Instrument Flight Procedure (IFP) is a set of instructions regarding navigation around aerodromes. Within the design of IFPs, rules are set out regarding obstacle clearance, to ensure the necessary safeguarding. The protected areas for IFPs are complex as it is necessary to consider where the obstacle is in relation to multiple stages of</p>	<p>Aviation and Radar</p>		<p>An assessment of Southend Airport's IFPs was undertaken, as presented in Appendix 17.2 Southend Airport Instrument Flight Procedure Assessment (Volume III) (document reference 3.3.19), which shows that North Falls WTGs would have no impact on existing published IFPs. There are also two Required Navigation Performance IFPs currently with the CAA awaiting approval. NATS have confirmed that North Falls WTGs would have no impact on these IFPs (email 27 January 2023).</p>	<p>N</p>

	<p>multiple flight paths for multiple types of aircraft. This may be relevant for windfarms built within 30 nautical miles (~55km) of an aerodrome or pre-built turbines being towed from shore to final generating position.</p> <p>Continued (2 of 2 pages)</p>				
NFOWFS3_003_004_240 523	<p>Impacts on civil aviation monitoring systems</p> <p>Wind turbines located within the line-of-sight of surveillance systems (in particular, primary radar) can cause clutter and interference and can result in performance degradation. Radar line-of-sight analysis is theoretical; operationally there are other factors such as signal refraction, diffraction, attenuation and anomalous propagation within a given radar environment that can influence the probability of an operational wind turbine being detected.</p> <p>The CAA ensures that air navigation service providers undertake appropriate safeguarding activities in respect of their systems and equipment used for the provision of services, that changes to the operating environment are fully considered within their Safety Management Systems and that the operational systems and equipment are functional and being used safely. We recommend that engagement with all potentially affected aviation stakeholders is undertaken and appropriate mitigation schemes developed.</p>	Aviation and Radar		Noted.	N

<p>NFOWFS3_003_005_240 523</p>	<p>Helicopter Operations This covers two aspects: (1) potential helicopter support for operations and maintenance of the wind farm itself; and (2) impact on offshore helicopter operations to existing platforms and installations Requirements for winching operations should be discussed with appropriate helicopter operators well in advance. Where such operations are undertaken, additional platform design criteria, lighting on the wind turbines, obstacle clearance and marking of the blades may be required. This is detailed in CAA Publication (CAP) 437 – Standards for Offshore Helicopter Landing areas. All offshore helicopters operate with limited icing clearances which means that they must be able to descend to warmer air near the sea surface at any point on the route. Operation through a wind farm corridor is highly unlikely and it might be that they would have to route around the wind farm. This may impact fuel burn and load capacity. In addition, where wind turbines are located in the vicinity of existing platforms and installations that offshore helicopters operate to/from, consideration must be given to approach and take off, including in abnormal situations (e.g. one engine inoperative). Engagement with operators and duty holders as appropriate should be undertaken. I hope that this is helpful input at this stage. Please do not hesitate to contact us if you require any further advice.</p>	<p>Aviation and Radar</p>		<p>Helicopter operations are discussed in Section 17.5.4 and assessed in Sections 17.6.1.2, 17.6.1.3, 17.6.2.2, 17.6.2.3, 17.6.3.2 and 17.6.3.3 of ES Chapter 17 (Aviation and Radar).</p>	<p>N</p>
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<p>NFOWFS3_004_001_070 623</p>	<p>Dear Mr. Crawford,</p> <p>Thank you for consulting the Forestry Commission regarding this application. As a Non-Ministerial Government Department, the Forestry Commission provide no opinion supporting or objecting to an application. We provide advice on the potential impact that the proposed development could have on trees and woodland including ancient woodland. The links below are to the Government guidance on the protection of ancient woodlands and veteran trees etc.</p> <p>Having reviewed the North Falls Offshore Wind Farm documents it is clear that there are no ancient woodlands ancient or veteran trees at the proposed site of landfall, none along the route of the cabling, and none at the proposed site of the substation. Therefore the Forestry Commission has no comment to make.</p> <p>1. Ancient woodlands, ancient trees and veteran trees are irreplaceable habitats. Paragraph 180(c) of the NPPF sets out that development resulting in the loss or deterioration of irreplaceable habitats should be refused unless there are wholly exceptional reasons, and a suitable compensation strategy exists. In considering the impacts of the development on Ancient Woodland, Ancient and Veteran trees, the planning authority should consider direct and indirect impacts resulting from both construction and operational phases.</p>	<p>Onshore Ecology</p>	<p>Land Use and Agriculture</p>	<p>Noted.</p>	<p>N</p>
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	<p>Please refer to Natural England and Forestry Commission joint Standing Advice for Ancient Woodland and Ancient and Veteran Trees, updated in January 2022. The Standing Advice can be a material consideration for planning decisions, and contains advice and guidance on assessing the effects of development, and how to avoid and mitigate impacts. It also includes an Assessment Guide which can help planners assess the impact of the proposed development on ancient woodland or ancient and veteran trees in line with the NPPF.</p> <p>The Ancient Tree Inventory is maintained by the Woodland Trust and is accessible at </p>				
<p>NFOWFS3_005_001_230 523</p>	<p>Dear Mr Crawford Section 42 Planning Act 2008: Statutory Consultation – North Falls Offshore Wind Farm Thank you for your letter of the 11 May 2023 regarding the proposed North Falls Offshore Wind Farm. HSE’s land use planning advice Will the proposed development fall within any of HSE’s consultation distances? According to HSE’s records, the proposed DCO application boundary for this Nationally Significant Infrastructure Project is not within the consultation zones of any major accident hazard sites</p>	<p>Land Use and Agriculture</p>		<p>Although the boundary of the Project has changed since PEIR (see Chapter 5 Project Description (Volume I) (document reference 3.1.7), it has reduced in size within the limits of the Scoping boundary, therefore this advice is still relevant.</p> <p>As this comment applies to the variations to the PEIR boundary which were subject to targeted consultation, along with the comments made in HES’s PEIR response above, this is confirmation that the DCO application boundary (the onshore project area) is not within the HSE’s land-use planning zones.</p>	<p>N</p>

	<p>or major accident hazard pipelines. This is based on the project area 'redline' in drawing 'Onshore Project Area' PB9244-RHD-ZZ-ON-DR-GS-0193 Rev 02 dated 24/04/2023 within Volume II of Chapter 1 of the Preliminary Environmental Information Report (PEIR).</p> <p>HSE's Land Use Planning advice is dependent on the location of areas where people may be present within HSE's land-use planning zones. As the project area 'redline' is not within any of HSE's land-use planning zones, under HSE's existing policy for providing land-use planning advice, HSE would not advise against the development. HSE's advice in response to a subsequent planning application may differ should HSE's policy or the scope of the development change by the time the Development Consent Order application is submitted.</p>				
NFOWFS3_005_002_230 523	<p>Would Hazardous Substance Consent be needed? Based on the Preliminary Environmental Information Report (PEIR), it is unlikely that hazardous substance consent (HSC) will be required. Hazardous substances planning consent is required to store or use any of the Categories of Substances or Named Hazardous Substances set out in Schedule 1 of The Planning (Hazardous Substances) Regulations 2015 as amended, if those hazardous substances will be present on, over or under the land at or above the controlled quantities. There is an addition rule in the Schedule for below-threshold substances. Further information on HSC should be sought from the relevant</p>	Ground Conditions and Contamination	Human Health	Hazardous substances above set threshold quantities are not expected to be part of the Project design, and therefore hazardous substances consent is not anticipated.	N

	Hazardous Substances Authority, if required or if changes to the scheme are made. 2				
NFOWFS3_005_003_230 523	Consideration of Risk Assessments Regulation 5(4) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the assessment of significant effects to include, where relevant, the expected significant effects arising from the proposed development's vulnerability to major accidents. HSE's role in NSIPs is summarised in Advice Note 11 'working with public bodies in the infrastructure planning process' Annex G on the Planning Inspectorate's website [Advice notes National Infrastructure Planning (planninginspectorate.gov.uk)] - Annex G – The Health and Safety Executive. This document includes consideration of risk assessments under the heading "Risk assessments".	Human Health		Chapter 28 of the ES (Human Health) provides an assessment of likely significant effects arising from the Project's vulnerability to major accidents. This concludes that the risk of 'major accidents and/or disasters' associated with any aspect of the Project, during the construction, operation and decommissioning phases is negligible.	N
NFOWFS3_005_004_230 523	Explosives sites HSE has no comment to make as there are no licensed explosives sites in the vicinity.	Human Health		Noted.	N
NFOWFS3_005_005_230 523	Electrical Safety No comment from a planning perspective. During this time, please send any further communication on this project directly to the HSE's designated e-mail account for NSIP applications at	Infrastructure and Other Users	Human Health	Noted.	N

	<p>nsip.applications@hse.gov.uk . We are currently unable to accept hard copies, as our offices have limited access.</p>				
<p>NFOWFS3_006_001_140 723</p>	<p>Dear Sir/Madam Application No: 231207 Registered Date: 11 May 2023 Proposal: CONSULTATION OUTSIDE BOROUGH - Offshore wind farm project Location: southern North Sea, Frinton on Sea, Holland on Sea, Essex, CO15 6NG I'm writing in relation to your consultation for the Five Estuaries Offshore Wind Farm Project. Based on the information available, it would appear that the impact on the City of Colchester is limited and we therefore have no comments to make at this stage. We will reserve the right to comment further once the project has moved forward and/or the impact on the City of Colchester changes.</p>	<p>N/A</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_007_001_140 723</p>	<p>Dear Mr. Harper NORTH FALLS OFFSHORE WIND FARM: STATUTORY CONSULTATION SECTION 42 OF THE PLANNING ACT 2008 AND/OR REGULATION 13 OF THE INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 Thank you for your consulting with us on the Preliminary Environmental Impact Report (PEIR). Please see our detailed comments below which principally relate to the water environment. I would particularly like to raise your attention to concerns about potential impacts concerning flood risk to third parties, crossing flood</p>	<p>Water Resources and Flood Risk</p>		<p>Numerical values for defining changes in flood risk magnitude, presented in the Design Manual for Roads and Bridges, have been added to Table 217 of ES Chapter 21 (Water Resources and Flood Risk).</p>	<p>N</p>

	<p>defences, waterbody crossings and Water Framework Assessment.</p> <p>Chapter 21: Water Resources and Flood Risk</p> <p>Flood Risk Assessment</p> <p>Table 21.7</p> <p>This table defines the magnitude for a flood risk receptor. The flood risk definitions are rather vague and so open to rather different interpretations of what is considered as “minor, moderate and major” change to flood risk. From a flood risk perspective, we would recommend defining values to an amount of flood risk change as being negligible, minor, moderate or major. You may find Table 3.71 (Estimating the magnitude of an impact on an attribute) from the Design Manual for Roads and Bridges (LA113 Road drainage and the water environment Revision 1, dated March 2020) useful in helping define values to an amount of flood risk change. Dependant on the values defined in Table 21.7 we would need to reassess the suitability of the parameters of Table 21.8 and Table 21.9.</p>				
NFOWFS3_007_002_140 723	<p>Crossing method and impacts on flood risk</p> <p>Paragraphs 97 to 99 identify that all Main River and most ordinary watercourse crossings will be crossed using Trenchless techniques. We would recommend that</p> <p>Trenchless techniques are used for ordinary watercourses with associated Fluvial / Tidal Flood Zone 3. If trenched techniques are used on ordinary watercourses with associated Fluvial / Tidal Flood Zone 3, the Environment Agency would expect the Flood Risk Assessment to assess the</p>	Water Resources and Flood Risk		Flood risk from all sources, including trenched crossings during construction, is assessed in Appendix 21.3 Flood Risk Assessment (document reference 3.3.29). The impact of trenched crossings in each water body catchment is assessed in Section 21.6 of ES Chapter 21 (Water Resources and Flood Risk).	N

	<p>flood risk impacts during construction for the Environment Agency's consideration before or at the examination stage of the Development Consent Order (DCO). The reason for this is that impacts on third parties should be presented to the Examining Authority for consideration to inform their role of assessing the principle of development and the acceptability of associated risks. If the DCO application were made without either a flood risk assessment and/ or suitable mitigation for third party properties our position would be objection.</p>				
NFOWFS3_007_003_140 723	<p>Appendix 21.3 Flood Risk Assessment Paragraph 363 of the Flood Risk Assessment regarding flood warning and evacuation must ensure there is an evacuation route in place in the event of Tidal flooding. Currently this paragraph only refers to fluvial and surface water. Paragraph 382 and 383 of the Flood Risk Assessment is in relation to trenched crossings, in which it states that the flood risk impacts of trenched crossings will be assessed at the detailed design stage. We reiterate the points that we have made in the previous paragraph: If trenched techniques are used on ordinary watercourses with associated Fluvial / Tidal Flood Zone 3, the Environment Agency would expect the Flood Risk Assessment to assess the flood risk impacts during construction for the Environment Agency's consideration before / during the examination stage of the Development Consent Order and not at the detailed design stage.</p>	Water Resources and Flood Risk		<p>Updated evacuation measures including for fluvial flood risk are described in Appendix 21.3 Flood Risk Assessment (document reference 3.3.29).</p> <p>Flood risk from all sources, including trenched crossings during construction, is also assessed in Appendix 21.3 Flood Risk Assessment (document reference 3.3.29). The impact of trenched crossings in each water body catchment is assessed in Section 2 1.6 of ES Chapter 21 (Water Resources and Flood Risk).</p>	N

<p>NFOWFS3_007_004_140 723</p>	<p>Appendix 21.2 Water Framework Directive Compliance Assessment Table 1 This table identifies waterbodies screened in or out of the assessment. Impacts on Hamford Water are screened out. This is justified on the basis that the Main River crossing upstream will be crossed using trenchless crossing techniques. However, we have not been able to identify detailed assessment of the technical suitability of trenchless crossings for each crossing location. It may be that at the detailed design stage there will reasons why trenched techniques should be used. We therefore think it prudent that Hamford Water is scoped in.</p>	<p>Water Resources and Flood Risk</p>		<p>The main river that drains to Hamford Water is now outside of the onshore Project area and does not need to be crossed. As a result, impacts on Hamford Water are not expected. An updated screening assessment is included in Appendix 21.2 Water Environment Regulations Compliance Assessment (document reference 3.3.28).</p>	<p>N</p>
<p>NFOWFS3_007_005_140 723</p>	<p>Chapter 21. Table 21.10 We are pleased to note the commitment to develop an appropriate bentonite breakout plan in this table and the supporting comments in section 21.6.1.3.</p>	<p>Water Resources and Flood Risk</p>		<p>Mitigating measures associated with bentonite breakout are described in Section 21.3.3 of ES Chapter (Water Resources and Flood Risk).</p>	<p>Y</p>
<p>NFOWFS3_007_006_140 723</p>	<p>Drawing PB9244-RHD-ZZ-LN-DR-GS-0239 All three landfall site locations shown in drawing PB9244-RHD-ZZ-LN-DR-GS-0239 would require passing under an existing tidal defence. Jaywick and Holland On Sea defences are currently maintained by the Environment Agency and depending on the micro siting of the proposed Dovercourt location it may also be maintained by the Environment Agency. At the detailed design stage the Applicant must provide evidence/data to prove the design will not affect the stability of the existing defence.</p>	<p>Water Resources and Flood Risk</p>	<p>Infrastructure and Other Users</p>	<p>The potential for impact is considered to be low given the depth of the drill (20m). A detailed assessment of drilling below the existing flood defences will be undertaken post-consent (i.e. at detailed design).</p> <p>Noted. Protective provisions for the benefit of the Environment Agency have been included within the draft DCO (document reference 6.1).</p>	<p>Y</p>

NFOWFS3_007_007_140 723	Chapter 19: Ground Conditions and Contamination Paragraph 74 We agree that detailed ground investigations may be required post consent to determine the extent and source of any contamination. The range of contaminants tested should include those associated with the former land use.	Ground Conditions and Contamination		Ground investigations, and laboratory testing, will be designed with reference to historical land uses to ensure the potential contaminants of concern are included within the testing suite. More information can be found in ES Chapter 19 (Ground Conditions and Contamination).	N
NFOWFS3_007_008_140 723	Paragraph 97 In addition to the proposals in this paragraph, Hydrogeological Impact assessment (HIA) should be carried out for excavations that exceed 1meter.	Ground Conditions and Contamination		The requirement for the completion of Hydrogeological Risk Assessments will be undertaken where required prior to the commencement of the construction phase. Their need will be determined based on a high level assessment of the risk posed to the underlying water resource either from potential pollution or a disruption to the existing flow paths from either HDD crossings or shallow disturbance such as dewatering during the laying of the onshore cable route.	N
NFOWFS3_007_009_140 723	Appendix 19.1 Paragraph 63 - we agree with the proposed recommendations.	Ground Conditions and Contamination		Noted.	N

<p>NFOWFS3_007_010_140 723</p>	<p>Potential effects during construction We also note that Chapter 21 Section 21.6.1 is relevant in respect of this subject area. A hydrogeological impact assessment should assist in determining potential effects during construction.</p>	<p>Ground Conditions and Contamination</p>	<p>Water Resources and Flood Risk</p>	<p>A hydrogeological risk assessment will be undertaken where earthworks / excavations are within 50m (or 250m dependent upon the volume abstracted) of private potable groundwater abstractions and pose a potential risk from either existing or potentially introduced contamination.</p> <p>Further hydrogeological risk assessments will be undertaken where earthworks / excavations are within influencing distance of abstractions whereby they may interrupt flow pathways due to dewatering or other associated activities.</p> <p>The risk assessment, which would be desk-based, follows a tiered approach with more detailed assessments carried out in areas considered to pose a potentially greater risk to groundwater.</p> <p>The hydrogeological risk assessment will meet the requirements of the Environment Agency's Approach to Groundwater Protection 2018 Framework and be completed post consent dependent on further design information.</p> <p>The need for hydrogeological risk assessment will be determined following detailed design based on the final proximity in relation water abstractions. Details regarding the hydrogeological risk assessment are set out in the OCoCP (Document Reference: 7.13), which is secured by DCO Requirement.</p>	<p>Y</p>
<p>NFOWFS3_007_011_140 723</p>	<p>Chapter 23: Onshore Ecology Table 23.48 We welcome the commitment to develop a plan to prevent the spread of invasive non-native species in the Code of Construction Practice.</p>	<p>Onshore Ecology</p>	<p>Project Description</p>	<p>Noted.</p> <p>Mitigation measures associated with trenched crossings, including the use of pumps, are listed in Section 21.3.3 of ES Chapter (Water Resources and Flood Risk). This includes a fish rescue and use of fish and eel-friendly filters.</p>	<p>N</p>
<p>NFOWFS3_007_012_140 723</p>	<p>Paragraph 429 We note the proposed enhancements and look forward to more details and evaluation. We suggest that enhancements could be extended to riparian locations by replacing lost gravel to restore benthic habitats, as well as varied and diverse tree/scrub planting to</p>	<p>Onshore Ecology</p>		<p>Riparian habitats are considered in this ES in Sections 23.5 and 23.6 of Chapter 23 (Onshore Ecology).</p> <p>BNG is addressed in the Biodiversity Net Gain Strategy (Document Reference 7.22).</p>	<p>N</p>

	provide shading and riverbank habitat for mammals. We look forward in due course to a full biodiversity net gain plan showing net gain of at least 10%.				
NFOWFS3_007_013_140 723	<p>Linked comment: Chapter 21: Table 21.3</p> <p>Any temporary pumps used for over pumping will require screening to prevent the entrainment of eel, lamprey or other fish species. The Eel (England and Wales) Regulations came into force in 2010. Since 1 January 2015, under Part 4, Section 17, it has become an offence not to place an eel screen on any water diversion structure capable of abstracting more than 20 cubic metres in a 24-hour period, unless specifically exempted from the requirement by the Environment Agency.</p> <p>As part of a fish rescue, the fish should be re-located downstream.</p>	Onshore Ecology	Water Resources and Flood Risk	Noted.	N
NFOWFS3_007_014_140 723	<p>Environmental Permitting for watercourse crossings</p> <p>The proposed development involves watercourse crossings and a flood defence crossing which, will either require a Flood Risk Activity permit or exemption under the provisions of the Environmental Permitting (England and Wales) Regulations 2016 or, for the Applicant to apply through the DCO for disapplication of this legislation by the inclusion of an appropriate set of Protective Provisions. To date we are not aware of the Applicant's intentions in respect of this and would welcome early discussions. We will send under separate cover our standard wording for Protective Provisions the have been used in</p>	Water Resources and Flood Risk		Noted.	N

	<p>recent DCO's which replicate the safeguards which the Environment Agency is granted through environmental permits and which we consider to be appropriate for this development. Guidance on Flood Risk Activity Permits can be found at: https://www.gov.uk/guidance/flood-riskactivities-environmental-permits. I trust that this information is of assistance.</p>				
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<p>NFOWFS3_008_001_240 523</p>	<p>Dear Harper Your Reference Number: 004788663-01 Description of Development: North Falls is a proposed offshore wind farm located in the southern North Sea, approximately 20 kilometres from the East Anglia coast at its nearest point. An offer has been accepted from National Grid for an onshore grid connection in Tendring, North Essex, approximately 20 kilometres from its likely landfall location for that connection option near Frinton-on-Sea. North Falls is set to support the UK's target of 50GW of installed offshore wind capacity by 2030. The Project comprises:</p> <ul style="list-style-type: none"> • Up to 72 offshore wind turbine generators • Up to two offshore substation platforms • Platform interconnector cables • Inter-array cables • Options for transmission infrastructure including: <p>Option 1: Onshore electrical connection at a National Grid connection point within Tendring, Essex, with a project alone onshore cable route and onshore substation infrastructure;</p> <p>Option 2: Onshore electrical connection at a National Grid connection point within Tendring, Essex, sharing all or part of an onshore cable route with separate onshore export cables with another project (such as Five Estuaries) where practicable, or</p> <p>Option 3: Offshore electrical</p>	<p>N/A</p>		<p>Noted.</p>	<p>N</p>
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	<p>connection supplied by a third-party electricity network provider. Such a connection will potentially be identified through the Offshore Transmission Network Review (OTNR) process. Location: North Falls Offshore Wind Farm</p> <p>I refer to your consultation under Article 16/17 of the Development Management Procedure (England) Order 2010. We thank you for the opportunity to provide our comments and these are set out below.</p> <p>OBSERVATIONS: The London Borough of Waltham Forest do not wish to make any comments on the application at this time.</p>				
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<p>NFOWFS3_009_001_300 623</p>	<p>Dear Sir/Madam,</p> <p>Please be aware that any works within the Marine area require a licence from the Marine Management Organisation. It is down to the applicant themselves to take the necessary steps to ascertain whether their works will fall below the Mean High Water Springs mark.</p> <p>Response to your consultation</p> <p>The Marine Management Organisation (MMO) is a non-departmental public body responsible for the management of England's marine area on behalf of the UK government. The MMO's delivery functions are; marine planning, marine licensing, wildlife licensing and enforcement, marine protected area management, marine emergencies, fisheries management and issuing European grants.</p> <p>Marine Licensing Works activities taking place below the mean high water mark may require a marine licence in accordance with the Marine and Coastal Access Act (MCAA) 2009.</p> <p>Such activities include the construction, alteration or improvement of any works, dredging, or a deposit or removal of a substance or object below the mean high water springs mark or in any tidal river to the extent of the tidal influence.</p> <p>Applicants should be directed to the MMO's online portal to register for an application for marine licence</p>	<p>Policy and Legislative Context</p>	<p>Benthic and Intertidal Ecology</p>	<p>Noted.</p>	<p>N</p>
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	<p>https://www.gov.uk/guidance/make-a-marine-licence-application</p> <p>You can also apply to the MMO for consent under the Electricity Act 1989 (as amended) for offshore generating stations between 1 and 100 megawatts in English waters.</p> <p>The MMO is also the authority responsible for processing and determining Harbour Orders in England, together with granting consent under various local Acts and orders regarding harbours.</p>				
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<p>NFOWFS3_009_002_300 623</p>	<p>A wildlife licence is also required for activities that that would affect a UK or European protected marine species.</p> <p>The MMO is a signatory to the coastal concordat and operates in accordance with its principles. Should the activities subject to planning permission meet the above criteria then the applicant should be directed to the follow pages: check if you need a marine licence and asked to quote the following information on any resultant marine licence application:</p> <ul style="list-style-type: none"> • local planning authority name, • planning officer name and contact details, • planning application reference. <p>Following submission of a marine licence application a case team will be in touch with the relevant planning officer to discuss next steps.</p>	<p>Policy and Legislative Context</p>	<p>Marine Mammals</p>	<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_009_003_300 623</p>	<p>Environmental Impact Assessment With respect to projects that require a marine licence the EIA Directive (codified in Directive 2011/92/EU) is transposed into UK law by the Marine Works (Environmental Impact Assessment) Regulations 2007 (the MWR), as amended. Before a marine licence can be granted for projects that require EIA, MMO must ensure that applications for a marine licence are compliant with the MWR.</p> <p>In cases where a project requires both a marine licence and terrestrial planning permission, both the MWR and The Town and Country Planning (Environmental Impact Assessment) Regulations</p>	<p>Policy and Legislative Context</p>	<p>EIA Methodology</p>	<p>Noted.</p>	<p>N</p>

	<p>http://www.legislation.gov.uk/ukxi/2017/571/contents/made may be applicable.</p> <p>If this consultation request relates to a project capable of falling within either set of EIA regulations, then it is advised that the applicant submit a request directly to the MMO to ensure any requirements under the MWR are considered adequately at the following link</p> <p>https://www.gov.uk/guidance/make-a-marine-licence-application</p>				
NFOWFS3_009_004_300 623	<p>Marine Planning</p> <p>Under the Marine and Coastal Access Act 2009 ch.4, 58, public authorities must make decisions in accordance with marine policy documents and if it takes a decision that is against these policies it must state its reasons. MMO as such are responsible for implementing the relevant Marine Plans for their area, through existing regulatory and decision-making processes. Marine plans will inform and guide decision makers on development in marine and coastal areas. Proposals should conform with all relevant policies, taking account of economic, environmental and social considerations. Marine plans are a statutory consideration for public authorities with decision making functions. At its landward extent, a marine plan will apply up to the mean high water springs mark, which includes the tidal extent of any rivers. As marine plan boundaries extend up to the level of the mean high water</p>	Policy and Legislative Context		Noted.	N

	<p>spring tides mark, there will be an overlap with terrestrial plans which generally extend to the mean low water springs mark.</p> <p>A map showing how England's waters have been split into 6 marine plan areas is available on our website. For further information on how to apply the marine plans please visit our Explore Marine Plans service.</p> <p>Planning documents for areas with a coastal influence may wish to make reference to the MMO's licensing requirements and any relevant marine plans to ensure that necessary regulations are adhered to. All public authorities taking authorisation or enforcement decisions that affect or might affect the UK marine area must do so in accordance with the Marine and Coastal Access Act and the UK Marine Policy Statement unless relevant considerations indicate otherwise. Local authorities may also wish to refer to our online guidance and the Planning Advisory Service soundness self-assessment checklist. If you wish to contact your local marine planning officer you can find their details on our gov.uk page.</p>				
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<p>NFOWFS3_009_005_300 623</p>	<p>Minerals and waste plans and local aggregate assessments</p> <p>If you are consulting on a mineral/waste plan or local aggregate assessment, the MMO recommend reference to marine aggregates is included and reference to be made to the documents below;</p> <ul style="list-style-type: none"> • The Marine Policy Statement (MPS), section 3.5 which highlights the importance of marine aggregates and its supply to England's (and the UK) construction industry. • The National Planning Policy Framework (NPPF) which sets out policies for national (England) construction minerals supply. • The Managed Aggregate Supply System (MASS) which includes specific references to the role of marine aggregates in the wider portfolio of supply. • The National and regional guidelines for aggregates provision in England 2005-2020 predict likely aggregate demand over this period including marine supply. <p>The NPPF informed MASS guidance requires local mineral planning authorities to prepare Local Aggregate Assessments, these assessments have to consider the opportunities and constraints of all mineral supplies into their planning regions – including marine. This means that even land-locked counties, may have to consider the role that marine sourced supplies (delivered by rail or river) play – particularly where land based resources are becoming increasingly constrained.</p>	<p>Policy and Legislative Context</p>	<p>Marine Water and Sediment Quality</p>	<p>Noted.</p>	<p>N</p>
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	<p>If you require further guidance on the Marine Licencing process, please follow the link https://www.gov.uk/topic/planning-development/marine-licences</p>				
NFOWFS3_010_001_020 723	<p>Dear Sir/Madam Town and Country Planning Act 1990 NO OBJECTIONS RAISED Proposed work: North Falls Offshore Wind Farm-Energy Security and Net Zero under Section 37 of the Planning Act 2008. At: North Falls Offshore Wind Farm Thank you for your notification of the above development which was registered in this office on 11th May 2023. I have reviewed the information provided on your website and consider that the proposals would not have any strategic implications for this Borough.</p>	N/A		Noted.	N

NFOWFS3_011_001_060 723	<p>Good morning</p> <p>Further to consultation amongst residents and Councillors, I would like to submit the following feedback on behalf of the Council:</p> <ul style="list-style-type: none"> • Tunnelling should stay on the Beaumont side of Betty Dent's Corner where Swan Road meets Thorpe Road on the B1035 	Traffic and Transport		Noted.	N
NFOWFS3_011_002_060 723	<ul style="list-style-type: none"> • Stones Green Road off the B1035 is part of the National Sustrans Cycle Network 	Traffic and Transport	Tourism and Recreation	Section 27.3.3 of ES Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) outlines a package of embedded mitigation measures to reduce the effects of the Project's construction traffic upon the most sensitive communities and to minimise travelling via narrow roads. In particular this includes the use of a temporary haul road and vehicular crossovers to remove the requirement for any traffic to access from Stones Green Road and to reduce the number of HGV movements past sensitive communities located along the B1035, e.g. Tendring Green and Tendring.	N
NFOWFS3_011_003_060 723	There are many old oaks in the Stones Green area, some of which have Tree Preservation Orders	Onshore Ecology		Details of the potential effects of the Project on trees in the local area can be found in the Applicant's Tree Preservation Order and Hedgerow Plan (document reference 5.12).	N
NFOWFS3_011_004_060 723	<ul style="list-style-type: none"> • The Council would like a limit imposed on working hours and working days 	Project Description		Noted.	N
NFOWFS3_011_005_060 723	<ul style="list-style-type: none"> • The Council request the B1035 is not used as an alternate route for traffic at any time 	Traffic and Transport		Section 27.3.3 of ES Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) outlines a package of embedded mitigation measures to reduce the effects of the Project's construction traffic upon the most sensitive communities and to minimise travelling via narrow roads. In particular this includes the use of a temporary haul road and vehicular crossovers to remove the requirement for any traffic to access from Stones Green Road and to reduce the number of HGV movements past sensitive communities located along the B1035, e.g. Tendring Green and Tendring.	N

NFOWFS3_011_006_060 723	<ul style="list-style-type: none"> The Council requests footpaths are kept open with diversions if needed 	Tourism and Recreation		All diverted footpaths will be kept open with diversions. Further details of how footpaths will be managed are set out in the OPRoWMP (document reference 7.17).	Y
NFOWFS3_011_007_060 723	The Council requests the impact on agricultural and farming land is kept to an absolute minimum	Land Use and Agriculture		Noted.	N
NFOWFS3_011_008_060 723	<ul style="list-style-type: none"> Local people should be trained to work on site rather than bringing a workforce in from further afield 	Socio-economics		An OSEP has been developed as part of the DCO process (document reference 7.18) which is secured by DCO Requirement. This provides details of commitments to training on site workers and procuring local firms.	Y
NFOWFS3_011_009_060 723	<ul style="list-style-type: none"> Procurement contracts should be placed with local firms 	Socio-economics			
NFOWFS3_011_010_060 723	<ul style="list-style-type: none"> North Falls and Five Estuaries infrastructure should be constructed in conjunction with each other to avoid double the inconvenience for residents <p>Please acknowledge receipt of these comments.</p>	Site Selection and Assessment of Alternatives		The Applicant has worked with Five Estuaries throughout the pre-application stage to develop co-ordinated proposals as discussed in Section 5.3.1 and Section 5.7 of Chapter 5 Project Description of the ES (document reference 3.1.7) and reduce the projects' cumulative impact.	Y

<p>NFOWFS3_012_001_060 723</p>	<p>FAO: Daniel Harper – Consent Manager Re: East Suffolk Council's response to the third round of consultation for the North Falls Offshore Wind Farm Project – Statutory Consultation (16 May – 14 July 2023). Thank you for your letter dated 16 May 2023 inviting East Suffolk Council (ESC) to provide feedback on the third round of consultation for the North Falls offshore wind farm project. The statutory consultation is being held between 16 May and 14 July 2023, with ESC being identified as a consultee for the purposes of Section 42 of the Planning Act 2008 and/or Regulation 13 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This letter provides ESC's response to the statutory consultation. Having reviewed the published statutory consultation materials, ESC understands that the current proposal is for either 72 offshore wind turbines (310m to blade tip) or 40 offshore wind turbines (397m to blade tip) split across two offshore array areas, with two offshore substation platforms, located approximately 22.5km off the Suffolk coast at the closest point. We understand the subsea cable route will make landfall between Frinton-on-Sea and Holland-on-Sea in Tendring, Essex. We also understand from the previous round of non-statutory consultation that National Grid has made a grid connection offer for the project, which assuming this continues to be a radial connection, is likely to be on the Tendring Peninsula in proximity to</p>	<p>Site Selection and Assessment of Alternatives</p>		<p>Noted.</p>	<p>N</p>
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	<p>the proposed Norwich to Tilbury (formerly East Anglia Green) project's connection substation south of Lawford.</p> <p>However, it is noted that the North Falls project is maintaining a flexible approach to connection options in the Development Consent Order (DCO), presenting three options for the transmission infrastructure. It is understood that the first option being proposed provides approximately 24km of underground cables (for this project alone) linking to a new onshore substation co-located with the Norwich to Tilbury project's substation at Lawford in Tendring. The second option being the same as the first option, apart from the sharing of all or part of the onshore cable route infrastructure with separate onshore export cables (potentially with the Five Estuaries offshore wind farm project where practicable), and the third option being an offshore electrical connection supplied by a third-party electricity network provider. The latter option being potentially identified through the Offshore Transmission Network Review (OTNR) process.</p>				
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<p>NFOWFS3_012_002_060 723</p>	<p>As set out in our previous engagement at the non-statutory consultation, ESC's primary concern with the North Falls project relates to the potential for seascape visual impacts being introduced on our highly designated coastline and communities, including the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). In June 2020, Suffolk County Council (SCC) and Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) Partnership (in consultation with ESC and Natural England (NE)) commissioned a seascape sensitivity study for offshore wind farms located in the inshore and offshore waters off the Suffolk coast (Suffolk Seascape Sensitivity Study, White Associates 2020). The seascape of Suffolk is sensitive to offshore wind farm development primarily due to its relationship with the combined Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, with seascape contributing significantly to the AONB's setting and natural beauty. To fully assess the potential seascape impacts on East Suffolk's coastal communities and designated landscapes, an update to the Suffolk Seascape Sensitivity Study 2020 was required as the original scope of works did not cater for the proposed North Falls project parameters having wind turbine generators up to 397m to blade tip. The findings of this updated study have now been published and inform our response to the statutory consultation set out below. Whilst this update was commissioned to support ESC's</p>	<p>Seascape, Landscape and Visual Assessment (SLVIA)</p>		<p>Noted.</p>	<p>N</p>
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	<p>recent response to the Five Estuaries statutory consultation, having proposed wind turbines up to 424m to tip at approximately 37km from the Suffolk coast, its findings are equally applicable to the North Falls project, which proposes wind turbines up to 397m to tip at only 22.5km from the Suffolk coast. The Suffolk Seascape Sensitivity to Offshore Wind Farms Study update addendum - White Consultants (June 2023) is attached to this letter in Annex A.</p>				
NFOWFS3_012_003_060 723	<p>2 Page</p> <p>ESC is not a host authority, or a direct neighbouring authority of the onshore scoping area. However, whilst no onshore infrastructure is proposed within our District, ESC has concerns regarding the potential significance of visual impact on our coastal regions resulting from the project. At a distance of approximately 22.5km from the northern offshore array, the proposed wind turbines will be visible from the designated Suffolk Coast and Heaths AONB, and this response provides comments primarily relating to potential seascape, landscape and visual impacts and their anticipated significance.</p> <p>Our response is provided on the basis that the North Falls Offshore Wind Farm proposes an onshore grid connection located outside of Suffolk and beyond the ESC</p>	Seascape, Landscape and Visual Assessment (SLVIA)	Site Selection and Assessment of Alternatives	Noted.	N

	<p>District, however, should this change in future, our position on this project may need to be revisited. ESC therefore requests that should there be any amendments to the onshore (or offshore) connection location for the project, the Council is informed. This letter provides you with ESC's feedback on the current proposals set out in the Preliminary Environmental Information Report (PEIR) consultation materials. This letter should be read in conjunction with our response submitted to PINS for the EIA Scoping Report consultation (16 August 2021)¹, and our previous non-statutory consultation responses (6 December 2021; 2 December 2022)².</p>				
NFOWFS3_012_004_060 723	<p>Need case and coordination ESC acknowledges that renewable energy will play a central role in tackling climate change and in meeting Government targets in the lead up to net-zero by 2050. A significant amount of new offshore wind generation and associated infrastructure is required to connect 50GW by 2030. However, the shift towards the delivery of low carbon and renewable sources of energy must consider the potential impacts it may have on the landscape, natural environment and local communities set to host or neighbour such development. Developers must also explore opportunities for greater levels of coordination between projects in relation to the objectives set out in the OTNR. ESC supports North Falls' submission into the Government's Offshore Coordination Support Scheme (OCSS), noting that this</p>	Need for the Project	Site Selection and Assessment of Alternatives	The Applicant has worked with Five Estuaries Offshore Wind Farm throughout the pre-application stage to develop co-ordinated proposals as discussed in Section 5.3.1 and Section 5.7 of ES Chapter 5 (Project Description).	Y

	<p>seeks to provide grants to offshore energy projects to develop coordinated options for offshore transmission infrastructure. North Falls is also engaging with the OTNR as is the developer of the Five Estuaries project, and whilst it is welcomed that the North Falls project, alongside other developers, has committed to exploring options within the Early Opportunities workstream³, ESC remains disappointed that the project has not been put forward as a Pathfinder. Every opportunity should be undertaken by the two developers, given it is likely that they will have the same connection location, to seek maximum coordination between the projects in order to minimise impacts on local communities and the environment. The Sheringham Shoal and Dudgeon extension projects located in Norfolk are demonstrating that greater coordination is possible, and this should be replicated. ESC would welcome the opportunity to engage in future pathfinder discussions should these options be pursued within East Suffolk.</p> <p>1 https://www.eastsuffolk.gov.uk/assets/Planning/Strategic-engagement/1-ESC-North-Falls-Scoping-Report-Response-160821.pdf</p> <p>2 https://www.eastsuffolk.gov.uk/assets/Planning/Offshore-Windfarms/North-Falls/ESC-response-to-North-Falls-Offshore-Wind-Farm-informal-consultation-Dec21.pdf; https://www.eastsuffolk.gov.uk/assets/Planning/Offshore-Windfarms/North-Falls/ESC-response-to-North-Falls-Offshore-</p>				
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	Wind-Farm-Informal-Consultation- Dec22.pdf				
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<p>NFOWFS3_012_005_060 723</p>	<p>ESC welcomes the intention for coordination between the North Falls and Five Estuaries offshore wind farm projects, noting that an opportunity to coordinate more closely has been identified by the developers. We understand that coordination will seek to reduce the potential impact of building the onshore connection to the national electricity transmission network for the two projects, however, note that the viability of any coordinated connection is dependent on the progress made by the OTNR process, associated regulatory and commercial policy changes and the individual offshore connector projects involved.</p> <p>Whilst the proposed onshore connections for both North Falls and Five Estuaries projects are not within the East Suffolk District, offshore options for connection should continue to be fully explored, minimising the need for onshore infrastructure. It is therefore encouraging to see the intention of this project's DCO to include a third option for connection as stated earlier (an offshore electrical connection supplied by a third-party electricity network provider), which will be for the Secretary of State to decide which is to be pursued as part of the DCO decision making process at the appropriate time.</p> <p>ESC supports the proposed coordination effort between the two projects regarding key elements such as cable corridor selection (to optimise both onshore routes), environmental surveys and by sharing consultation feedback. It is encouraging to read that coordination and cooperation</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Policy and Legislative Context</p>	<p>Noted.</p>	<p>N</p>
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	<p>will continue between the projects throughout their development and may enable elements of joint delivery should the technical and commercial conditions allow for this, reducing the potential impact of building the onshore connection to the national electricity transmission network for the two projects.</p> <p>ESC is being consulted on and is aware of a number of energy related projects that may have an impact on our District, and we welcome and support collaborative working between all Applicants and the National Grid to ensure that the optimal solution is delivered. We expect this to involve coordination and the sharing of infrastructure where feasible to reduce the amount required onshore.</p>				
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<p>NFOWFS3_012_006_060 723</p>	<p>Seascape and cumulative impacts We have reviewed the relevant statutory consultation material including the PEIR Non-Technical Summary and PEIR Report including (but not limited to) Chapter 6 Environmental Impact Assessment Methodology; Chapter 29 Offshore Seascape, Landscape and Visual Impact Assessment, Appendix 29.1 Seascape, Landscape and Visual Impact Assessment and Visualisation Methodology, and Chapter 29 SLVIA – Figures (Volume II); which collectively sets out the current environmental baseline, potential impacts, and initial proposals to mitigate those impacts. In terms of the PEIR’s Seascape Visual Impact Assessment (SLVIA), Section 3.3.2 within the Non-Technical Summary states that ‘the impact assessment is based on a worst-case scenario of the largest turbines (40 wind turbines up to 397m above Mean High Water Spring (MHWS)) as this will result in longer distance visibility’. The PEIR concludes that ‘North Falls is predicted to have major (significant in EIA terms) effects on marine character areas, and moderate (also significant in EIA terms) effects on landscape character areas 3 Joint statement from North Falls, Five Estuaries and National Grid: Commitment to exploring coordinated network designs in East Anglia 4 Page and views at Sizewell Beach, cliffs above Thorpeness, Aldeburgh, Orford Ness, Shingle Street and Pulhamite Cliffs (Bawdsey Manor), as well as sections of the Suffolk Coast Path and Suffolk Coast and</p>	<p>Seascape, Landscape and Visual Assessment (SLVIA)</p>	<p>Landscape and Visual Impact Assessment (LVIA)</p>	<p>Noted.</p>	<p>N</p>
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	<p>Heaths AONB with visibility of North Falls during operation influencing the seascape and landscape character'. It also concludes that 'There is potential for cumulative effects to occur with a number of other offshore wind farms during all project phases. Total cumulative effects are predicted to be significant (major) for effects on marine character areas, and there is potential for significant effects (moderate) for landscape and on certain viewpoints'.</p> <p>Section 29.8 within the PEIR Chapter 29 Offshore Seascape, Landscape and Visual Impact Assessment notes that 'whilst significant landscape and visual effects have been identified, there are no landscape mitigation proposals, which require monitoring, which could lead to a reduction in landscape and visual effects'.</p> <p>The commissioned update to the Suffolk Seascape Sensitivity Study (2020) reviews the sensitivity assessment previously undertaken using the same study area limits, assessing for wind turbines >400m to blade tip above Lowest Astronomical Tide (LAT) (more appropriate for the North Falls project at 397m to tip). The report update forms an addendum to the original assessment and together they will act as a framework and background study for assessing the likely seascape and visual effects of wind farms off of the Suffolk coast.</p> <p>The update addendum to the Suffolk Seascape Sensitivity to Offshore Wind Farms Study (2020) was produced by White Consultants (June 2023) and is appended to this letter in Annex A. It finds that wind turbines at 400m</p>				
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	<p>and greater to tip height should be located no less than 40km from the Suffolk coast for the introduced visual effects on coastal communities and the AONB to fall below the medium magnitude threshold. It also assessed the average offshore visibility distances related to the percentage of days each year that turbines can be seen from coastal receptors. For comparison with the Five Estuaries project arrays (with the closest row of 424m turbines at approximately 37.7km from the Suffolk coast at the closest point), this assessment concluded that the turbines would be visible less than 33% of days each year due to visibility modifiers (i.e. meteorological/atmospheric conditions). North Falls (at only 22.5km from the Suffolk coast) would be expected to be visible more than this given their closer proximity and relative height at 397m to tip. On days where the turbines will be visible, it is expected that visual effects from within the AONB will be worse than medium magnitude (which supports the North Falls' PEIR conclusions).</p> <p>In parallel to the Suffolk Seascape Sensitivity Study update addendum, White Consultants also undertook a comparison of seascape and visual impact assessment methodologies for East Anglia TWO/East Anglia ONE North offshore wind farms and the Five Estuaries offshore wind farm to ensure consistency in the PEIR approach adopted. The comparison report is appended to this letter in Annex B, the findings of which have been considered in reference to the North Falls PEIR assessment. It is noted that for the North Falls PEIR assessment,</p>				
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	<p>impacts to the Natural Beauty and Special Qualities of the Suffolk Coast and Heaths AONB are considered in Section 29.6 within Chapter 29 Offshore Seascape, Landscape and Visual Impact Assessment.</p> <p>However, the Applicant's description of the implications of the Offshore Above-Sea Development for the Suffolk Coast & Heaths AONB (29.6.2.2.2, Offshore Seascape, Landscape and Visual Impact Assessment) refers to the baseline description in the 2013-2018 Suffolk Coast & Heaths AONB Management Plan and not the current 2018-2023 Suffolk Coast & Heaths AONB Management Plan. ESC, SCC and the AONB Partnership collectively conclude that this approach is not sufficiently robust for the assessment of potential impacts on the AONB. The PEIR seascape, landscape and visual impact assessment applies baseline descriptions taken from the 2013-18 management plan. It is acknowledged that for other NSIP consultations, the AONB Partnership has sought assessment of impacts against the 2016 Natural Beauty and Special Qualities document rather than the landscape character work outlined in in the 2013-18 management plan. The assessment should be made against the more recent Suffolk Coast & Heaths Area of Outstanding Natural</p> <p>5 P a g e</p> <p>Beauty and Special Quality Indicators v1.8 November 2016 or the detailed Suffolk Landscape Character Assessment⁴. An assessment of the offshore element of the proposals should therefore be undertaken against the defined natural beauty and</p>				
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	<p>special qualities of the Suffolk Coast & Heaths AONB and not the summary landscape character assessment as referenced in 29.6.2.2.2, Offshore Seascape, Landscape and Visual Impact Assessment. However, it is acknowledged that the North Falls PEIR concludes moderate effects on landscape character areas along the Suffolk coast, being significant in EIA terms. Therefore, whilst a more updated assessment is required, it is unlikely to alter the PEIR conclusion given the proximity of the northern array to coastal communities of Suffolk and the AONB.</p> <p>The maximum visual impact onshore will be in late summer afternoons when turbine blades face towards the coastline as it coincides with peak visitor periods at Suffolk coast locations. It is therefore clear from the PEIR findings that the current North Falls proposals (specifically the northern array of offshore wind turbines at only 22.5km from the Suffolk coast) will put the statutory purposes of the AONB designation at risk from the project alone and cumulatively with other projects due to the anticipated seascape visual impact introduced.</p>				
NFOWFS3_012_007_060 723	<p>Coastal geomorphology The PEIR assessment materials include Chapter 8 Marine Geology Oceanography and Physical Processes as well as the accompanying Figures (Volume II). Section 3.1 within the PEIR Non-Technical Summary concludes 'With the implementation of mitigation measures, North Falls is</p>	<p>Marine Geology Oceanography and Physical Processes</p>		<p>Numerical modelling of waves has now been completed for potential operational impacts due to the presence of the foundation structures for North Falls alone and cumulatively with other wind farms. The cumulative results are described in Section 8.8.3.3 of ES Chapter 8 (Marine Geology, Oceanography and Physical Processes) and shown in Figure 8.20 (document reference 3.2.4).</p>	N

	<p>predicted to have no greater than negligible adverse (not significant in EIA terms) effects on marine geology, oceanography and physical processes during all project phases.... There is potential for cumulative effects to occur with a number of other offshore wind farms and other projects. However, when considering proposed mitigation measures, it is not anticipated that cumulative effects are likely to be significant in EIA terms'.</p> <p>As set out in ESC's non-statutory consultation response, our coastal management concern focusses on the potential for an increasingly dense wall of offshore wind turbines having an effect on their lee side, such that this alters wind driven wave patterns through a reduction in wind energy. Our comments therefore focus on the assessment of how wave energy will be affected as this appears to have the greatest potential to cause an impact on the East Suffolk coastline. The impact of wave energy interruption by turbine foundations arising from both this development in isolation and the entire licensed turbine field, for a number of wave directions, needs to be fully understood and modelling should include possible effects to the ESC shoreline. This is considered important because if there is a measurable impact which reduces wave energy on approach to the East Suffolk shoreline from an east/southeast direction, then it has potential to alter the net sediment drift balance at the shoreline. There are coastal locations where a reduction in the southerly component of net drift may be significant e.g., East Lane Bawdsey and Thorpeness.</p>				
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	<p>It is requested that the final impact assessments undertaken for this project demonstrate consideration of the impact of wind energy interruption by the turbine array on lee side wave energy, in addition to turbine foundation interruption impacts, and this should provide a commentary on how this impact may impact net sediment trends over East Suffolk shorelines.</p>				
NFOWFS3_012_008_060 723	<p>Heritage considerations Within the PEIR Non-Technical Summary, Section 3.2.7 sets out the onshore archaeology and cultural heritage findings. As set out in ESC's non-statutory consultation response, there are various built heritage assets located on the East Suffolk coastline which could potentially be affected by the North Falls proposal 4 https://suffolklandscape.org.uk/ 6 Page including those that derive some of their significance from their visual, working and historic relationship to the sea, as part of their coastal location and maritime history. The latter would include the history of fishing, coastal protection, military defence and resort tourism, for example. The viewpoints previously set out in the EIA Scoping response cover most of these key areas of heritage significance for our District. Consideration should also be given to some of our coastal Conservation Areas, these are designated heritage assets and, as they are area-based, may sustain wider-ranging impacts from the proposals than specified individual sites. The military chain of early 19th century Martello Towers is the most pre-eminent of our military coastal defence features,</p>	Onshore Archaeology and Cultural Heritage		A detailed assessment of the predicted effects on the significance of heritage assets arising from visibility of the offshore development (following the decision to remove the northern cluster of turbines from the proposed development) is presented in Appendix 25.4 Offshore Infrastructure Setting Assessment (Volume III) (document reference 3.3.51).	N

	<p>all of which are listed buildings and scheduled monuments, having a high level of designation. If the North Sea is regarded as part of the setting of these heritage assets and which partly contributes to their significance, then there is a statutory obligation to include them for the effect of the impacts arising from the proposed offshore development. This would include the separate and combined impacts arising from the northern and southern arrays, although it is acknowledged that combination effect will be smaller further north along the coastline.</p>				
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<p>NFOWFS3_012_009_060 723</p>	<p>Socio-economic effects and tourism It is acknowledged that the PEIR contains Chapter 31 Socio-economics and accompanying Figures (Volume II); Appendix 31.1 North Falls Offshore Wind Farm Economic Impact; Chapter 32 Tourism and Recreation and accompanying Figures (Volume II). Within the PEIR Non-Technical Summary, Section 3.3.4 sets out the socio-economics findings and Section 3.3.5 sets out findings on tourism and recreation. The assessment included consideration of tourism assets and activities in both Essex and Suffolk, and Tendring Districts. For marine and coastal tourism and recreation, the study area was based on the SLVIA study area including the East Anglian coastal and offshore waters, the Suffolk coast and the Essex coast. As set out in ESC's non-statutory consultation response, consideration must be given to how the visual impact of the turbines will affect visitors to the southern coastal areas of our District and the potential for economic displacement when this development is viewed in combination with the other proposed large energy/infrastructure projects in the region. Tourism plays an important role in the local economy across the East Suffolk District, with many coastal locations being popular holiday destinations, much of which is designated for its natural beauty and ecological importance. This consideration also needs to acknowledge that many of these areas are still recovering from the negative</p>	<p>Socio-economics</p>	<p>Tourism and Recreation</p>	<p>Noted.</p>	<p>N</p>
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	<p>impacts of COVID19 on their businesses. Tourism impacts should be addressed by investment in place promotion and visitor 'assets'. ESC remains concerned that tourism effects may be felt in East Suffolk due to seascape visual impacts introduced by the proposed wind farm extension, either alone or in combination with other NSIP projects.</p> <p>Noting the matters raised in the seascape section of this letter, ESC still awaits further assessment being completed. The need for a detailed assessment of AONB special qualities has been highlighted to inform ESC's final position on the visual effects within the AONB, and we reserve the right to provide more detailed comments on socio-economic effects and tourism once this has been completed. However, it has already been acknowledged in the seascape section of this letter that the North Falls PEIR concludes moderate effects on landscape character areas along the Suffolk coast, being significant in EIA terms.</p> <p>It was discussed earlier in this letter that Section 29.8 within the PEIR Chapter 29 Offshore Seascape, Landscape and Visual Impact Assessment notes that 'whilst significant landscape and visual effects have been identified, there are no landscape mitigation proposals, which require monitoring, which could lead to a reduction in landscape and visual effects'. Residual visual effects on our coastline will therefore remain, and ESC are unable to support the PEIR's tourism and recreation conclusion which states 'With the implementation of mitigation measures, North Falls is predicted</p>				
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	<p>to have no greater than minor adverse (not significant in EIA terms) effects on tourism and recreation during all its phases.... There is potential for cumulative effects to occur with a number of other offshore wind farms and/or projects. However, when considering proposed mitigation measures, potential cumulative effects have been assessed as not significant (in EIA terms).’ Our concerns relating to seascape visual impacts and the potential knock-on effects on tourism and recreation within our District therefore remains unchanged.</p>				
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<p>NFOWFS3_012_010_060 723</p>	<p>Future consultation and engagement We understand that this response will also be shared with Five Estuaries Offshore Wind Farm as part of the coordination effort between the two projects. It is understood that the feedback received as part of this consultation will be used to refine the assessment and mitigation proposals within the final Environmental Statement submitted for Examination as part of the DCO process. ESC welcomes ongoing engagement with the North Falls project as the DCO application progresses and we trust the feedback provided in this letter is useful, being read alongside our earlier consultation responses and the EIA Scoping response submitted by ESC to PINS in Autumn 2021.</p> <p>Conclusion Having reviewed the North Falls PEIR assessment and findings, alongside the recently commissioned White Consultants report updates (June 2023), the northern array is due to contain wind turbines up to 397m to tip at a distance of only 22.5km from the Suffolk coast. In terms of wind turbine visibility, the North Falls PEIR concludes moderate effects on landscape character areas along the Suffolk coast, being significant in EIA terms. It has been acknowledged within the PEIR assessment that there are no landscape mitigation proposals which could lead to a reduction in visual effects, and it can therefore be concluded that the mitigation hierarchy would be unable to fully mitigate the anticipated effects and that residual impacts would remain</p>	<p>Seascape, Landscape and Visual Assessment (SLVIA)</p>		<p>A detailed assessment of the predicted effects on the significance of heritage assets arising from visibility of the offshore development (following the decision to remove the northern cluster of turbines from the proposed development) is presented in Appendix 25.4 Offshore Infrastructure Setting Assessment (Volume III) (document reference 3.3.51).</p>	<p>N</p>
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	<p>upon the AONB special qualities. It is therefore clear from the PEIR findings that the current North Falls proposals (specifically the northern array of offshore wind turbines) will put the statutory purposes of the AONB designation at risk from the project alone and cumulatively with other projects due to the anticipated seascape visual impact introduced. It is also possible that residual impacts could have a detrimental effect on tourism and recreational activities in these areas.</p> <p>Therefore, ESC does not support the current North Falls project given the magnitude of seascape visual impacts anticipated on Suffolk coastal communities and the special qualities of the AONB. Notwithstanding ESC's carefully considered objection to the scheme, if the Secretary of State decides to consent the scheme, ESC (in conjunction with SCC as host Authority and the SCHAONB Partnership) will be seeking appropriate compensation to offset the seascape impacts introduced by the current offshore wind turbine layout.</p> <p>8 Page Annex A - Suffolk Seascape Sensitivity to Offshore Wind Farms Study update addendum - White Consultants (June 2023).</p> <p>9 Page Annex B - Comparison of seascape and visual impact assessment methodologies for East Anglia TWO/East Anglia ONE North offshore wind farms and Five Estuaries windfarm – White Consultants (June 2023).</p>				
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<p>NFOWFS3_013_001_110 723</p>	<p>RESPONSE OF BABERGH AND MID SUFFOLK DISTRICT COUNCILS</p> <p>This is the response of Babergh and Mid Suffolk District Councils to the non-statutory pre-application consultation for the proposed North Falls Offshore Windfarm NSIP.</p> <p>Introduction</p> <p>Although they remain two separate sovereign councils, since 2013 Babergh and Mid Suffolk District Councils have been working together to deliver services and they share a Chief Executive, management team and joint workforce who work across both authorities. The comments below are submitted on behalf of both councils except where they are specifically attributed to a single council.</p> <p>Babergh and Mid Suffolk District Councils consider their role of protecting and promoting the interests of the districts' communities, businesses and environment to be of utmost importance and recognise the contribution Babergh and Mid Suffolk make to the unique character and quality of Suffolk and the wider eastern region.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_013_002_110 723</p>	<p>Comments</p> <p>The councils acknowledge the national importance of strategic energy infrastructure and have previously stated a preference for a coordinated, offshore approach to the delivery of transmission reinforcement, import and export objectives including consolidation</p>	<p>Need for the Project</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Noted.</p>	<p>N</p>

	of offshore connections and onshore infrastructure together with appropriate management of construction activities to effectively minimise and mitigate harm to Suffolk's communities and environment.				
NFOWFS3_013_003_110 723	<p>That position notwithstanding, the councils take this opportunity to register their concern in respect of the potential visual impacts of the substation element of the project on the landscape of Babergh District Council, including the designated AONB, especially having regard to cumulative impacts with other projects in the area.</p> <p>The council also acknowledges the comments from the AONB.</p>	Landscape and Visual Impact Assessment (LVIA)	Site Selection and Assessment of Alternatives	Noted.	N
NFOWFS3_014_001_090 723	<p>Response to North Falls Statutory Consultation Little Bromley Parish Council (LBPC) strongly oppose North Falls proposal for development of onshore infrastructure in the parish of Little Bromley. We do support your Option 3 for the projects National Grid connection point, an Offshore electrical connection supplied by a third party electricity distribution network provider.</p>	Need for the Project		The feasibility of Option 3 (an offshore connection) is subject to the outcomes of the OCSS which is expected to conclude in March 2025. Therefore radial transmission to an onshore connection location must be included in the North Falls DCO application.	N
NFOWFS3_014_002_090 723	An onshore development would industrialise our precious rural landscape with a large substation and large swathes of farmland permanently affected by underground cabling.	Land Use and Agriculture	Landscape and Visual Impact Assessment (LVIA)	Details of the potential effects of the Project have been considered in detail throughout the ES; in particular effects from loss of agricultural land are considered within Section 22.6 of Chapter 22 Land Use and Agriculture (document reference 3.1.24) of the ES.	N

NFOWFS3_014_003_090 723	Such a development would be a permanent disfigurement of the parish, remove valuable arable land necessary for food security from production, generate significant construction and ongoing noise, and affect residents and community amenities.	Land Use and Agriculture	Noise and Vibration	Construction and operational noise impacts have been assessed in accordance with best practice and mitigation measures identified, as required, such that significant adverse effects are not anticipated at human receptors, which includes the dwellings in the Little Bromley parish.	
NFOWFS3_014_004_090 723	There is concern that the development will negatively affect sale potential and sale value of properties in the area.	Socio-economics		Assessment of property type, value and impact is considered in detail throughout Chapter 31 Socio-economics (document reference 3.1.33) of the ES	N
NFOWFS3_014_005_090 723	LBPC understand that North Falls is working in Tendring District and Little Bromley as you have been offered a connection into the proposed National Grid East Anglia Connection substation. The National Grid project is very contentious with over 23,000 people having signed a petition calling for an offshore grid. Across East Anglia residents, parish councils, district councils, county councils and members of parliament (OFFSET group of MP's) have united in voicing their opposition to the current National Grid plans. With an offshore connection there would be no need for your	Site Selection and Assessment of Alternatives		<p>The Applicant co-operated with the Department of Energy Security and Net Zero (DESNZ) to explore grid connection options, as part of the Offshore Transmission Network Review (OTNR).</p> <p>In addition, NFOW has applied to the OCSS in consortium with National Grid Electricity Transmission (NGET) and Five Estuaries for an offshore connection to Sea Link, a marine cable between Suffolk and Kent proposed by NGET as part of their Great Grid Upgrade.</p> <p>The Applicant continues to engage with Government, Office of Gas and Electricity Markets (Ofgem) and other developers to explore the potential options.</p>	N

	development onshore. LBPC ask that North Falls support and participate in the DESNZ OTNR supporting the offshore option.				
NFOWFS3_014_006_090 723	The cumulative effect of the currently planned North Falls onshore development together with those planned by Five Estuaries and National Grid is devastating for Little Bromley and is causing many residents anxiety and stress.	Human Health	Site Selection and Assessment of Alternatives	The Applicant understands the Project's potential impacts and that the length of the development process can create uncertainty and stress. The Applicant takes its role as a responsible developer seriously, and concerns and feedback will be considered throughout the Project's continued development. The Applicant is also always happy to answer enquiries from its stakeholders and members of the public.	N
NFOWFS3_014_007_090 723	Specific concerns we have with the North Falls onshore plans as detailed in this Consultation are as follows: • Visual Impact - The potential visual impact for the entire parish from the North Falls substation is major. The scale of the substation within its 60Ha search area is large (267m x 300m - 8Ha), with the height of the substation buildings being up to 15m. LBPC believe any proposed screening cannot be entirely effective. We note that you have chosen not to define your plans for screening and visual mitigation at this time which is disappointing. LBPC would like to	Landscape and Visual Impact Assessment (LVIA)		Noted.	N

	understand these plans, what visual mitigations will be in place and how these will improve over time.				
NFOWFS3_014_009_090 723	<ul style="list-style-type: none"> Operational Noise - LBPC note that you have not provided any estimates for actual noise from the substation as equipment is not yet selected. However you suggest an upper limit of 35dBA (as measured at the nearest receptor). LBPC believes that this is too high. LBPC believe that it is essential that residents have a clear understanding of noise levels and mitigation measures in place. As can be seen from background noise measurements, Little Bromley is a very quiet area, and LBPC believe that any noise increase with consequent reduction in quality of life for residents is unacceptable. 	Noise and Vibration		Section 26.4.3.6 of ES Chapter 26 (Noise and Vibration) discusses the proposed approach to assessment of operational noise impacts and provides evidence based on accepted standards and guidance that, where background sound levels are low, the Lowest Observed Adverse Effect Level should be a rating level of 35dB LAr,Tr for the substation sound. This approach has been agreed with Tendring District Council through the ETG process. As discussed in Section 26.8.3.1.3 of ES Chapter 26 (Noise and Vibration), cumulative substation noise levels will be controlled to not exceed 35dB LAr,Tr at any residential property by DCO Requirement and this will avoid a reduction in quality of life for residents.	N
NFOWFS3_014_010_090 723	<ul style="list-style-type: none"> Construction Noise - The construction period of 12-hours per day, 6 days a week for many years will be hugely disruptive to the village and surrounding area. LBPC believes that construction noise will be intrusive to the village and surrounding areas. You have identified a number of NVSR's in the Parish who will be affected even after designed mitigation. LBPC also believe that different noise 	Noise and Vibration		Embedded mitigation measures to reduce construction noise impacts are discussed in Section 26.3.3 of ES Chapter 26 (Noise and Vibration), with additional mitigation measures discussed as required relevant to each construction phase impact assessed in Section 26.6.1 of ES Chapter 26 (Noise and Vibration).	Y

	types can be particularly penetrating - for example a back-up alarm or vehicle motion alarm can be clearly heard over a long distance. It would be helpful to understand what additional mitigation measures could be included to reduce construction noise.				
NFOWFS3_014_011_090 723	<ul style="list-style-type: none"> • Construction Traffic - The predicted HGV traffic during the construction period is exceptionally high with, for North Falls traffic alone, a growth of 1,457% growth from today on Bentley Road (257 HGV's per day at peak). With a 12 hour work day this would indicate an average of 21 HGV movements per hour, or one every 3 minutes. If you include traffic flows for Five Estuaries as well the HGV traffic growth on Bentley Road is 2,959% with peak traffic of 503 HGV's per day. This equates to a 42 HGV movements every hour, or one every 1.5 minutes. Bentley Road and all roads in the parish of Little Bromley are not designed for such traffic volumes and size. It is not possible for two HGV's to pass on most roads without one of the vehicles mounting the road verge, with subsequent verge damage. The roads themselves are in poor repair, and with this volume of HGV's will deteriorate further and faster. LBPC would like to understand how North Falls will mitigate these highway problems. 	Traffic and Transport		<p>Table 27-2 of the ES (Chapter 27 Traffic and Transport (Volume I)) includes details of an extensive package of mitigation measures to address comments in regard to the effects of construction traffic upon the users of Bentley Road.</p> <p>An Outline Construction Traffic Management Plan (OCTMP) (document reference 7.16) is submitted with the DCO application. The OCTMP includes details of the approach to managing the highway condition.</p>	N
NFOWFS3_014_012_090 723	<ul style="list-style-type: none"> • Construction Dust and Mud - North Falls are planning a 5-year construction project which will create 	Land Use and Agriculture	Traffic and Transport	Construction dust and particulate matter impacts have been assessed in Section 20.6.1.1 with site specific mitigation included in Section 20.6.1.1.5 of ES Chapter 20 (Onshore Air Quality).	N

	significant dust, dirt and mud on roads. Residents properties and gardens will be affected, and our roads will be affected. LBPC would like to understand how North Falls plan to mitigate this.				
NFOWFS3_014_013_090 723	<ul style="list-style-type: none"> Construction Traffic Management - LBPC understand that the current traffic management plan is essentially for traffic to be removed from the public highways onto haul roads. It has not been made clear how access of North Falls traffic into and out of haul roads will be achieved - will this be by traffic light control for example - as this could cause delays in the local road network. With predicted traffic volumes for Bentley Road if access is poorly implemented then significant traffic delays and problems could be created. LBPC would also like to understand how North Falls will ensure and police that HGV's and other development traffic does not route through the village of Little Bromley and surrounding single track roads. 	Traffic and Transport		An Outline Construction Traffic Management Plan (OCTMP) (document reference 7.16) is submitted alongside this DCO application and will be further developed and agreed with stakeholders prior to construction. The OCTMP provides details of the proposed approach to managing and monitoring of traffic movements associated with North Falls.	N
NFOWFS3_014_014_090 723	<ul style="list-style-type: none"> Route Disruption - LBPC believe the impact on the local road network around Little Bromley parish will be high. Bentley Road, Paynes Lane, Spratts Lane, Barlon Road, Ardleigh Road and Grange Road will all be crossed by the Export Cable Corridor and Haul Roads. LBPC understand that Bentley Road will be crossed using HDD and we have been advised that the other roads listed will be open trenched. With all these roads affected there will be major disruption to village, farm and business traffic flows, with the key access into the A120 severely restricted. LBPC believe that there 	Traffic and Transport	Onshore Archaeology and Cultural Heritage	<p>Section 27.6.1.5 of Chapter 27 Traffic and Transport (Volume I) of the ES (document reference 3.1.29) presents an assessment of the effects of road closures upon driver delay.</p> <p>Section 27.6.1 of Chapter 27, Traffic and Transport (Volume I), of the ES (document reference 3.1.29) includes an assessment of the effects of the Project's construction traffic upon severance and amenity of all road users (including those of PRow, as identified in Table 27-13).</p>	N

	is a real risk of Bentley Road effectively being unusable by local traffic, such that the village and surrounding towns main link to the A120 will be severed.				
NFOWFS3_014_015_090 723	<ul style="list-style-type: none"> • Loss of Village Amenity - The North Falls development and associated facilities such as haul roads, temporary construction compounds and haul road access points will be highly disruptive to day-today village life. Quiet country roads and Public Rights of Way will be affected impacting residents, walkers, cyclists and horse riders. 	Traffic and Transport		<p>Section 27.6.1.3 of Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES presents an assessment of the effects of the Project upon amenity. Section 27.6.1.5 of this chapter presents an assessment of the effects of road closures upon driver delay.</p> <p>The Outline Construction Traffic Management Plan (document reference 7.16) includes details of measures to manage the Projects traffic movements during planned events, such as the Bromley 10k race.</p>	N
NFOWFS3_014_016_090 723	There are many farms which need access to their properties and fields at all times of year, and especially during harvest.	Land Use and Agriculture			
NFOWFS3_014_017_090 723	Annual events such as the Little Bromley 10k race and the Corbeau Seats Rally use many of the roads and areas of the parish that will be affected by the development. Both these events raise significant funds for local charities.	Tourism and Recreation			

<p>NFOWFS3_014_018_090 723</p>	<p>An important village social gathering point is St Marys Church (Grade II* Listed by National Heritage), which will have the underground cabling and haul road passing close and have major development close by. St Marys is maintained by the Church's Conservation Trust, with many events organised by the Friends of Little Bromley Church. Services are still carried out on an occasional basis at the Church. The village bus service runs down Bentley Road, and school buses run daily during term time to take local children to their schools.</p>	<p>Onshore Archaeology and Cultural Heritage</p>			
<p>NFOWFS3_014_019_090 723</p>	<p>• Business Impact - With road diversions and closures and large parts of the parish under development our village businesses, many of which depend on local road access by customers , could be seriously affected. Written Correspondence to: The Clerk, Dakas House, Shop Road, Little Bromley, Manningtree CO11 2PX</p>	<p>Socio-economics</p>	<p>Traffic and Transport</p>	<p>Chapter 27 Traffic and Transport (document reference 3.1.29) of the ES assesses the impact of road diversions and closures on road users. The assessment includes a detailed of mitigation being put in place to ensure communities, businesses and other local stakeholders fully understand the scale of change and the embedded mitigations and how they are secured and enforced.</p>	<p>N</p>

<p>NFOWFS3_014_020_090 723</p>	<ul style="list-style-type: none"> • Village Well Water - Many properties in Little Bromley have no mains water connection and are reliant on well water. There is concern on whether the North Falls development will affect the water sources in the village and affect these water supplies. Extension of the water main to these properties would seem to be the only way to guarantee continuity of supply. 	<p>Ground Conditions and Contamination</p>		<p>Information relating to groundwater and surface water abstractions has been received from the Environment Agency and local authority, with relevant information included within Table 19.10 of Chapter 19 Ground Conditions and Contamination (document reference 3.1.21) of the ES, with additional detail provided in Appendix 19.1 Geo-Environmental Desk Study and Preliminary Risk Assessment Report (Volume III) (document reference 3.3.20). Potential impacts to identified resources during construction and operation are provided in Sections 19.6.1.2 and 19.6.2.2 of ES Chapter 19 Ground Conditions and Contamination respectively.</p> <p>A high level screening exercise to identify those potable groundwater abstractions that may be impacted as a result of the construction and operation of the Project will be undertaken. Where potentially impacted potable groundwater abstractions are identified, a detailed Hydrogeological Risk Assessment will be undertaken. The Hydrogeological Risk Assessments will be undertaken post consent and will include an assessment on potential disruption to local water supplies and outline appropriate mitigation measures to reduce the magnitude of impact.</p> <p>Potential impacts on surface and groundwater flows, including abstractions, are assessed in Section 21.6.1.3, Section 21.6.1.4, Section 21.6.2.1 and Section 21.6.2.2 of ES Chapter 21 (Water Resources and Flood Risk).</p>	<p>Y</p>
<p>NFOWFS3_014_021_090 723</p>	<ul style="list-style-type: none"> • Village Drainage - Little Bromley has a very high water table and during wet periods localised flooding and drainage problems can occur. There is concern on whether the North Falls development will affect the village drainage flows and increase the frequency or scale of these events. 	<p>Water Resources and Flood Risk</p>		<p>Potential impacts on flood risk are assessed in Section 21.6.1.4 and Section 21.6.2.2 of ES Chapter 21 (Water Resources and Flood Risk). .</p> <p>Flooding from all sources is assessed in Appendix 21.3 Flood Risk Assessment (document reference 3.3.29).</p>	<p>N</p>

<p>NFOWFS3_014_022_090 723</p>	<p>• Wildlife and Environmental Impact - Little Bromley parish has a rich and varied wildlife population as identified by wildlife surveys. This includes many species of waterbirds and non-waterbirds. We are very close to the Stour Estuary SSI and Ramsar site, and surveys indicate bird species present which are related to those sites. Badgers, hares, foxes, deer, bats and other mammals can be found in the parish. Grass snakes are regular seen in the summer. These all thrive in the parish, as we have woodland, extensive hedgerows and arable margins some of which will be affected by your planned development. The migratory bird route across East Anglia, the East Atlantic Flyway, has gained Government backing to bid to become a UNESCO World Heritage Site. Major developments such as planned by Five Estuaries, North Falls and National Grid will have serious impact. Potential exists for protected or notable species to be impacted by construction activities either physically via permanent or temporary habitat loss or by inadvertent injury or killing or from disturbance via light, noise and human presence. There is potential for permanent habitat fragmentation and species isolation as a result of the substation construction and also from construction of the cable route. The substation construction will bring a permanent loss of an estimated 8Ha of habitat together with the additional loss of the temporary construction compound areas and the cable route during construction.</p>	<p>Onshore Ornithology</p>	<p>Onshore Ecology</p>	<p>The importance of the onshore ornithology study area for breeding and non-breeding bird assemblages has been carefully considered in the Project design and assessment.</p> <p>It is agreed that the potential exists for the impacts listed to occur to IOFs, and as such a range of mitigation measures is proposed to minimise the risk to species of key conservation concern, including migratory species which utilise wetlands that form part of the National Site Network in southeast England.</p> <p>The impacts of habitat loss and fragmentation on breeding birds due to the onshore substation has been assessed accordingly, with appropriate mitigation and enhancement measures proposed.</p> <p>Impacts on named species, mitigation, and how losses are being minimised and avoided are addressed in this ES, namely in Section 23.6 of Chapter 23 (Onshore Ecology).</p> <p>Main migratory locations are designated sites and are fully assessed in the HRA and in Chapter 24 Onshore Ornithology (Volume I) (document reference 3.1.25).</p> <p>Mitigation measures are also addressed in the OLEMS (document reference 7.14) and Schedule of Mitigation (document reference 2.6).</p>	<p>N</p>
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<p>NFOWFS3_015_001_130 723</p>	<p>1 Future Infrastructure Risk July 2023</p> <p>Essex County Fire and Rescue Service Initial Response to North Falls Off Shore Wind Farm ECFRS Initial Response to North Falls Off Shore Wind Farm 2 Version 1 Future Infrastructure Risk July 2023</p> <p>About This document outlines Essex Fire and Rescue Service's initial response to the consultation for the proposed development. Essex County Fire and Rescue Service has a statutory duty to provide Response, Prevention and Protection functions within the community. Therefore, we would welcome any opportunities to enable further development and enhancement of these provisions. If further information or clarification on any of the points presented is required to support the developers, please contact the Service via future.infrastructure.risk@essex-fire.gov.uk. ECFRS Initial Response to North Falls Off Shore Wind Farm 3 Version 1 Future Infrastructure Risk July 2023</p>	<p>Human Health</p>		<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_015_002_130 723</p>	<p>National Fire and Rescue Priorities – Home Office The priorities for fire and rescue authorities set out in the National Fire and Rescue Framework for England July 2018 are to:</p> <ul style="list-style-type: none"> • • Make appropriate provision for fire prevention and protection activities and response to fire and rescue related incidents • • Identify and assess the full range of foreseeable fire and rescue related risks their areas face • • Collaborate with emergency services and other local and national partners to increase the efficiency and effectiveness of the service they provide • • Be accountable to communities for the service they provide • • Develop and maintain a workforce that is professional, resilient, skilled, flexible and diverse <p>The Fire and Rescue Plan – Essex County Fire and Rescue Service The Fire and Rescue Plan sets out the priorities for fire and rescue services in Essex and a series of strong, tangible commitments to how we will help keep our communities safe. The plan brings together the Service, partners and the public to build safe and secure communities and other efficient and effective prevention, protection and response activity. The activities in this plan set out a clear direction for development of the Service and how, by working closer together with other emergency services and wider partners, we can deliver a better service while being closer to the communities we serve. Our priorities are:</p>	<p>Policy and Legislative Context</p>	<p>Human Health</p>	<p>Noted.</p>	<p>N</p>
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	<ul style="list-style-type: none">•• Prevention, protection and response•• Improve safety on our roads•• Help the vulnerable to stay safe•• Promote a positive culture in the workplace•• Develop and broaden the roles and range of activities undertaken by the Service•• Be transparent, open and accessible•• Collaborate with our partners•• Make best use of our resources				
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<p>NFOWFS3_015_003_130 723</p>	<p>Essex Design Guide The Essex Design Guide provides high level direction for new developments which we would like to draw your attention to: ECFRS Initial Response to North Falls Off Shore Wind Farm 4 Version 1 Future Infrastructure Risk July 2023</p> <ul style="list-style-type: none"> • • Continuation of road design to ensure safe and timely access and egress to and from new developments. • • Continuation of road design to include turning circle provision plus future consideration to appliance sizes to ensure adequate space to manoeuvre on a development. • • Consideration for installation of an approved suppression system with better safety and more design freedom. Sprinkler considerations would help to isolate fire to the source and to ensure better safety for occupants / emergency services / reduce insurance costs. This may also afford developers more design freedom and scope for capacity in respect of distance from buildings to fire appliance access points. • • Continued consultation with Water Authorities for fire hydrant / water main provisions and consideration to ensure sufficient strategically placed resources are made available for operational firefighting and with appropriate water pressure considerations. • • Ensure new fire hydrant installations are fully operational before permitting residents to occupy dwellings. • • Ensuring new fire hydrants are not installed within private driveways / gardens. • • Continuation of at least 3 forms 	<p>Policy and Legislative Context</p>	<p>Human Health</p>	<p>Noted.</p>	<p>N</p>
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	<p>of fire hydrant asset indication. Hydrant indicator plate / post, painted FH cover and painted adjacent kerb. In the absence of a kerb then a thermoplastic yellow road 'H' applied to the road surface.</p> <ul style="list-style-type: none"> • Section 106 agreement at planning application stage to ensure that the developer will bear the costs for any new fire hydrant installations deemed necessary by the Fire Authority where the new development exceeds 10 dwellings. • Where applicable door sets to carry dual certification ensuring compliance with fire and security regulations. Such recommendations align with both the Independent Review of Building Regulations and Fire Safety in the wake of and the review and recommendations resulting from the Grenfell Fire tragedy of 2017. • Fire resistant cladding considerations that may fall outside of Building Control matters. 				
NFOWFS3_015_004_130 723	<p>Initial Response to Consultation Document</p> <p>Having reviewed the consultation document, at this time Essex County Fire and Rescue Service would ask that the following are considered during the continued development of the North Falls Off Shore Wind Farm:</p> <ul style="list-style-type: none"> • Adherence to the requirements of the Fire Safety Order and relevant building regulations, especially approved document B. ECFRS Initial Response to North Falls Off Shore Wind Farm 5 	Policy and Legislative Context		<p>All buildings constructed for the Project will comply with the relevant buildings fire safety regulations.</p> <p>Fire suppression systems will be provided where required for safety reasons. The type of suppression system will be based on the equipment present within the room.</p> <p>The design proposes limited changes to the road network. There will be temporary restrictions whilst construction is ongoing, but these will be discussed and communicated with the relevant stakeholders. Further details on construction access are provided in Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES.</p>	N

	Version 1 Future Infrastructure Risk July 2023			Measures to mitigate effects upon water resources are detailed in Chapter 21 Water Resources and Flood Risk (Volume I) (document reference 3.1.23) of the ES. A Design Vision (document reference 2.3) has been prepared which sets out the principles to be adhered during development of the Project's design, including in relation to operational safety. All construction works will be carried out by a competent contractor, in adherence with the construction management measures set out in the OCoCP (document reference 7.13). The approach to the provision of fire suppression systems also accords with the relevant buildings fire safety regulations.
NFOWFS3_015_005_130 723	<ul style="list-style-type: none"> • Installation of smoke alarms and/or sprinkler systems at suitably spaced locations throughout each building. 	Human Health	Policy and Legislative Context	
NFOWFS3_015_006_130 723	<ul style="list-style-type: none"> • Implementation of vision zero principles where there are introductions of or changes to the road network. 	Traffic and Transport		
NFOWFS3_015_007_130 723	<ul style="list-style-type: none"> • Appropriate planning and mitigations to reduce risks around outdoor water sources. 	Water Resources and Flood Risk		
NFOWFS3_015_008_130 723	<ul style="list-style-type: none"> • Suitable principles in design to avoid deliberate fire setting. 	Infrastructure and Other Users	Human Health	

NFOWFS3_015_009_130 723	<ul style="list-style-type: none"> • Consideration for road widths to be accessible whilst not impeding emergency service vehicle response through safe access routes for fire appliances including room to manoeuvre (such as turning circles). 	Traffic and Transport		Chapter 5 Project Description (Volume I) (document reference 3.1.7) of the ES includes details in regard to the design of the Project's infrastructure.	N
NFOWFS3_015_010_130 723	<ul style="list-style-type: none"> • Access for Fire Service purposes must be considered in accordance with the Essex Act 1987 – Section 13, with new roads or surfaces compliant with the table below to withstand the standard 18 tonne fire appliances used by Essex County Fire and Rescue Service. Min. Width of Road between Kerbs Min. Width of Gateways Min. Height Clearance Min. Carrying Capacity Min. Turning Circle (Kerb to Kerb) Min. Turning Circle between Walls Sweep Circle Pumping Appliance 3.7m 3.1m 3.7m 18 tonnes 17.8m 19.0m 19.0m High Reach 3.7m 3.1m 4.0m 26 tonnes 17.8m 20.0m 	Traffic and Transport	Policy and Legislative Context		
NFOWFS3_015_011_130 723	<ul style="list-style-type: none"> • Implementation of a transport strategy to minimise the impact of construction and prevent an increase in the number of road traffic collisions. Any development should not negatively impact on the Service's ability to respond to an incident in the local area. 	Traffic and Transport		Section 27.6.1.4 of Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES includes a detailed assessment of the Project's construction traffic upon highway safety.	N
NFOWFS3_015_012_130 723	<ul style="list-style-type: none"> • A risk reduction strategy to cover the construction and completion phases of the project. 	Project Description		<p>A Design Vision (document reference 2.3) has been prepared which sets out the principles to be adhered during development of the Project's design, including in relation to operational safety.</p> <p>All construction works will be carried out by a competent contractor, in adherence with the construction management measures set out in the OCoCP (document reference 7.13).</p>	N

<p>NFOWFS3_015_013_130 723</p>	<ul style="list-style-type: none"> • Implementation of a land management strategy to minimise the potential spread of fire either from or towards the development site. <p>Essex County Fire and Rescue Service welcomes the opportunity to continue these conversations as the development progresses to ensure opportunities to reduce risk and improve the emergency service provision are realised.</p>	<p>Project Description</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_016_001_130 723</p>	<p>Dear Daniel, North Falls Offshore Wind Farm (NFOWF) Project Statutory consultation to 14th July 2023 Thank you for the opportunity to comment on the statutory consultation for the NFOWF and the Preliminary Environmental Impact Report (PEIR). Anglian Water is the statutory sewerage undertaker for the proposed onshore project area for the cable corridor between landfall and the onshore substation within the Tendring District Council area. As highlighted in our response to the scoping consultation, Anglian Water would welcome discussions with North Falls and SSER/RWE before the subsequent submission of the Draft DCO for examination. We would recommend discussion on the following issues:</p> <ul style="list-style-type: none"> • The Draft DCO Order including protective provisions specifically to ensure Anglian Water's services are maintained during construction • Requirement for wastewater services for onshore infrastructure • Impact of development on Anglian Water's assets and the need for mitigation • Pre-construction surveys if required 	<p>Water Resources and Flood Risk</p>	<p>Infrastructure and Other Users</p>	<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_016_002_130 723</p>	<p>PEIR NON-TECHNICAL SUMMARY Anglian Water welcomes reference to the revised drafts of applicable National Policy Statements, and that these versions will inform the Environmental Statement, when the DCO application is submitted for examination. We support the coordination sought with the Five Estuaries Offshore Wind Farm (VEOWF) regarding the opportunities to coordinate as part of the onshore construction process (regarding cable route and potential substation) to minimise the overall impact of the two projects and to ensure consistent and efficient engagement with stakeholders including statutory undertakers</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Policy and Legislative Context</p>	<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_016_003_130 723</p>	<p>VOLUME 1, CHAPTER 4: SITE SELECTION AND ASSESSMENT OF ALTERNATIVES Anglian Water notes the process for identifying the onshore project area and onshore substation siting options and acknowledge that the detailed design development work has been defined by three options for onshore electrical connection – consisting of cable route and onshore substation infrastructure, with landfall between Clacton-on-Sea and Frinton-on-Sea. Anglian Water Services Lancaster House, Lancaster Way, Ermine Business Park, Huntingdon, Cambridgeshire. PE29 6XU www.anglianwater.co.uk Our ref: Stat.Con/NFOWF/July2023 2</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Onshore Archaeology and Cultural Heritage</p>	<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_016_004_130 723</p>	<p>4.14.4 Onshore cable corridor(s) for PEIR: Anglian Water notes the broad corridor connecting the landfall search area to the onshore substation zone, which will accommodate any temporary works for both NFOWF and VEOWF, temporary construction compounds and corridor flexibility. In retaining corridor flexibility around Thorpe-le-Soken and adding the temporary construction compounds to the onshore cable corridor; the approach taken avoids direct interfaces with our assets. The closest corridor option to Thorpe-le-Soken is therefore closest to our water recycling network but does not appear to intersect with our below ground wastewater network assets. Should this option be taken forward following the ongoing refinement of options to a final onshore cable route, we would seek to require Protective Provisions specifically to ensure Anglian Water's services are maintained and retained apparatus protected during construction. However, we welcome the acknowledgement in the PEIR that the cable corridor has been broadened to accommodate the necessary stand-off distances requested by utility companies.</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Onshore Archaeology and Cultural Heritage</p>	<p>Following ongoing onshore cable route refinement since PEIR, the onshore cable route closer to Thorpe-le-Soken has been selected due to the environmental constraints associated with the alternative options near Hamford Water (see section 4.9.4.2 of ES Chapter 4, Site Selection and Assessment of Alternatives).</p> <p>NFOW note Anglian Water have raised the possible interaction of an access track with existing Anglian Water assets, and will seek to continue discussion with Anglian Water regarding protective provisions within the DCO.</p>	<p>Y</p>
<p>NFOWFS3_016_005_130 723</p>	<p>VOLUME 1, CHAPTER 5: PROJECT DESCRIPTION 5.8.4.4 Drainage: Anglian Water notes that this section states that a surface water drainage system would be required for the operational substation. Anglian Water would welcome a design that follows the drainage hierarchy in seeking to manage surface water through sustainable drainage systems, and only seek a connection to a public sewer when</p>	<p>Project Description</p>		<p>A Outline Operational Drainage Strategy (document reference 7.19) has been developed for the Project, which includes SuDS to manage runoff from the Project.</p> <p>The Outline Operational Drainage Strategy identifies that there are no public sewers in the vicinity of the substation (according to the Anglian Water sewer records), so it will not be possible to make a foul connection to a public sewer. A septic tank is therefore proposed for the substation site. The size of the septic tank will be confirmed during the post-DCO design stage.</p>	<p>Y</p>

	<p>all other options are demonstrated to be impracticable. The PEIR states that the full specification for water attenuation and drainage system, plus any foul drainage connection to a public sewer system (if available) would be addressed as part of detailed design post consent. If a connection to a public sewer is therefore a possibility, Anglian Water would wish to be included as a consultee in the Schedule of Requirements that specifically concern surface water and foul water drainage.</p>				
NFOWFS3_016_006_130 723	<p>We would also seek clarification whether a connection to our wastewater network will be required for any of the temporary construction compounds (TCC) and advise that early discussions should take place with our pre-development team regarding capacity of our network and assets to accept wastewater flows from the proposed TCC sites.</p>	Project Description		<p>There is no intention to connect to the wastewater network at any of the TCCs at this stage, with all wastewater generated from welfare facilities proposed to be removed from site and treated at a permitted waste treatment facility.</p>	N
NFOWFS3_016_007_130 723	<p>CHAPTER 18 INFRASTRUCTURE AND OTHER USERS 18.5.3 Anglian Water welcomes the PEIR identifying that there is a surface water sewer outfall pipe located within the landfall search area to the north east of Frinton Golf Course. However, figure 22.6 also identifies a foul sewer from Great Holland to a sewer pumping station (FRINTON-HOLLAND ROAD] and further sewers on the edge of Frinton on Sea.</p>	Infrastructure and Other Users		Noted.	N

<p>NFOWFS3_016_008_130 723</p>	<p>CHAPTER 19 GROUND CONDITIONS AND CONTAMINATION 19.3.3 Summary of mitigation embedded in the design: The mitigation measures outlined regarding contaminated land and groundwater references that wastewater arising from potential areas of contamination within the PRA or encountered through construction works, or groundwater from dewatering activities would be collected prior to discharge. This goes on to state that discharge of the wastewater shall either be to a foul sewer under a trade effluent agreement or to a surface water body. Anglian Water as the statutory sewerage undertaker, would welcome further discussion regarding such matters, and would seek to ensure that we are adequately consulted on any connections to our network, including through the Expert Topic Group proposed in Chapter 21.</p>	<p>Ground Conditions and Contamination</p>		<p>Ongoing consultation with Anglian Water will be undertaken as part of the DCO application process to ensure the appropriate agreements are in place prior to the commencement of construction works.</p>	<p>N</p>
<p>NFOWFS3_016_009_130 723</p>	<p>CHAPTER 21 WATER RESOURCES AND FLOOD RISK 3 Anglian Water welcomes reference to our Scoping Response in Table 21.1 regarding impacts on our sewer network and that matters relating to the Construction Surface Water and Drainage Plan will be developed as part of the Code of Construction Practice (CoCP). Whilst an outline CoCP will be included as part of the DCO application, Anglian Water requests that we are consulted on the CoCP when this is prepared post-DCO consent, particularly if connections are likely to be required to our assets. Anglian Water confirms that we would welcome further engagement</p>	<p>Water Resources and Flood Risk</p>		<p>The Outline Operational Drainage Strategy (document reference 7.19) identifies that there are no public sewers in the vicinity of the substation (according to the Anglian Water sewer records), so it will not be possible to make a foul connection to a public sewer. A septic tank is therefore proposed for the substation site. The size of the septic tank will be confirmed during the post-DCO design stage. Interested parties will be able to provide feedback on the Outline Code of Construction Practice (document reference 7.13) as part of the examination process.</p>	<p>Y</p>

	<p>through an Expert Topic Group to consider any impacts on our existing infrastructure.</p> <p>Table 21.3 Embedded mitigation measures:</p>				
NFOWFS3_016_010_130 723	<p>Surface Water: Anglian Water notes that we may potentially be consulted should a connection to our drainage infrastructure should be required for surface water run-off following construction of the cable corridor and particularly the onshore substation. Anglian Water would request that we are consulted when the Operational Surface Water and Drainage Plan is developed, unless it is demonstrated through the Environmental Statement that surface water drainage will be managed through SuDS or alternative means that do not require a connection to our network.</p>	Water Resources and Flood Risk		<p>A Outline Operational Drainage Strategy (document reference 7.19) has been developed for the Project, which includes SuDS to manage runoff from the Project. The strategy identifies that a septic tank would be used at the substation, so it is not anticipated that sewerage connection will be required.</p>	Y
NFOWFS3_016_011_130 723	<p>Supply of contaminants (construction and operational maintenance phases): It is stated that foul drainage will connect to a mains (public) sewer if a connection is available or collected and disposed of at a facility with capacity within its existing permit. Anglian Water suggests that discussions are undertaken with our pre-development team when reasonably practicable.</p>	Water Resources and Flood Risk		<p>The Outline Operational Drainage Strategy (document reference 7.19) identifies that a septic tank would be used at the substation, so it is not anticipated that sewerage connection will be required.</p>	Y

<p>NFOWFS3_016_012_130 723</p>	<p>21.5.5 Utilities: Anglian Water notes that the only sewerage mains within the project area are located within the landfall area of the onshore project area, immediately west of Frinton-on-Sea. However, the limits of the project area (Fig 22.6) also include a sewer from Great Holland to the pumping station at Frinton-Holland Road. The proposed route is in proximity to our water recycling catchments at Thorpe-le-Soken (dependent on selected route option) and Kirby Cross. The mitigation for flood risk incurred by the construction of the onshore cable corridor should therefore ensure that any risks to our wastewater networks are mitigated for – e.g. do not result in increased risk of sewer flooding events.</p>	<p>Water Resources and Flood Risk</p>		<p>The outfall interacts with a proposed access route into the landfall, rather than the landfall itself. The foul sewer running from Great Holland to the sewer pumping station does not appear to directly interact with the DCO Limits or the Project.</p> <p>The Outline Operational Drainage Strategy (document reference 7.19) identifies that a septic tank would be used at the substation, so it is not anticipated that sewerage connection will be required.</p> <p>Drainage strategies and flood risk are considered in Appendix 21.3, Flood Risk Assessment (Volume III), of the ES (document reference 3.3.29).</p>	<p>Y</p>
<p>NFOWFS3_016_013_130 723</p>	<p>APPENDIX 21.3 FLOOD RISK ASSESSMENT (FRA) Flooding from Sewers: It is noted that the FRA identifies that there is a limited foul sewer network within proximity of the onshore cable corridor and that the risk from sewer flooding is considered to be low. Anglian Water notes the reference to the Tendring SFRA DG5 register of sewer flood events, and this dates from 2009. We would encourage the FRA to use more recent data to ensure that the Environmental Statement has more accurate information in this regard. Furthermore, as identified in relation to Chapter 21, it is also the risk of flooding from the construction project on our own assets that should be considered and addressed as appropriate through the Outline CoCP and final CoCP. 7.5 Onshore Substation Operational Surface Water Drainage: It is noted that an</p>	<p>Water Resources and Flood Risk</p>		<p>Noted.</p>	<p>N</p>

	<p>Outline Operational Drainage Plan will provide details of the proposed surface water drainage design confirming that sufficient storage will be provided to attenuate surface water and discharge at a controlled rate during surface water events following the SuDS hierarchy. Anglian Water would wish to be consulted on the details of the operational drainage at the onshore substation when this is developed in consultation with Essex County Council (as the LLFA) and the Environment Agency; particularly regarding the final proposed approach for discharge of water from the site.</p>				
<p>NFOWFS3_016_014_130 723</p>	<p>CHAPTER 22 LAND USE AND AGRICULTURE 4</p> <p>Anglian Water notes that paragraph 155 states that protective provisions and/or side agreements will be agreed with affected utilities as part of the DCO application process and that NFOWF will undertake utility crossings or diversions in accordance with the appropriate industry standards for such crossings. We have provided NFOWF with our template protective provisions and would welcome further discussion on these and other matters raised through the statutory consultation. In conclusion, Anglian Water would want to minimise any disruption to customers and cost to the project of diverting, relocating and provision of wastewater pipelines and infrastructure, and certainly the onshore route and identified project areas have limited impact on our assets. It is noted that there is a wide corridor selected for the grid connection</p>	<p>Land Use and Agriculture</p>		<p>Noted.</p>	<p>N</p>

	<p>route which should provide sufficient latitude to deliver the necessary pipeline diversions or connections for construction and coordination with the VEOWF. Further engagement would serve to enable pre submission agreement on Protective Provisions for our assets and the submission of an agreed Statement of Common Ground with Anglian Water. This in turn reduces the Examining Authority questions for statutory undertakers and removes the possible need for changes to the project during Examination.</p>				
NFOWFS3_017_001_130 723	<p>Dear Sir/Madam,</p> <p>North Falls Offshore Wind Farm development consent order (DCO) Consultation: Section 42 and Section 48 of the Planning Act 2008.</p> <p>I write in respect of the above consultation under Section 42 and Section 48 of the Planning Act 2008 associated with the North Falls Offshore Wind Farm proposal. Having considered the details of the consultation, I can confirm that Network Rail wishes to make the following comments. Network Rail is a statutory undertaker responsible for maintaining and operating the railway infrastructure and associated estate. It owns, operates, maintains and develops the main rail network. Network Rail aims to protect and enhance the railway infrastructure therefore, any proposed development which is in close proximity to the railway line or could potentially affect Network Rail's specific land interests will need to be carefully considered.</p> <p>Impact on Network Rail</p>	Traffic and Transport	Technical Consultation	Noted.	N

	<p>Infrastructure The proposed North Falls scheme may affect Network Rail level crossings in the surrounding area of the onshore cable route. The Applicant must engage with Network Rail to discuss potential impacts.</p>				
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<p>NFOWFS3_017_002_130 723</p>	<p>Consideration will need to be given to the potential increase in Pork Lane level crossings usage due to large construction vehicles. Network Rail Infrastructure Limited Registered Office: Network Rail, One Eversholt Street, London, NW1 2DN Registered in England and Wales No. 2904587 www.networkrail.co.uk</p>	<p>Traffic and Transport</p>		<p>The Applicant considers that Network Rail have misinterpreted the PEIR documents and offers the following clarifications.</p> <p>The extents of the TTSA are detailed in section 27.3.1 of Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES. It can be noted from section 27.3.1 that no traffic is proposed to be routed via Pork Lane.</p> <p>Section 27.6.1.5 of this chapter includes an assessment of potential road closures and does not identify Pork Lane as a possible diversion route.</p> <p>Section 27.3.3 of this chapter describes the proposed access strategy and identifies that HGV traffic travelling to the accesses on the B1032 will be routed from the south, i.e. avoiding the level crossing at Kirby Cross to the north.</p>	<p>N</p>
<p>NFOWFS3_017_003_130 723</p>	<p>The level crossing at Pork Lane may not be directly affected. However, road closures within the area may lead to increased traffic and uncontrollable risks at level crossings on the diversion route. Details of any proposed road closure should be provided and assessed as necessary.</p>	<p>Traffic and Transport</p>			

<p>NFOWFS3_017_004_130 723</p>	<p>The planned route for HGVs is via the B1033 through Thorpe-le-Soken and Kirby Cross, then to the B1032 towards Great Holland. The railway over bridge at Kirby Cross has a restricted height below the usual standard (16ft 6in/5m) at just 13 feet 3 inches, or 4.04 metres. If the large HGV tipper trucks and, or low-loaders conveying plant, which are likely to be used, may not pass under the bridge, they will likely use Pork Lane, the narrow country lane which has an Automatic Half Barrier (AHB) level crossing. The layout of the AHB and approach roads are not suited to multiple large HGVs as the roads are narrow, and a sharp curve can cause blocking back if two large vehicles meet simultaneously. The crossing has a height restriction of 16ft 6in/5m and is subject to a risk of grounding, requiring all long low and slow vehicles to call the signallers for permission to cross.</p>	<p>Traffic and Transport</p>			
<p>NFOWFS3_017_005_130 723</p>	<p>Page 85 of the report states that the expected HGV traffic on Pork Lane in 2026 is expected to be 154, with the works having a daily increase of 104 HGVs. The most recent 9-day traffic survey undertaken in June 2022 by IDASO recorded just 25 HGVs per day, most of which are ECC/Viola waste trucks servicing the newly constructed recycling centre and which do not fit under the bridge at Kirby Cross. Therefore, the projected increase by the works of HGVs traverses would be over 200%. The mentioned matters are not included in the transportation report and should be evaluated and raised as a risk. The developer would need to provide</p>	<p>Traffic and Transport</p>			

	<p>Network Rail with a more detailed map of the construction traffic proposed routes. Mitigation measures may be required to address any adverse impact on the level crossing.</p> <p>North Falls Limited will therefore need to engage with Network Rail regarding the proposed scheme and associated transport report.</p> <p>Network Rail Infrastructure Limited Registered Office: Network Rail, One Eversholt Street, London, NW1 2DN Registered in England and Wales No. 2904587 www.networkrail.co.uk</p>				
NFOWFS3_017_006_130 723	<p>An Asset Protection Agreement is required to be signed before proceeding with any design or construction work alongside, above or below Network Rail's Infrastructure. The trenching project and tunnelling works beneath the railway will be overseen by ASPRO to safeguard railway assets.</p> <p>Prior to any development/construction or alterations to the site by North Falls Limited, further site-specific safety requirements, engineering technical approval and detailed conditions will need to be sought from Network Rail's Anglia Asset Protection team (asproangliage@networkrail.co.uk)</p> <p>. The process for obtaining approval is outlined on Network Rail's web page https://www.networkrail.co.uk/running-the-railway/looking-after-the-railway/asset-protection-and-optimisation/.</p>	Traffic and Transport	Project Description	Noted.	N

<p>NFOWFS3_017_007_130 723</p>	<p>Network Rail have standard protective provisions which will need to be included in the DCO as a minimum. North Falls Limited should therefore contact Tony Ridley, email: tony.ridley@networkrail.co.uk to request a copy of these and to discuss any other agreements that will need to be entered into with Network Rail.</p> <p>A number of legal and commercial agreements will need to be entered into, for example, asset protection agreements, method statements, connection agreements, property agreements and all other relevant legal and commercial agreements. This list is not exhaustive and will need to be reviewed once more scheme details are discussed between the parties.</p> <p>Thank you again for allowing Network Rail to comment on this consultation. I trust that the comments above are clear, but if you require any further information or have any queries, do not hesitate to contact me.</p>	<p>Policy and Legislative Context</p>	<p>Technical Consultation</p>	<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_018_001_140 723</p>	<p>Dear Mr Harper North Falls Offshore Wind Farm Section 42 of the Planning Act 2008 - Preliminary Environment Information Report</p> <p>Thank you for your email dated 15 May 2023 inviting comments on the Preliminary Environment Information Report (PEIR) for the proposal to construct and operate the North Falls Wind Farm.</p> <p>The MCA's remit for offshore renewable energy development is to ensure that safety of navigation is preserved, as progress is made towards government targets for renewable energy. This response is focused on the shipping and</p>	<p>Shipping and Navigation</p>		<p>Noted.</p>	<p>N</p>

	<p>navigation elements of the PEIR and will form the basis of our response to the Environmental Impact Assessment Report in due course.</p>				
NFOWFS3_018_002_140 723	<p>Chapter 15.1 Navigation Risk Assessment (NRA) The proposed area has very high concentrations of commercial, recreational and fishing traffic which includes vessels transiting to and from major UK and international ports. This is evidenced by the results of the 56-day vessel traffic survey in winter 2022 and summer 2022 which recorded 151 transits per day during the winter period and 167 transits per day during summer period. We note that a Hazard Identification (HAZID) workshop has not yet been undertaken and the results of which has not informed any conclusions on risk tolerability. When a date is finalised for the HAZID workshop we would recommend that representatives from the Belgian Maritime Administration are invited (we can provide the appropriate contact details). The NRA does include a preliminary Risk Control Log in Annex 3, however the Residual Impacts are not accepted at this stage since the assessment is incomplete, no risk controls are proposed, and it is an assessment on 'impacts', not navigational hazards.</p>	Shipping and Navigation		<p>Hazard Workshop details are provided in the Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16) noting the Belgian National Authority for Maritime Safety was in attendance.</p> <p>Impacts have been assessed via the Formal Safety Assessment (FSA) in Section 15.6 of ES Chapter 15 (Shipping and Navigation).</p>	N

<p>NFOWFS3_018_003_140 723</p>	<p>The proposed southern array area encroaches into the SUNK TSS Precautionary Area and is adjacent to two Traffic Separation Schemes. The encroachment into the Precautionary Area, which is an IMO-adopted routeing measure, is unacceptable to MCA as it would interfere with the use of recognised sea lanes essential to international navigation. The distance between the SUNK TSS South and the wind farm boundary is approximately 120 metres which does not meet MCA expectations of a two nautical mile separation distance as per MGN654 Annex 2. The distance between the SUNK TSS East and the boundary is less than half a nautical mile which also does not meet MCA expectations and guidance.</p>	<p>Shipping and Navigation</p>		<p>The refinement of the offshore array area post PEIR (as per Section 15.3.2 of ES Chapter 15, Shipping and Navigation) has removed the overlap with the Outer Precautionary Area.</p> <p>Distances from the structures to the local routeing measures is assessed and considered in Section 15.6 of ES Chapter 15, Shipping and Navigation.</p> <p>The array area has been refined in response to the PEIR feedback. The northern array has been removed and the southern array area reduced in size. Further details on the consultation with shipping stakeholders and responses to stakeholder comments are provided in Chapter 15 Shipping and Navigation (Volume I) (document reference 3.1.17).</p> <p>Consultation has been undertaken with the Belgian Authorities to discuss the Galloper Recommended Ferry Route. This process will be progressed at the appropriate time with the IMO in consultation with the relevant stakeholders as the Project moves forward.</p> <p>Detailed assessment of the Galloper Recommended Ferry Route is provided in the Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16).</p> <p>Section 42 feedback and further liaison has been used to refine the PDE including the complete removal of the northern array (Section 15.3.2 of ES Chapter 15, Shipping and Navigation).</p> <p>Chapter 15 of the ES (Shipping and Navigation) also provides details on consultation with the</p>	<p>Y</p>
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<p>NFOWFS3_018_004_140 723</p>	<p>The southern array area is proposed over an international Recommended Route (Galoper route) for ferries between UK and Belgium. It would require agreement, at least in principle, with relevant operators, ports and IMO members, in particular the Belgian maritime administration, to remove the ferry route from the routing measure. If agreement cannot be reached MCA would not be able to support a proposal to remove the Recommended Route and, in all likelihood, it will result in objections to the proposed development. It is important to note that the route is also used by smaller vessels, including recreational and wind farm support vessels, and should consent be granted the array would force these smaller vessels into the main channel of the SUNK TSS South used by larger commercial vessels.</p>	<p>Shipping and Navigation</p>		<p>Belgian Authorities on the Galoper Recommended Ferry Route and plans for future consultation.</p>	<p>Y</p>
<p>NFOWFS3_018_005_140 723</p>	<p>The proposed northern array is located at the end of the SUNK TSS North and encroaches into the route where vessels exit the TSS. This western section of the northern array, located at the end of the TSS Separation Zone, would force vessels further west and restrict the available sea room. It would remove the safety clearance between the traffic exiting the TSS and Greater Gabbard wind farm. This section of the northern array is unacceptable to MCA as it would interfere with the use of a recognised sea lane essential to international navigation.</p>	<p>Shipping and Navigation</p>			<p>Y</p>

<p>NFOWFS3_018_006_140 723</p>	<p>Chapter 15 Shipping and Navigation The shipping and navigation chapter of the Preliminary Environmental Information Report (PEIR) and the likely impacts on maritime navigation is informed by the Navigation Risk Assessment. There should be sufficient information on which to draw conclusions on the tolerability of navigation risks, however the PEIR has been presented to MCA and other navigational stakeholders prior to a HAZID workshop and therefore there has been insufficient consultation at this stage. We feel that since the NRA is incomplete the PEIR does not contain enough information for consultees to fully assess the significant environmental effects of the development.</p>	<p>Shipping and Navigation</p>	<p>Technical Consultation</p>	<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_018_007_140 723</p>	<p>Conclusion The comments detailed above are considered appropriate and necessary for the safety of navigation, Search and Rescue, and vessel traffic management purposes. MCA has significant concerns on the acceptability of navigational risks created by the proposed wind farm arrays. These can only be mitigated by significant amendments to the wind farm boundaries to avoid the impacts to internationally and strategically important shipping routes. MCA is keen to engage and provide further comments as the project progresses.</p>	<p>Shipping and Navigation</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_019_001_140 723</p>	<p>Dear Sue, Proposed application by North Falls Offshore Windfarm Limited for a Development Consent Order for the proposed North Falls Offshore Windfarm, an extension to the operational Greater Gabbard Offshore Wind Farm located off the Tendring Coast, Essex. Tendring District Council (TDC) has been working with Essex County Council (ECC) to provide technical input into the full planning process for the North Falls development and this response should therefore be considered in conjunction with representations from Essex County Council – including comments on the Preliminary Environmental Information Report (PEIR). The proposed route corridor for this project assumes a 132kV underground connection will be made to the proposed 400kV Norwich to Tilbury powerline and a new substation in the Lawford/Ardleigh/Great Bromley area. It is also assumed that a separate customer sub-station serving the North Falls development is likely to be located close to the new 400kV substation. Tendring District Council along with all other authorities in Essex and many in Suffolk and Norfolk has previously made representations to National Grid raising strong objections to the Norwich to Tilbury proposal. With these objections in mind, this Council cannot support any proposal to connect the Five Estuaries Offshore windfarm to the electricity network via the proposed Norwich to Tilbury substation.</p>	<p>Need for the Project</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>It is not unusual for energy generation projects to progress the DCO application process in advance of consent for the transmission into the national electricity distribution network being granted. The Applicant has a grid connection agreement in place to connect into the proposed East Anglia Connection Node. The Applicant is also participating in the UK Government's offshore coordination scheme and as such has included an onshore and offshore connection option as part of its DCO application. These connection options are described in Chapter 5 Project Description of the ES (document reference 3.1.7). Ultimately, the Applicant is focused on its own programme and commitment to be operational by the end of the decade.</p>	<p>N</p>
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	<p>It is the clear preference of this Council, along with many others in the region, that the Norwich to Tilbury powerline should have an offshore centred approach. This would enable the connection of the Five Estuaries Offshore Windfarm without the need to pass through and beneath land in Tendring – avoiding the severe damage, complication and disturbance it would cause.</p> <p>The Council considers this application for a DCO is premature because it is wholly predicated on the draft proposals for Norwich to Tilbury obtaining consent. This proposal from National Grid has not yet reached statutory consultation stage and there are serious objections to that proposal that have not yet been resolved. The Electricity Supply Office (ESO) is currently conducting a review of the Norwich to Tilbury project to identify alternative options, which include the consideration of offshore routes to address the capacity issues. These will be assessed in terms of benefit and cost for each option. Until this review is complete TDC is unable to support the current proposed North Falls extension.</p> <p>If the outcome of the review recommends the Norwich to Tilbury project goes ahead in its current proposed form, the corresponding DCO application is successful, and ergo the North Falls extensions are deemed able to proceed then TDC will rigorously seek to ensure the best outcomes for the District and the success of the project. This Council will pursue measures to minimise the environmental impact and disturbance to residents and maximise the prospect of local job creation and other local benefits to</p>				
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	soften and mitigate the substantial harm that is clearly going to be caused.				
NFOWFS3_019_002_140 723	OFFSHORE The Tendring coastline has existing offshore windfarms, this Council does not object to the offshore elements of the proposals which are an extension of what is already in place.	Need for the Project		Noted.	N
NFOWFS3_019_003_140 723	Indeed, the Council recognises the great benefits of offshore wind – not only in the generation of clean energy in the face of a climate emergency, but also in the provision of jobs in the	Climate Change	Socio-economics	Noted.	N

	construction, maintenance and servicing of the turbines and the potential for Harwich to play an important role in supporting that industry.				
NFOWFS3_019_004_140 723	<p>It is the onshore implications that are of greatest concern to the Council. From Tendring District Council's perspective, it firmly believes that much greater consideration should be given to an offshore powerline route that would avoid the need for the cables to make landfall through / under the SSSI and LNR designations. Whilst the grounding of the cables through the SSSI / LNR would bring about temporary disruption that could be mitigated over time, it would also cause significant damage to the area and greatly affect the tourism industry during the construction period. These issues could all be resolved through a route around the coast as suggested in this and previous responses. The Council will not accept the need for the onshore elements of the North Falls scheme until such time that the alternative offshore route has been properly considered and duly discounted through a full and transparent process for Norwich to Tilbury.</p>	Site Selection and Assessment of Alternatives	Onshore Archaeology and Cultural Heritage	<p>National Grid has provided the Applicant with a grid connection location for North Falls in the vicinity of Ardleigh, Essex. However, the Applicant is committed to working with DESNZ to explore grid connection options and as such, the Applicant has co-operated with the Offshore Transmission Network Review (OTNR) process. In addition, the Applicant has applied to the OCSS in consortium with NGET and Five Estuaries for an offshore connection to Sea Link, a marine cable between Suffolk and Kent proposed by NGET as part of their Great Grid Upgrade. The scheme is expected to run until March 2025, at which point a decision will then be made on the viability of the alternative connection option proposed. Therefore, radial transmission to an onshore connection location must be included in the North Falls DCO application.</p> <p>This is addressed in Chapter 4 Site Selection and Assessment of Alternatives (Volume I) (document reference 3.1.6), Chapter 32 Tourism and Recreation (Volume I) (document reference 3.1.34), and Chapter 23 Onshore Ecology.</p> <p>Impacts on Holland Haven Marshes SSSI are assessed in Section 32.6.1.1 of Chapter 23 Onshore Ecology (document reference 3.1.25). No significant effects are predicted on the Holland Haven Marshes.</p> <p>Cumulative effects with Norwich to Tilbury are assessed in Chapter 23 Onshore Ecology .</p>	N
NFOWFS3_019_005_140 723	<p>ONSHORE</p> <p>There are a multitude of concerns that TDC has in relation to the onshore elements – as have been raised by local residents, debated by elected Councillors and shared by neighbouring authorities and other partners.</p>	Site Selection and Assessment of Alternatives		Noted.	N

<p>NFOWFS3_019_006_140 723</p>	<p>As mentioned in previous responses, the prospect of the onshore elements of this project is generating considerable anxiety in our communities. Namely the large-scale, intrusive physical on-shore infrastructure in the form of substations in sensitive locations and the disturbance and environmental impact of development along the route. These relate as much to the construction phases as they do to the operational phase.</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Landscape and Visual Impact Assessment (LVIA)</p>	<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_019_007_140 723</p>	<p>The proximity of the development and associated construction activity to homes genuinely runs the risk of undermining public support for off-shore wind and other means of generating clean, renewable energy. This could be damaging to the government's ambitions around zero carbon and the fight against climate change which is of imperative importance to all residents and future generations.</p>	<p>Climate Change</p>		<p>The onshore Project area and onshore substation works area have been defined following an extensive site selection process, which has sought to take account of landscape and visual, other environmental, engineering, planning and land requirements to seek to identify the Project location. The site selection process is described in detail in Chapter 4, Site Selection and Assessment of Alternatives (Volume I) of the ES (document reference 3.1.3206).</p> <p>The site selection process has included consideration of the following landscape and visual criteria as part of the process:</p> <ul style="list-style-type: none"> - Baseline landscape character and landscape susceptibility to change; - Landscape designations; - Principal visual receptors; and - Physical suitability of the site and potential for mitigation. <p>Cumulative landscape and visual impacts have been considered in Section 30.8 of Chapter 30, Landscape and Visual Assessment, of the ES (document reference 3.1.32)</p>	<p>N</p>
<p>NFOWFS3_019_008_140 723</p>	<p>With regard to the location of the proposed substations, Tendring District Council is still concerned about the potential land-take and height of these structures.</p>	<p>Landscape and Visual Impact Assessment (LVIA)</p>		<p>Section 27.3.3 of Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES outlines a package of embedded mitigation measures to reduce the impact of the Project's construction traffic to the onshore substation upon the most sensitive communities and to minimise</p>	<p>N</p>

NFOWFS3_019_009_140 723	The poor road access, via narrow country lanes will be irreversibly damaged during the construction process and will cause significant disturbance to a rural community where the road infrastructure is not designed to accommodate such activity.	Traffic and Transport		travelling via narrow roads, including: <ul style="list-style-type: none"> • A temporary haul road from Bentley Road to the onshore substation, facilitated by new temporary crossings of narrow roads; • Widening of the junction of Bentley Road and the A120; • Widening of Bentley Road; and • Provision of a new temporary footway/cycleway along Bentley Road. 	
NFOWFS3_019_010_140 723	These concerns are magnified by the fact that the clustered option means two other substations, including the 400kV Norwich to Tilbury substation might also be located within close proximity – completely transforming the character and enjoyment of this relatively untouched part of Tendring's rural heartland.	Site Selection and Assessment of Alternatives		Section 27.6 of Chapter 27 Traffic and Transport (Volume I) outlines that with this package of embedded mitigation measures there would be no significant residual traffic and transport effects.	
NFOWFS3_019_011_140 723	The Council, as previously stated, is extremely concerned about the health risks posed to residents within proximity to electro-magnetic fields - as demonstrated through considerable research and peer-reviewed scientific data in relation to childhood cancer. There will be considerable noise emanating from substations - again raising concern about proximity to people's homes. The sterilisation of agricultural land along the route of the underground power connections seems to have been given little weight in consideration of the preferred options for both Norwich to Tilbury and, consequently, this project – which could be avoided through achieving an offshore solution.	Human Health	Land Use and Agriculture	Operational noise impacts from the proposed onshore substation have been assessed, as reported in Section 26.6.2 of ES Chapter 26 (Noise and Vibration). The assessment of cumulative effects of operational noise from all three substations is reported in Section 26.8.3.1.3 of ES Chapter 26 (Noise and Vibration) and residual effects are not significant. Electric and magnetic fields (EMF) are considered in Section 28.6.3.2 of ES Chapter 28 (Human Health). The effects from noise are presented in Chapter 26 Noise and Vibration (Volume I) (document reference 3.1.28) of the ES and in Section 28.6.1.1 and Section 28.6.3.1 of Chapter 28 (Human Health). This is addressed in Chapter 28 Human Health (Volume I) (document reference 3.1.30) of the ES, Chapter 22 Land Use and Agriculture (Volume I) (document reference 3.1.24) of the ES, in the OLEMS (document reference 7.14), and in the Biodiversity Net Gain Strategy (document reference 7.22).	N

<p>NFOWFS3_019_012_140 723</p>	<p>These significant landscape concerns mean there is a clear need for landscape impact and mitigation plans in respect not only of the SSSI and LNR at landfall, but also along the length of the route through the district to either of the proposed substations. The Council appreciates the approach to Biodiversity Net Gain and encourage increases that exceed the current 10% national requirements. The long term commitment (30yrs in line with BNG regs), to the planting around the substation is supported and should be replicated for all other areas of planting that occur as a result of the project. TDC would welcome the inclusion of other stakeholders, such as Essex Wildlife Trust, Farming Wildlife and Agriculture Group when long term discussions on planting maintenance are taking place with landowners along the route. Opportunities to assess any positive contributions that can be made to the Local Nature Recovery Strategy should be assessed.</p>	<p>Land Use and Agriculture</p>	<p>Onshore Ecology</p>	<p>This is addressed in Chapter 28 Human Health (Volume I) (document reference 3.1.30) of the ES, Chapter 22 Land Use and Agriculture (Volume I) (document reference 3.1.24) of the ES, in the OLEMS (document reference 7.14), and in the Biodiversity Net Gain Strategy (document reference 7.22).</p> <p>Impacts on Holland Haven Marshes SSSI are assessed in Section 32.6.1.1 of Chapter 23 Onshore Ecology (document reference 3.1.25). No significant effects are predicted on the Holland Haven Marshes.</p>	<p>N</p>
<p>NFOWFS3_019_013_140 723</p>	<p>If the Council's objections to the scheme are ultimately unsuccessful, TDC insists on there being meaningful dialogue with the promoter – North Falls, to consider a Community Benefit Contribution package for the legacy of the project. There are several community projects that would benefit from funding. A priority for TDC will involve seeking reinforcements to the sea defences and the cycle routes for the affected areas.</p>	<p>Technical Consultation</p>	<p>Socio-economics</p>	<p>The Applicant has on previous schemes supported the communities in which it operates and has committed to work with communities to develop its approach to supporting the local area. At this stage, the details of any community benefit package associated with the Project have not been finalised. The Applicant will engage with local people and groups prior to construction commencing to help shape how the Project can best support the community.</p> <p>The haul road for North Falls is temporary and would be removed upon completion of construction.</p>	<p>N</p>

NFOWFS3_019_014_140 723	There are also potential opportunities arising from the construction of servicing haul roads in affected areas – particularly in locations where such routes could be utilised and/or formalised to provide permanent highway re-enforcements – such as link roads or bypasses that could resolve long-standing traffic issues (for example congestion in Thorpe le Soken village). This would require further consultation with both TDC and Essex County Highways.	Traffic and Transport			
NFOWFS3_019_015_140 723	There are also costed community projects within the district that require funding (Jaywick being just one example), TDC would be happy to share these at an appropriate time. There is however, a much longer-term view whereby the ongoing benefits to North Falls and associated shareholders can be used as part of the social, environmental and corporate responsibility to improve a wide range of community assets.	Socio-economics		Noted.	N
NFOWFS3_019_016_140 723	TDC requests further conversations with the promoter with regards to the socio-economic impacts of the scheme. Given the level of economic investment involved for North Falls we would like to progress the economic benefits in the form of training a local work force in the relevant areas. As a well as the longer-term commitment to apprenticeships for those who are near completion of their higher education and looking to enter the workforce. Further detail on specific schemes that will benefit the employment prospects of the current working and future working population would be of great interest to TDC.	Socio-economics		The Applicant's Outline Skills and Employment Plan (document reference 7.18) sets out how the Applicant intends to maximise the benefits of the Project in relation to key skills and employment.	N

NFOWFS3_019_017_140 723	At present Tourism is a major part of the Tending economy. As such we would expect to see a full outline of how the impacts on tourism will be mitigated. The Council has concerns that the disturbance not only to the coast and the wider countryside, particularly in the construction phase, will be significant. The tourism industry relies on good trade and repeat custom achieved during a relatively short window of opportunity in the summer months and the works proposed as part of this project will have a substantial impact.	Tourism and Recreation		<p>The existing environment, as described in Section 32.5 of ES Chapter 32 (Tourism and Recreation), notes the volume and value of the tourism economy. Section 32.5 of Chapter 32 also considers the specific characteristics of the local areas most affected by construction works and the embedded mitigation measures proposed within other inter-related topic chapters which may reduce impacts on visitors (noise, traffic and transport etc).</p> <p>Knock on effects on tourism which occur because of effects on transport infrastructure are considered within Section 32.6 of Chapter 32.</p> <p>The worst case approach outlined in Section 32.3.2 of Chapter 32 considers how the timing of construction activity will relate to the peak tourist season traffic levels and key routes to visitor assets.</p> <p>Potential monitoring requirements are set out in Section 32.7 of ES Chapter 32 (Tourism and Recreation).</p>	N
NFOWFS3_019_018_140 723	TDC expect this to be monitored and further work carried out as necessary, as sites at landfall are popular destinations. The cumulative impacts of the entire project on the transport infrastructure, in particular any challenges around heavy plant traffic impact across the proposed routes at busy times of the year.	Traffic and Transport		Noted.	N
NFOWFS3_019_019_140 723	Seasonal increases as a result of tourism will need to be looked at extremely carefully and mitigated as required.	Tourism and Recreation		Noted.	N
NFOWFS3_019_020_140 723	Taking the wider view of all proposed NSIP projects within the Tending (Norwich to Tilbury & Five Estuaries Offshore Wind Farm), the Council would expect to see an assessment of the cumulative impacts with other schemes. Both at land fall, along the route and the approach towards the substation in the north of the district - in particular with	Site Selection and Assessment of Alternatives		The potential cumulative effects of North Falls, Five Estuaries and other relevant projects in the region have been considered throughout the ES.	Y

	consideration toward the Dedham Vale AONB.				
NFOWFS3_019_021_140 723	To summarise, in the absence of an off shore centred approach TDC would expect to work toward the following points with North Falls; • Long term commitment to apprenticeships and permanent employment	Socio-economics		<p>The Applicant has on previous schemes supported the communities in which it operates and has committed to work with communities to develop its approach to supporting the local area. At this stage, the details of any community benefit package associated with the Project have not been finalised. The Applicant will engage with local people and groups prior to construction commencing to help shape how the Project can best support the community.</p> <p>An OSEP (document reference 7.18) has been developed as part of the DCO process. This provides details of commitments to apprenticeships and permanent employment opportunities.</p> <p>The effect on the volume and value of tourism in Essex and Suffolk is assessed within Chapter 32 Tourism and Recreation (document reference 3.1.34) of the ES.</p> <p>Physical and mental health impacts on residents are considered in Chapter 28 Human Health (document reference 3.1.30) of the ES.</p> <p>Cumulative effects assessment within Section 0 of the ES considers the impact of Norwich to Tilbury. Embedded mitigation, which will reduce potential negative socioeconomic impacts, is set out in Section 31.3.2.</p> <p>Potential impacts of construction works on traffic and transport are assessed in ES Chapter 27 (Traffic and Transport).</p>	N
NFOWFS3_019_022_140 723	• Establishment of a Community Benefit Contribution package	Socio-economics			
NFOWFS3_019_023_140 723	• Fully mitigated proposals to address the impact of the entire project in environmental terms, including but not limited to ecology, visual landscape, Biodiversity Net Gain and the ongoing maintenance	Onshore Ecology	Landscape and Visual Impact Assessment (LVIA)		
NFOWFS3_019_024_140 723	• Fully mitigated proposals to deal with the impact of construction on tourism within the District	Tourism and Recreation			
NFOWFS3_019_025_140 723	• Fully mitigated proposals addressing the impacts on residents – (both physical and mental) in the immediate vicinity of construction and the substations	Human Health			
NFOWFS3_019_026_140 723	• Fully mitigated proposals with regard to the impact of construction on the highways along the route and at the substations	Traffic and Transport			

<p>NFOWFS3_019_027_140 723</p>	<ul style="list-style-type: none"> Fully mitigated proposals with regard to the impact of this project and the in-combination impacts of North Falls and Norwich to Tilbury. <p>If you require further information on any of the matters raised, please contact the case officer, their details are set out below.</p>	<p>Site Selection and Assessment of Alternatives</p>		<p>Assessments of onshore ecology are addressed in Chapter 23 of the ES (Onshore Ecology) and the Applicant's Biodiversity Net Gain Strategy can be viewed at document reference 7.22.</p> <p>Assessments of the Project's potential landscape and visual effects are assessed in ES Chapter 30 (Landscape and Visual Impact Assessment).</p>	
<p>NFOWFS3_020_001_140 723</p>	<p>Ref: North Falls Offshore Wind Farm– SECTION 42 CONSULTATION</p> <p>Cadent Infrastructure within or in close proximity to the development Cadent has identified the following apparatus within the vicinity of the proposed works:</p> <ul style="list-style-type: none"> Intermediate pressure (above 2 bar) Gas Pipelines and associated equipment in land north of Holland Mill Wood. Low pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are also gas services and associated apparatus in the vicinity, these are not shown on plans but their presence should be anticipated) around Thorpe Le Soken and Great Holland. 	<p>Infrastructure and Other Users</p>	<p>Onshore Archaeology and Cultural Heritage</p>	<p>Protective provisions for the benefit of gas undertakers have been included in Part 1 of Schedule 14 to the draft DCO. The Applicant will be liaising with Cadent Gas to negotiate and agree bespoke protective provisions and any associated side agreement if required by Cadent Gas.</p>	<p>Y</p>

	<ul style="list-style-type: none"> Above Ground Installations <p>Note: No liability of any kind whatsoever is accepted by Cadent Gas Limited or their agents, servants or contractors for any error or omission.</p> <p>The above Cadent apparatus is located within the 'the cable corridor' compulsory powers sought to operate this pipeline should not interfere with Cadent's ability to access to maintain and inspect its own pipelines within this area.</p> <p>Where the Promoter intends to acquire land, extinguish rights, or interfere with any of Cadent's apparatus, Cadent will require appropriate protection and further discussion on the impact to its apparatus and rights including adequate Protective Provisions.</p> <p>Where diversions of apparatus are required to facilitate the scheme, Cadent will require adequate land and consents to be included within the Order to enable works and provide appropriate land rights for Cadent to access, maintain and protect apparatus in future</p>				
NFOWFS3_020_002_140 723	<p>Key Considerations:</p> <ul style="list-style-type: none"> Cadent has a Deed of Grant of Easement for each pipeline, which prevents the erection of permanent / temporary buildings, or structures, change to existing ground levels, storage of materials etc. 	Infrastructure and Other Users	Policy and Legislative Context		Y
NFOWFS3_020_003_140 723	<ul style="list-style-type: none"> Please be aware that written permission is required before any works commence within the Cadent easement strip. 	Infrastructure and Other Users	Policy and Legislative Context		Y
NFOWFS3_020_004_140 723	<ul style="list-style-type: none"> The below guidance is not exhaustive and all works in the vicinity of Cadent's asset shall be subject to review and approval from Cadent's plant protection team in advance of 	Infrastructure and Other Users	Policy and Legislative Context		Y

	commencement of works on site. General Notes on Pipeline Safety:				
NFOWFS3_020_005_140 723	<ul style="list-style-type: none"> You should be aware of the Health and Safety Executives guidance document HS(G) 47 "Avoiding Danger from Underground Services", and Cadent's specification for Safe Working in the Vicinity of Cadent High Pressure gas pipelines and associated installations - requirements for third parties 	Policy and Legislative Context	Human Health		Y
NFOWFS3_020_006_140 723	GD/SP/SSW22. Digsafe leaflet Excavating Safely - Avoiding injury when working near gas pipes. There will be additional requirements dictated by Cadent's plant protection team.	Human Health	Policy and Legislative Context		Y
NFOWFS3_020_007_140 723	<ul style="list-style-type: none"> Cadent will also need to ensure that our pipelines remain accessible throughout and after completion of the works . 	Infrastructure and Other Users			Y
NFOWFS3_020_008_140 723	<ul style="list-style-type: none"> The actual depth and position must be confirmed on site by trial hole investigation under the supervision of a Cadent representative. Ground cover above our pipelines should not be reduced or increased. 	Infrastructure and Other Users			Y
NFOWFS3_020_009_140 723	<ul style="list-style-type: none"> If any excavations are planned within 3 metres of Cadent High Pressure Pipeline or, within 10 metres of an AGI (Above Ground Installation), or if any embankment or dredging works are proposed then the actual position and depth of the pipeline must be established on site in the presence of a Cadent 	Infrastructure and Other Users			Y

	representative. A safe working method agreed prior to any work taking place in order to minimise the risk of damage and ensure the final depth of cover does not affect the integrity of the pipeline.				
NFOWFS3_020_010_140 723	<ul style="list-style-type: none"> • Below are some examples of work types that have specific restrictions when being undertaken in the vicinity of gas assets therefore consultation with Cadent's Plant Protection team is essential: ▪ Demolition ▪ Blasting ▪ Piling and boring ▪ Deep mining ▪ Surface mineral extraction ▪ Landfilling ▪ Trenchless Techniques (e.g. HDD, pipe splitting, tunnelling etc.) ▪ Wind turbine installation ▪ Solar farm installation ▪ Tree planting schemes 	Infrastructure and Other Users	Policy and Legislative Context		Y

<p>NFOWFS3_020_011_140 723</p>	<p>Pipeline Crossings:</p> <ul style="list-style-type: none"> • Where existing roads cannot be used, construction traffic should ONLY cross the pipeline at agreed locations. • The pipeline shall be protected, at the crossing points, by temporary rafts constructed at ground level. <p>The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.</p> <ul style="list-style-type: none"> • The type of raft shall be agreed with Cadent prior to installation. • No protective measures including the installation of concrete slab protection shall be installed over or near to the Cadent pipeline without the prior permission of Cadent. • Cadent will need to agree the material, the dimensions and method of installation of the proposed protective measure. • The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to Cadent. • A Cadent representative shall monitor any works within close proximity to the pipeline. <p>Cadent Gas Limited Registered Office Ashbrook Court, Prologis Park Central Boulevard, Coventry CV7 8PE Registered in England and Wales No.10080864 National Gas Emergency Service 0800 111 999* (24hrs) *Calls will be recorded and may be monitored 5000419 (01/13) Page 3 of 4</p>	<p>Traffic and Transport</p>	<p>Infrastructure and Other Users</p>		<p>Y</p>
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<p>NFOWFS3_020_012_140 723</p>	<p>New Service Crossing:</p> <ul style="list-style-type: none"> • New services may cross the pipeline at perpendicular angle to the pipeline i.e. 90 degrees. • Where a new service is to cross over the pipeline a clearance distance of 0.6 metres between the crown of the pipeline and underside of the service should be maintained. If this cannot be achieved the service shall cross below the pipeline with a clearance distance of 0.6 metres. • A new service should not be laid parallel within an easement strip • A Cadent representative shall approve and supervise any new service crossing of a pipeline. • An exposed pipeline should be suitable supported and removed prior to backfilling • An exposed pipeline should be protected by matting and suitable timber cladding • For pipe construction involving deep excavation (<1.5m) in the vicinity of grey iron mains, the model consultative procedure will apply therefore an integrity assessment must be conducted to confirm if diversion is required 	<p>Infrastructure and Other Users</p>			<p>Y</p>
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<p>NFOWFS3_021_001_140 723</p>	<p>Good Morning,</p> <p>Please find attached Suffolk County Council's response to the statutory consultation.</p> <p>Regards, Andy</p> <p>Andy Rutter Development Manager Suffolk County Council (he/him)</p> <p>1. Introduction 3</p> <p>2. National Policy 4</p> <p>3. SCC Energy Infrastructure Policy 4</p> <p>4. Coordinated Offshore Centred Approach 5</p> <p>5. Landscape, Seascape and the AONB 6</p> <p>6. Community Benefit and Project Legacy..... 6</p> <p>7. Socio-Economics and Skills 6</p> <p>8. Tourism 7</p> <p>9. Traffic and Transport 8</p> <p>10. Cumulative Impacts 8</p> <p>11. Consultation undertaken by the promotor 9</p>	<p>Introduction</p>		<p>National Grid has provided the Applicant with a grid connection location for North Falls in the vicinity of Ardleigh, Essex. However, the Applicant is committed to working with DESNZ to explore grid connection options and as such, the Applicant has co-operated with the Offshore Transmission Network Review (OTNR) process. In addition, the Applicant has applied to the OCSS in consortium with NGET and Five Estuaries for an offshore connection to Sea Link, a marine cable between Suffolk and Kent proposed by NGET as part of their Great Grid Upgrade. The scheme is expected to run until March 2025, at which point a decision will then be made on the viability of the alternative connection option proposed. Therefore, radial transmission to an onshore connection location must be included in the North Falls DCO application.</p> <p>An offshore connection is considered, however an onshore connection must also be included in the DCO application to align with the Project's connection location which has been provided by the National Grid.</p> <p>Refinement of the North Falls array area in response to PEIR feedback, has led to the removal of the northern array area and therefore significantly reduced the impacts on the Suffolk coast and its Areas of Outstanding Natural Beauty (discussed further in Chapter 29 Seascape, Landscape and Visual Impact Assessment (Volume I) (document reference 3.1.34) of the ES.</p> <p>Impacts on socio-economics, tourism and traffic are discussed in ES Chapters 31 (document reference 3.1.33), 32 (3.1.34) and 27 (Volume I) (document reference 3.1.29), respectively.</p> <p>Cumulative effects are assessed in each technical chapter of the ES (Chapters 8 to 33, Volume I).</p> <p>Consultation with communities is described in the Consultation Report (document reference 4.1).</p>	<p>N</p>
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	<p>Maps 10 Suffolk County Council Page 3</p> <p>1. Introduction 1.1 These comments of Suffolk County Council (SCC) are in response to the Statutory</p> <p>Consultation stage including the 'Preliminary Environmental Information Report' (the PEIR) by North Falls Offshore Wind Farm team dated May 2023.</p> <p>1.2 The scheme consists of a proposed extension to the existing Greater Gabbard offshore windfarm, located within the southern North Sea.</p> <p>1.3 The project has the potential for up to 72 turbines across two separate seabed areas with a maximum tip height of 397 metres above mean high water springs.</p> <p>1.4 The SCC electoral divisions indirectly affected include the following:</p> <ul style="list-style-type: none"> •• Felixstowe Coastal. •• Felixstowe North and Trimley. •• Wilford. •• Aldeburgh and Leiston. •• Blything. •• Kessingland and Southwold. •• Lowestoft South. •• Gunton. •• Pakefield. <p>1.5 This representation raises the following substantive issues in detail below:</p> <ul style="list-style-type: none"> • a) The Council's preference for a coordinated offshore centred approach. • b) The need for seascape and landscape impacts and mitigation in respect of the Suffolk coast and its Areas of Outstanding Natural Beauty. 				
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	<ul style="list-style-type: none">• c) The need for the promotor to consider community benefit and project legacy.• d) Socio-economic impacts of the scheme and seeking further commitments to support local skills training measures.• e) Impacts on tourism.• f) The need to assess traffic and transport impacts, including upon Suffolk's transport system.• g) A full assessment of cumulative impacts with other schemes.• h) The level of consultation with communities in Suffolk by the promotor. <p>Suffolk County Council Page 4</p>				
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<p>NFOWFS3_021_002_140 723</p>	<p>2. National Policy 2.1 The County Council acknowledges the need to increase renewable energy generation, the increasing demand for new additional generation and the UK Governments legal obligation to achieve Net Zero Emissions by 2050, as supported by research and publications by the Committee for Climate Change. 2.2 National Policy Statement (EN-1) is the overarching national policy statement for energy and was published in July 2011. This sets This sets out the UK Government's commitment to increasing renewable generation capacity and recognises that, in the short to medium term, much of the new capacity is likely to come from onshore and offshore wind. 2.3 National Policy Statement (EN-3) is the UK Government's strategy for renewable energy infrastructure. This statement states that, through the Offshore Energy Strategic Environmental Assessment 2009 (SEA) process, the Government has concluded that there are no overriding environmental considerations to prevent the achievement of the planned 25GW capacity. However, this is subject to mitigation measures being implemented to prevent, reduce and offset significant adverse effects. This figure has now been increased to 50GW by 2030. 2.4 National Policy Statement (EN-5) is the UK Government's strategy for electricity network infrastructure. This policy statement applies to transmission systems and associated infrastructure (e.g. substations) and sets out the general principles</p>	<p>Policy and Legislative Context</p>		<p>Noted.</p>	<p>N</p>
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	<p>that should be applied in the assessment of an application for development consent. The County Council expects the promoter to use this policy statement effectively to influence their site selection for their onshore substation in Essex.</p> <p>2.5 The Government consulted on changes to the suite of Energy National Policy Statements in 2021 (including revised versions on EN-1, EN-3 and EN-5) and between 30 March and 25 May 2023. The revised versions of this policy guidance may be published later this year, before any NSIP application has been submitted. If so, the new guidance will need to be considered during the examination process. However, for the time being, the existing policy framework remains in place.</p>				
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<p>NFOWFS3_021_003_140 723</p>	<p>3. SCC Energy Infrastructure Policy 3.1 The County Council has declared a climate emergency and is therefore predisposed to supporting projects that are necessary to deliver Net-Zero Carbon for the UK. 3.2 The County Council updated its energy infrastructure policy on 16 May 2023, setting out its overall stance on projects required to deliver Net-Zero Carbon for the UK. However, projects will not be supported unless the harms of the project alone, as well as cumulatively and in combination with other projects, are adequately recognised, assessed, appropriately mitigated, and, if necessary, compensated for.</p> <p>Suffolk County Council Page 5</p> <p>3.3 The policy also sets out how, in principle, the County Council will engage and influence other parties to ensure adverse impacts to our communities are understood and addressed by future decisions. 3.4 The County Council expects to have comprehensive and effective engagement with developers and their supply chain partners to maximise the local business opportunity, skills inspiration, and employment benefits. Where appropriate, the County Council and developers should promote synergies between projects that enhance these benefits, deliver growth, and attract inward investment. 3.5 The County Council will expect projects to deliver appropriate community benefit schemes in addition to the necessary compensation and mitigation,</p>	<p>Need for the Project</p>	<p>Technical Consultation</p>	<p>Noted.</p>	<p>N</p>
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	<p>including schemes that support the decarbonisation of heat and transport, reduce energy poverty, and improve the climate adaptive resilience of both the natural environment and communities.</p>				
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<p>NFOWFS3_021_004_140 723</p>	<p>4. Coordinated Offshore Centred Approach 4.1 The County Council has a clear preference for a coordinated approach between the different proposed offshore windfarm extension projects and multi-purpose interconnector projects within the vicinity of this project. 4.2 The County Council does note that the promotor has identified this project, jointly with the promoters of Five Estuaries, Nautilus and Eurolink, as being within the Early Opportunities workstream of the Offshore Transmission Network Review, and that there are ongoing discussions between these parties and National Grid Electricity Transmission (NGET), under the auspices of the Department for Energy Security and Net Zero. 4.3 The County Council considers that the developers of these projects, and East Anglia Green, have not presented a comprehensive and conclusive set of evidence that the transmission objectives of these project cannot be met by combining these offshore wind farms into the multi-purpose interconnectors, to reduce the impact of onshore infrastructure on the terrestrial environment in Essex or Suffolk. If such an offshore solution which could be delivered, in a timely manner, without risking wider Net Zero renewable generation and decarbonisation targets, it would be welcomed by the County Council. 4.4 The County Council has separately made objections to NGET's East Anglia Green project on this basis that it does not</p>	<p>Site Selection and Assessment of Alternatives</p>		<p>Noted.</p>	<p>N</p>
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	<p>adequacy demonstrate why greater offshore co-ordination would not be feasible to avoid or significantly reduce the need for that project. As noted above, this proposal is reliant upon the Lawford substation, which is part of the East Anglia Green project, for its own connection to the National Grid network. Whilst onshore development to deliver that connection falls in Essex rather than in Suffolk, the socio-economic and highway impacts of that inshore development are more widely spread and will also affect the local road network and communities and businesses in Suffolk. To that extent, the County Council also has concerns about this project's reliance on an onshore connection and on a component part of the East Anglia Green project.</p>				
NFOWFS3_021_005_140 723	<p>Suffolk County Council Page 6</p> <p>5. Landscape, Seascape and the AONB</p> <p>5.1 Given the need for accurate assessment of direct and cumulative impacts, the County Council's view is that the preliminary position of the promoter has not adequately addressed the potential harm on the Suffolk Coast & Heaths Area of Outstanding Natural Beauty. 5.2 The County Council, jointly with East Suffolk Council and the Suffolk Coast and Heaths Area of Outstanding Natural Beauty Partnership, commissioned White Associates to provide an update to the Seascape Sensitivity Study originally commissioned in 2020. The original sensitivity study does</p>	<p>Seascape, Landscape and Visual Assessment (SLVIA)</p>		<p>This is addressed in Chapter 29 SLVIA (Volume I) (document reference 3.1.31) and Chapter 30 LVIA (Volume I) (document reference 3.1.32) of the ES.</p>	N

	<p>not take into account the parameters (larger turbines etc.) of the North Falls project (see Map 1 appended).</p> <p>5.3 The County Council will provide the developer with a copy of this addendum as soon as work is completed. However, early indications show that the conclusions of the report will be different to that of the opinion provided by the developer.</p> <p>5.4 Taking this into account, it appears that the north-eastern most portion of the project will have significant impacts on the Suffolk Coast and Heaths AONB. These impacts could be eliminated by this small part of the project being removed.</p> <p>5.5 The removal of this part would only lead to a reduction in seven turbines.</p>				
NFOWFS3_021_006_140 723	<p>6. Community Benefit and Project Legacy</p> <p>6.1 Community benefits should be in addition to the required secondary mitigation for the development, including those based on any emerging requirement in the Government's recent consultation on Community Benefits, which the County Council has responded to. 6.2 The County Council encourages the promoter to consider such community benefit options and would be happy to discuss how community benefits suitable for the locality could be incorporated. Given the visual impacts on the Suffolk coast, community benefit must be considered for those affected communities.</p>	Socio-economics	Seascape, Landscape and Visual Assessment (SLVIA)	The Applicant has on previous schemes supported the communities in which it operates and has committed to work with communities to develop its approach to supporting the local area. At this stage, the details of any community benefit package associated with the Project have not been finalised. The Applicant will engage with local people and groups prior to construction commencing to help shape how the Project can best support the community.	N
NFOWFS3_021_007_140 723	<p>7. Socio-Economics and Skills</p> <p>7.1 Whilst the onshore construction of the project is proposed to be located in Essex, the County Council expects that</p>	Socio-economics		An OSEP (document reference 7.18) has been developed as part of the DCO process. This included engagement with Suffolk County Council. The OSEP is focused on Tendring, the wider Essex and Suffolk.	N

	there will be an impact on the workforce in Suffolk, therefore a coordinated approach on skills is required.				
NFOWFS3_021_008_140 723	7.2 Local partners, including the County Council and the New Anglia Local Enterprise Partnership, share a high-level ambition to ensure energy infrastructure development actively supports a sustainable regional and subregional supply chain, with direct benefits of increased employment, education and training opportunities for residents.	Socio-economics		The Applicant supports these ambitions. The OSEP (document reference 7.18) seeks to maximise the benefits of increased employment, education and training opportunities for residents. Following consent, the Supply Chain Plan (required under the CfD) will consider the potential actions to maximise employment and supply chain benefits.	N
NFOWFS3_021_009_140 723	7.3 Suffolk and its neighbouring counties have a natural geographical advantage, which means that they will play a huge part in achieving the target to reach net zero. Therefore, the cumulative opportunity and negative impacts (such as adverse impacts in the visitor economy, churn, and negative displacement in local employment) of this development must be at the forefront of the promoters thinking, as further details of the project are finalised.	Socio-economics		The Applicant anticipates that there will be no significant effects on socio-economics and there is therefore no need for any additional mitigation to be proposed. The effect of the visitor economy is assessed in Chapter 32 Tourism and Recreation (document reference 3.1.34) of the ES.	N
NFOWFS3_021_010_140 723	7.4 The County Council expects the promoters to deliver a package of training, skills and growth opportunities that engages with local suppliers, contractors, and the whole supply chain strategically across all local and regional projects.	Socio-economics		The OSEP (document reference 7.18) includes consideration of education and training opportunities. The Applicant is committed to continue to work with local stakeholders to maximise local skills and employment benefits of the Project.	N
NFOWFS3_021_011_140 723	7.5 It is anticipated that this project has the potential to be in construction (subject to consent being granted) at the same time as Sizewell C Nuclear Power Station and the Scottish Power Renewables Hub are reaching the peak of their construction employment. Therefore, the	Socio-economics		The cumulative effects assessment within Section 31.8 of ES Chapter 31 Socio-economics (Document Reference: 3.1.33) of the ES considers the effects of a range of cumulative projects including Sizewell C Nuclear Power Station and the Scottish Power Renewables Hub. As part of the assessment close attention has been paid to the scale and timing of workforce requirements, the	N

	promotor could be in a position in which they may find it difficult to secure any home-based labour as these projects will be already well established.			origins of the workforce and accommodation requirements.	
NFOWFS3_021_012_140 723	7.6 The County Council expects this to be taken into account when developing a workforce profile, including origins, and the promoter will require strong evidence to accompany their assumptions.	Socio-economics			
NFOWFS3_021_013_140 723	7.7 The County Council welcomes the proposal for a dedicated outline skills and employment plan as part of the promoter's development consent order application and will require this plan to take a strategic approach to enhance the impact of ongoing activities within the County and the maximise the benefits of the plan.	Socio-economics		A strategic approach has been taken for the production of the OSEP (document reference 7.18) which looks to build on existing interventions activities in the region. North Falls and Five Estuaries have worked and will continue to work together closely to ensure a co-ordinated approach will be taken to skills and employment planning.	N
NFOWFS3_021_014_140 723	7.8 The promoter has assumed that non-local workers will be unlikely to bring additional family members to the local area, the County Council would welcome further clarification of the basis of this assumption.	Socio-economics		Chapter 31 (Socio-Economics) provides additional clarity on the source of the assumption that non-local workers will not bring their families to the study area.	N
NFOWFS3_021_015_140 723	8. Tourism 8.1 Whilst onshore works are proposed to be located in Essex, there is still the potential for onshore works to impact Suffolk. The visual impacts of the offshore elements are reflected through a permanent impact upon tourism on the visitor economy within Suffolk.	Tourism and Recreation		The potential for onshore works to impact on Suffolk are assessed in Section 32.6 of Chapter 32 of the ES (Tourism and Recreation). This includes an assessment of impacts on accommodation in Suffolk.	N
NFOWFS3_021_016_140 723	8.2 The County Council believes that it is vital that projects fully and appropriately consider the character, function and sensitivity of the natural and historic environment and landscape of	Tourism and Recreation	Landscape and Visual Impact Assessment (LVIA)	The existing environment, as described in Section 32.5 of ES Chapter 32 (Tourism and Recreation), sets out the natural and historic environment and landscape within Suffolk and its importance of this to the tourism sector. It also provides data on the value and volume of tourism. This is considered	N

	Suffolk and its importance to a thriving tourism sector.			within the assessment in Section 32.6 of Chapter 32 and the assessment of wider economic effects detailed in Chapter 31 Socio-economics of the ES.	
NFOWFS3_021_017_140 723	8.3 Suffolk offers a rich and varied tourist offer known for its heritage assets and landscape designations, such as, the Suffolk Coast and Heath AONB and Heritage Coast. The County Council expects the applicant to fully assess and evidence direct and indirect impacts on designations. This includes the extent to which the physical infrastructure would detract from the environmental quality for recreation and quantifying the impact of construction on tourism assets and visitor numbers. More broadly, it is also imperative that the project considers its part in the cumulative impact on the perception and propensity of people to visit the area.	Tourism and Recreation	Landscape and Visual Impact Assessment (LVIA)	Section 32.6 of Chapter 32 (Tourism and Recreation) assesses impacts on tourism on the basis of the available literature, the nature of the local visitor offer and the characteristics of visitors and the experiences from other offshore wind projects. It should be noted that the project has been refined since the PEIR submission. Section 32.3.2 of Chapter 32 notes how the project design has changed. Importantly this substantially reduces the visual impact and therefore potential for impact on tourism along the Suffolk Coast.	Y
NFOWFS3_021_018_140 723	8.4 Of particular concern are the implications for the Suffolk coast as a visitor destination, and the consequences for the local tourism economy. The impacts on the landscape of the Suffolk Coast and Heaths AONB and the related seascape by reason of the potential height of the offshore elements are already discussed in the Seascape and Landscape section. These impacts have the potential to affect the attractiveness of the area to visitors as well as for local communities.	Tourism and Recreation	Landscape and Visual Impact Assessment (LVIA)	Section 32.6 of Chapter 32 (Tourism and Recreation) assesses impacts on tourism on the basis of the available literature, the nature of the local visitor offer and the characteristics of visitors and the experiences from other offshore wind projects. It should be noted that the project has been refined since the PEIR submission. Section 32.3.2 of Chapter 32 notes how the project design has changed. Importantly this substantially reduces the visual impact and therefore potential for impact on tourism along the Suffolk Coast.	Y

<p>NFOWFS3_021_019_140 723</p>	<p>8.5 The County Council is also seeking to ensure that addressing the accommodation needs of construction workers and other non-home-based workers is not detrimental but beneficial to the visitor economy. This could be achieved by aiming for the project related accommodation needs to be complementing the main tourist season (and Autumn/Winter weekend breaks) rather than causing disruption. For example, depending on the timing of the construction work, it could be possible for accommodation to be used in the shoulder months.</p>	<p>Tourism and Recreation</p>		<p>Section 32.6 of Chapter 32 (Tourism and Recreation) considers the reduction in tourist accommodation availability.</p>	<p>N</p>
<p>NFOWFS3_021_020_140 723</p>	<p>9. Traffic and Transport 9.1 The County Council expects traffic and transport impacts to be fully assessed and mitigated, for Suffolk especially in regard to any potential construction traffic impacts on Suffolk's rural road network and the limited options for suitable HGV and Abnormal Intervisible Loads (AIL) routes once the East Anglia Green route alignment has been chosen. 9.2 The County Council will need to be satisfied that there will be no disruption or delays cause by the project on the A12 or wider strategic right network which may then have an impact on businesses in Suffolk.</p>	<p>Traffic and Transport</p>		<p>Section 27.3.1 of Chapter 27 Traffic and Transport (Volume 1) (document reference 3.1.29) of the ES details the extents of the TTSA as agreed with the relevant highway authorities. It can be noted that no links extend into the administration area of Suffolk County Council. Section 27.3.1 of this chapter further outlines that routes that extend outside of the TTSA are where construction traffic has dissipated and therefore, significant effects upon users of the highway network are unlikely.</p>	<p>N</p>

NFOWFS3_021_021_140 723	9.3 There should be an Outline Port Construction Management Plan provided to manage traffic impacts that arise at any port as a result of the offshore elements of the proposal.	Traffic and Transport		<p>The preferred base port (or ports) for the offshore construction, operation and decommissioning of the Project is not known and any decision would not be expected until post-consent. Such facilities would be existing or would be provided or brought into operation by means of one or more planning applications or as port operations with permitted development rights. It has therefore been agreed with National Highways (at a meeting on the 7 June 2022) and Essex County Council (at a meeting on the 9 July 2021) to scope out of the assessment the onshore impacts of traffic and transport associated with offshore construction, operation and decommissioning activities.</p> <p>This approach has also been accepted by the Planning Inspectorate for other recently consented offshore wind farm projects, e.g. Norfolk Vanguard and Boreas, East Anglia Two, East Anglia One North and Hornsea Four.</p> <p>For further information, see Chapter 27 (Traffic and Transport).</p>	N
NFOWFS3_021_022_140 723	9.4 Decommissioning and removal routes also need careful consideration.	Traffic and Transport		Section 27.6.3 of Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES includes details of the decommissioning assessment.	N

<p>NFOWFS3_021_023_140 723</p>	<p>10. Cumulative Impacts 10.1 Given the number (approximately five NSIPs reaching statutory consultation stage in 2023/24, with many more at different stages of the process) of Nationally Significant Infrastructure Projects and other developments proposed in the area, the need for a full assessment of environmental and socio-economic impacts of the cumulative effects of the project in conjunction with the other projects is particularly important. 10.2 There is a lack of reference to the potential impact on businesses and supply chains of other construction projects in the local area and region due to additional workforce displacement and churn resulting from the project. 10.3 The County Council welcomes the commitment from the promoter to undertake an assessment of whether it is considered likely that the cumulative effect indicates a loss of benefit as a result of cumulative projects, or an enhancement of opportunity which would help to develop expertise and capacity in the market.</p> <p>Suffolk County Council Page 9</p> <p>10.4 The above assessment should include a consideration of other infrastructure projects not just similar offshore wind farm projects and identify how any mismatch between supply and demand can be addressed. This cumulative effect assessment would also need to be considered in determining the feasibility and consequential impact of securing a</p>	<p>Socio-economics</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Noted. A cumulative assessment of workforce supply/demand has been conducted, and is described in 31.8 of ES Chapter 31 Socio-economics.</p>	<p>N</p>
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	<p>greater contingent of local work force and if the number of workers needed from beyond the boundaries of the workforce supply chain area (both positive and negative, including a consideration of displacement and high levels of labour churn in the wider economy).</p> <p>10.5 The construction period for this project is predicted to occur during the middle of the construction period for Sizewell C Nuclear Power Station. It is anticipated that there would be significant cumulative pressure on the available workforce. This could reduce the opportunities to securing any skills and employment legacy from the construction workforces as the projects could be occurring in parallel.</p> <p>10.6 The County Council expects the promotor to develop a demonstrable understanding of the wider development environment for their project, and to work with the County Council and other promoters to manage and mitigate these impacts.</p>				
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<p>NFOWFS3_021_024_140 723</p>	<p>11. Consultation undertaken by the promotor 11.1 The County Council will be consulted on the adequacy of the promoters consultation by the examining authority once the application for development consent has been submitted. 11.2 The closest offshore elements are located off the coast of Suffolk; therefore it is expected that the promoter engages effectively with communities and stakeholders within Suffolk. 11.3 The developer has not undertaken in person consultation events in Suffolk, even though its sister project (Five Estuaries), which is approximately double the distance offshore (approx. 40km) conducted these in various locations along the Suffolk coast from Felixstowe to Lowestoft. 11.4 When the examination authority consults the County Council on the adequacy of consultation, the County Council will have to assess whether the promoter has undertaken the correct level of consultations, including with rural coastal communities and other hard to reach groups within Suffolk.</p> <p>Maps Map 1: An Extract from Suffolk Seascape Sensitivity to Offshore Windfarms - October 2020 - White Associates - for SCC & the SCHAONB Partnership1 1 https://www.suffolkcoastandheaths.org/wp-content/uploads/2020/10/Suffolk-seascape-sensitivity-to-wind-farms-final-061020-003.pdf</p>	<p>Technical Consultation</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_022_001_140 723</p>	<p>Ardleigh Parish Council response to North Falls Off-shore Windfarm consultation on July 2023 Our Parish Council has previously responded to consultation by North Falls (in December 2021) having met with a team from North Falls in November 2021. This was before the proposals for the National Grid pylons and substation project (East Anglia GREEN AKA Norwich to Tilbury) were known. The National Grid Proposals would (if implemented) have a profound impact on our Parish and the surrounding areas. We responded to National Grid (June 2022) and to the Five Estuaries consultations (August 2022 and May 2023). Those earlier comments still stand - copies of other responses can be forwarded on request and are published on our website https://ardleigh.website/pylons-and-substations. We would ask that these responses are taken in to account for the current consultation.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_022_002_140 723</p>	<p>We note the broad opposition to the highly contentious National Grid proposals from many other quarters, including Essex County Council and Tendring District Council and by many thousands of local people and representative bodies across the three counties with over 23,000 people having signed a petition, calling for an offshore grid. Our own MP, Sir Bernard Jenkin, has played a pivotal role as part of the OFFSET group of MP's in galvanising opposition to the current National Grid plans. This project is many years from planning permission, if it succeeds at all. We have seen and endorse the comments on</p>	<p>Need for the Project</p>		<p>Noted.</p>	<p>N</p>

	your current consultation by our neighbours Little Bromley Parish Council.				
NFOWFS3_022_003_140 723	When we met you in November 2021 and as referred to in our initial response, we were given to understand that 'it would be technically possible for some infrastructure to be shared between providers, but that there were commercial and (perhaps) legal/ competition constraints which mean that multiple sites and cabling would be needed. Further, that some of the cabling and infrastructure could be placed offshore, but that this would be more costly and time consuming (and perhaps less commercially viable).'	Policy and Legislative Context	Site Selection and Assessment of Alternatives	Noted.	N
NFOWFS3_022_004_140 723	We were pleased to see an option for an off shore link in your latest consultation. We would strongly support your Option 3 for the project's National Grid connection point, an Offshore electrical connection supplied by a third party electricity distribution network provider. We are also pleased to see some evidence of attempts at collaboration and of direct engagement with our Parish Council and with our residents, including holding consultation events in our Parish (something that National Grid have conspicuously failed to do). We urge you to continue to do so and to work with other providers to seek an integrated off shore solution, lobbying to remove artificial constraints which force pylons on to communities when	Site Selection and Assessment of Alternatives	Technical Consultation	The Applicant co-operated with the Department of Energy Security and Net Zero (DESNZ) to explore grid connection options, as part of the Offshore Transmission Network Review (OTNR). In addition, NFOW has applied to the OCSS in consortium with National Grid Electricity Transmission (NGET) VE OWFL for an offshore connection to Sea Link, a marine cable between Suffolk and Kent proposed by NGET as part of their Great Grid Upgrade. The Applicant continues to engage with Government, Office of Gas and Electricity Markets (Ofgem) and other developers to explore the potential options.	N

	<p>other options would be technically feasible and even less costly (particularly when the human and societal costs are considered). Should these developments be forced upon our communities, any mitigation would need to address the impact on those communities as directly as possible. We are far from this stage, but would welcome public commitments to such legacy investment as early as possible and continued engagement with local stakeholders at every stage.</p>				
NFOWFS3_022_005_140 723	<p>As previously stated, 'In principle, the Parish Council supports the generation of green energy and is not opposed to the development of off-shore wind farms.' However, we object in the strongest terms to any unnecessary connection onshore in Tendring. This would result in tunnelling beneath the shoreline, trenching to place underground cables through Tendring, and a sub-station near to or within Ardleigh (with further sub-stations needed for National Grid and for other providers). This damaging onshore connection is unnecessary because both North Falls (plus at least two other offshore projects which we know of, ie Tarchon and Five Estuaries) could, and should, connect offshore. National Grid ESO has already carried out advanced scenario testing of offshore coordination options.</p>	Need for the Project	Site Selection and Assessment of Alternatives	Noted.	N
NFOWFS3_022_006_140 723	<p>We now know that the National Grid connection point would be in Ardleigh. We understand that National Grid has offered this connection point to you, and has not offered any alternatives, but we urge you to do the right thing for the environment and communities and to reject National</p>	Site Selection and Assessment of Alternatives	Infrastructure and Other Users	Noted.	N

	<p>Grid's unacceptable offer and work with others to deliver an off shore connection. You will be aware that the connection offered is deeply damaging and disruptive, being in the centre of a proposed 180km pylon route, and adjacent to the AONB where the pylons create a ring of steel around Ardleigh (both underground and overground). Overall we believe that Ardleigh would be uniquely and profoundly affected and would be at the epicentre of a number of infrastructure projects all of which would harm our Parish.</p>				
NFOWFS3_022_007_140 723	<p>Our residents care deeply about their environment and the rural characteristics around our Parish. This was emphasised during consultation for our Neighbourhood Plan- which has been endorsed by Tendring District and now reached Regulation 17 stage. 'It is the overwhelming view of the people who live and work in the Parish of Ardleigh that it should above all else retain its rural characteristics, including the visual quality of its buildings, open spaces, trees, hedges, footpaths and bridleways... There is also a strong sense of community in Ardleigh which should be protected and nurtured throughout all parts of the Parish, including its outlying hamlets...' (para 6.29-6.30 Ardleigh Neighbourhood Plan). More details of the emerging Plan are on the Tendring DC site https://www.tendringdc.uk/sub-content-pages/ardleigh-neighbourhood-plan or our own site https://ardleigh.website/our-plan. We consider the proposals by North Falls (unless an off shore connection is agreed) and the</p>	Landscape and Visual Impact Assessment (LVIA)		Noted.	N

	<p>associated proposals from National Grid to threaten the very things which our residents tell us they value about where they live. We are therefore bound to oppose them.</p>				
<p>NFOWFS3_022_008_140 723</p>	<p>We endorse the concerns raised by our neighbours in Little Bromley around wildlife and environmental impact. 'The countryside in the affect area has a rich and varied wildlife populaion as idenifed by wildlife surveys. This includes many species of waterbirds and non-waterbirds. We are very close to the Stour Estuary SSI and Ramsar site, and surveys indicate bird species present which are related to those sites. Badgers, hares, foxes, deer, bats and other mammals can be found in the parish. Grass snakes are regular seen in the summer. These all thrive as we have woodland, extensive hedgerows and arable margins some of which will be affected by your planned development. The migratory bird route across East Anglia, the East Atlanic Flyway, has gained Government backing to bid to become a UNESCO World Heritage Site. Major developments such as planned by Five Estuaries, North Falls, National Grid and Tarchon, will have serious impact. Potenial exists for protected or notable species to be impacted by construcion acivies either physically via permanent or temporary habitat loss or by inadvertent injury or killing or from disturbance via light, noise and human presence. There is</p>	<p>Onshore Ecology</p>	<p>Onshore Ornithology</p>	<p>Impacts on named species, mitigation, and how losses are being minimised and avoided are addressed in this ES, namely in Section 23.6 of Chapter 23, Onshore Ecology.</p> <p>Main migratory locations are designated sites and are fully assessed in the HRA and in Chapter 24 Onshore Ornithology (Volume I) (document reference 3.1.26) of the ES.</p> <p>Mitigation measures are also addressed in the OLEMS (document reference 7.14) and Schedule of Mitigation (document reference 2.6).</p>	<p>N</p>

	<p>potential for permanent habitat fragmentation and species isolation as a result of four substation construction and also from construction of the cable route. The substation construction together with the additional temporary construction compound areas and the cable route during construction will bring a permanent loss of habitat.'</p>				
NFOWFS3_022_009_140 723	<p>There are particular concerns about the impact on the road and lane network in the areas around the new sub-stations and of safety for all users but especially those on foot/ cycling or on horseback along the very narrow lanes, especially but not limited to lanes around the Burnt Heath area of Ardleigh which borders Little Bromley and Great Bromley. Such concerns would be exacerbated if several substations were contiguous or closely located. If the existing lanes are used by construction traffic we struggle to see how mitigation could prevent a very significant and negative impact on local residents particularly those who use the lanes for leisure and could well be prevented from doing so if sharing with HGVs. In other words we fear a loss of village amenity. The North Falls development and associated facilities such as haul roads, temporary construction compounds and haul road access points will be highly disruptive to day-to-day community life. Quiet country roads and Public Rights of Way will be affected impacting residents, walkers,</p>	Traffic and Transport		<p>Section 27.6.1 of Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES presents an assessment of the effects of the Project on of severance, amenity, highway safety and driver delay. With the application of additional mitigation measures (as appropriate) the residual effects upon all receptors was assessed to be not significant in EIA terms, as shown in Table 27-42 of this chapter.</p>	N

	cyclists and horse riders. There are many farms which need access to their properties and fields at all times of year, and especially during harvest.				
NFOWFS3_022_010_140 723	In addition we would emphasise local concerns around <ul style="list-style-type: none"> • Agricultural Land. loss and damage to significant areas of high grade agricultural land- at a time when food security is of increased concern 	Land Use and Agriculture		Impacts on land use and agriculture as assessed in Chapter 22 of the ES (Land Use and Agriculture).	N
NFOWFS3_022_011_140 723	<ul style="list-style-type: none"> • Landscape and Visual impact. The topography around Ardleigh means there are vast open vistas across productive farmland which could be disfigured forever by proposed pylons and substations 	Landscape and Visual Impact Assessment (LVIA)		Noted. More information on the potential visual impacts of the Project can be found in Chapter 30 of the ES (Landscape and Visual Impact Assessment).	N
NFOWFS3_022_012_140 723	<ul style="list-style-type: none"> • Operational and Construction Noise and Light Pollution. 	Noise and Vibration		Construction noise and traffic noise impacts have been assessed, as reported in Section 26.6.1 of Chapter 26 (Noise Vibration). Operational noise impacts have been assessed, as reported in Section 26.6.2 of Chapter 26. Cumulative impacts have also been assessed, as reported in Section 26.8 of Chapter 26. Residual noise and vibration effects on residents are considered to be not significant.	N
NFOWFS3_022_013_140 723	<ul style="list-style-type: none"> • Construction Traffic and Impact 	Traffic and Transport		Noted.	N

<p>NFOWFS3_022_014_140 723</p>	<ul style="list-style-type: none"> • Business Impact - With road diversions and closures and large parts of the countryside under development businesses could be seriously affected. <p>We urge you to work with Government and others to connect offshore thus avoiding all of the above negative impacts on the Tendring peninsular in general and Ardeigh in particular.</p>	<p>Socio-economics</p>		<p>Chapter 27 Traffic and Transport (document reference 3.1.29) of the ES assesses the impact of road diversions and closures on road users. The assessment includes a detailed of mitigation being put in place to ensure communities, businesses and other local stakeholders fully understand the scale of change and the embedded mitigations and how they are secured and enforced.</p>	<p>N</p>
<p>NFOWFS3_023_001_130 723</p>	<p>Good afternoon Tom,</p> <p>Many thanks for your e-mail below.</p> <p>I can confirm that Trinity House has the following comments/requests to make at this stage:</p> <ul style="list-style-type: none"> • Trinity House considers two areas within the red line boundary to be undevelopable. These areas are highlighted as red hatched areas in the attached chartlet. These areas would significantly compromise the safety of vessels using these internationally recognised shipping routes and are therefore deemed unacceptable. 	<p>Shipping and Navigation</p>		<p>The array area has been refined in response to the PEIR feedback. The northern array has been removed and the southern array area reduced in size. Further details on the consultation with shipping stakeholders and responses to stakeholder comments are provided in Chapter 15 Shipping and Navigation (Volume I) (document reference 3.1.17) of the ES.</p> <p>The areas of concern have since been removed during the refinement of the array area post PEIR as per Section 15.3.2 of Chapter 15.</p> <p>Distances from the structures to the local routeing measures is assessed and considered in Section 15.6 of Chapter 15.</p>	<p>Y</p>

<p>NFOWFS3_023_002_130 723</p>	<ul style="list-style-type: none"> • We would welcome your earliest possible consultation regarding proposed turbine layouts, as well as the locations of any other infrastructure, as this matter may well require significant work to reach agreement. 	<p>Technical Consultation</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Consultation with shipping stakeholders, including Trinity House has been undertaken throughout the pre-application stage. A hazard workshop was held in October 2023. Further information can be found in the Consultation Report (document reference 4.1).</p> <p>The worst case layout for shipping and navigation has been used throughout the Navigational Risk Assessment (Appendix 15.1, Volume III, document reference 3.3.16) and this Chapter. The final layout will be agreed with MCA and Trinity House post consent as per Section 15.3.4 of Chapter 15 (Shipping and Navigation).</p>	<p>N</p>
<p>NFOWFS3_023_003_130 723</p>	<ul style="list-style-type: none"> • I have attached our most recent standard navigation conditions, which we would expect to be provided for within your DCO/DML. 	<p>Shipping and Navigation</p>	<p>Policy and Legislative Context</p>	<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_023_004_130 723</p>	<ul style="list-style-type: none"> • Could you please provide us with the most recent shape files for this project? <p>I hope these comments are helpful and we look forward to working with you throughout this project.</p>	<p>N/A</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_023_005_130 723</p>	<p>Standard navigation conditions for inclusion within Deemed Marine Licences (DML) for offshore renewable energy installations. Agreed by Marine Management Organisation (MMO), Trinity House, Maritime and Coastguard Agency (MCA) and UK Hydrographic Office (UKHO)</p> <p>Notifications and Inspections:</p> <p>1) The undertaker must inform the MMO Coastal Office in writing at least 5 days prior to the commencement of the authorised project or any part thereof, and within 5 days of completion of the authorised project.</p> <p>2) The Kingfisher Information Service of Seafish, must be informed of details of the vessel routes, timings and locations relating to the construction of the authorised project or any part thereof by email to kingfisher@seafish.co.uk :-</p> <p>a) at least 14 days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data, and;</p> <p>b) as soon as reasonably practicable and no later than 24 hours of completion of all offshore activities.</p> <p>Confirmation of notification must be provided to the MMO within 5 days.</p> <p>3) The undertaker must ensure that a local notification to mariners is issued at least 14 days prior to the commencement of the authorised project or any part thereof advising of the start date of each Work No.<insert> and the expected vessel routes from the construction ports to the relevant location.</p> <p>Copies of all notices must be</p>	<p>Policy and Legislative Context</p>	<p>Shipping and Navigation</p>	<p>Noted.</p>	<p>N</p>
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	<p>provided to the MMO, MCA and UKHO within 5 days.</p> <p>4) The undertaker must ensure that local notifications to mariners are updated and reissued at weekly intervals during construction activities and at least 5 days before any planned operations (or otherwise agreed) and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA in accordance with the construction and monitoring programme approved under deemed marine licence condition <insert>.</p> <p>Copies of all notices must be provided to the MMO and UKHO within 5 days.</p> <p>5) The undertaker must notify the UKHO of the completion (within 14 days) of the authorised project or any part thereof in order that all necessary amendments are made to nautical charts.</p> <p>Copies of all notices must be provided to the MMO and MCA within 5 days.</p> <p>6) In case of damage to, or destruction or decay of, the authorised project seaward of MHWS or any part thereof, excluding the exposure of cables, the undertaker shall as soon as reasonably practicable and no later than 24 hours following the undertaker becoming aware of any such damage, destruction or decay, notify MMO, MCA, Trinity House, UKHO, the Kingfisher Information Service of Seafish and regional fisheries contacts.</p> <p>7) In case of buried cables becoming exposed on or above the seabed, the undertaker must within three days following identification of a cable exposure, notify mariners, regional fisheries contacts and the Last updated</p>				
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	<p>18/05/23 Kingfisher Information Service of Seafish of the location and extent of exposure. Copies of all notices must be provided to the MMO, MCA, Trinity House, and the UKHO within 5 days.</p>				
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<p>NFOWFS3_023_006_130 723</p>	<p>Pre-construction plans and documents: The authorised project shall not commence until the following have been submitted to and approved by the MMO. Each programme, statement, plan, protocol, scheme or other detail required to be approved under this condition must be submitted to the MMO for approval at least 6 months prior to the commencement of the authorised project except where otherwise stated.</p> <p>1) A plan to be agreed in writing with the MMO following appropriate consultation with Trinity House, the MCA and UKHO, setting out proposed details of the authorised project, including the:</p> <ul style="list-style-type: none"> a) number, dimensions, specification, foundation type(s) and depth for each WTGs, offshore platforms, substations and meteorological masts; b) the grid coordinates of the centre point of the proposed location for each WTG, platform, substation and meteorological mast; c) proposed layout of all cables; and d) location and specification of all other aspects of the authorised project. <p>2) An Aids to Navigation Management Plan to be agreed in writing by the MMO following appropriate consultation with Trinity House specifying how the undertaker will ensure compliance with conditions (1) to (4) of 'Aids to Navigation' from the commencement of construction of the authorised project to the completion of decommissioning.</p> <p>3) No part of the authorised project may commence until the MMO, in</p>	<p>Policy and Legislative Context</p>	<p>Offshore Archaeology and Cultural Heritage</p>	<p>Noted.</p>	<p>N</p>
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	<p>consultation with the MCA, has confirmed in writing that the undertaker has taken into account and, so far as is applicable to that stage of the project, adequately addressed all MCA recommendations as appropriate to the authorised project contained within MGN654 "Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues" and its annexes.</p> <p>4) A construction method statement in accordance with the construction methods assessed in the environmental statement and including details of –</p> <p>i) Cable specification, installation and monitoring, to include:</p> <p>a) technical specification of offshore cables below MHWS;</p> <p>b) a detailed cable laying plan for the Order limits, incorporating a burial risk assessment encompassing the identification of any cable protection that exceeds 5% of navigable depth referenced to chart datum and, in the event that any area of cable protection exceeding 5% of navigable depth is identified, details of any steps (to be determined following consultation with the MCA and Trinity House) to be taken to ensure existing and future safe navigation is not compromised or such similar assessment to ascertain suitable burial depths and cable laying techniques, including cable protection; and Last updated 18/05/23</p> <p>c) proposals for monitoring offshore cables including cable protection during the operational lifetime of the authorised scheme which includes a risk based approach to the management of</p>				
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	<p>unburied or shallow buried cables. Pre-construction monitoring and surveys</p> <p>5) A swath bathymetric survey to IHO Order 1a of the area within the Offshore Order Limits extending to an appropriate buffer around the site, must be undertaken. The survey shall include all proposed cable routes. This should fulfil the requirements of MGN654 and its supporting 'Hydrographic Guidelines for Offshore Renewable Energy Developers', which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications. This must be submitted as soon as possible, and no later than [three months] prior to construction. The Order Limit shapefiles must be submitted to MCA. The Report of Survey must also be sent to the MMO.</p>				
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<p>NFOWFS3_023_007_130 723</p>	<p>Aids to Navigation: 1) The undertaker shall during the whole period from the commencement of construction of the authorised project to the completion of decommissioning exhibit such lights, marks, sounds, signals and other aids to navigation, and to take such other steps for the prevention of danger to navigation as Trinity House may from time to time direct. 2) The undertaker must during the whole period from the commencement of construction of the authorised project to the completion of decommissioning keep Trinity House and the MMO informed of progress of the authorised project including; a. notice of commencement of construction of the authorised project within 24 hours of commencement having occurred; b. notice within 24 hours of any aids to navigation being established by the undertaker; and c. notice within 5 days of completion of construction of the authorised project. 3) The undertaker must provide reports to Trinity House on the availability of aids to navigation in accordance with the frequencies set out in the aids to navigation management plan agreed pursuant to condition <insert> using the reporting system provided by Trinity House. 4) The undertaker must during the whole period from the commencement of construction of the authorised project to the completion of decommissioning notify Trinity House and the MMO of any failure of the aids to navigation and the timescales and plans for remedying such failures, as soon as possible and no later</p>	<p>Policy and Legislative Context</p>	<p>Shipping and Navigation</p>	<p>Noted.</p>	<p>N</p>
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	than 24 hours following the undertaker becoming aware of any such failure.				
NFOWFS3_023_008_130 723	Colouring of structures: 1) Except as otherwise required by Trinity House the undertaker must paint all structures forming part of the authorised project yellow (colour code RAL 1023) from at least HAT to a height as directed by Trinity House. Unless the MMO otherwise directs, the undertaker must paint the remainder of the structures grey (colour code RAL 7035). Last updated 18/05/23	Policy and Legislative Context	Project Description	Noted.	N

<p>NFOWFS3_023_009_130 723</p>	<p>Construction Monitoring 1) Construction monitoring must include vessel traffic monitoring by automatic identification system for the duration of the construction period. An appropriate report must be submitted to the MMO, Trinity House and the MCA at the end of each year of the construction period. Post-construction plans and documents 1) The undertaker must conduct a swath bathymetric survey to IHO Order 1a of the installed export cable route and provide the data and survey report(s) to the MCA and UKHO. The MMO should be notified once this has been done, with a copy of the Report of Survey also sent to the MMO. 2) On post decommissioning, the undertaker must conduct a swath bathymetric survey to IHO Order 1a of the cable route and the installed generating assets area and provide the data and survey report(s) to the MCA and UKHO. [Decommissioning is not consented at this stage so this can't be included in the DCO/DML] This should fulfil the requirements of MGN654 and its supporting 'Hydrographic Guidelines for Offshore Renewable Energy Developers', which includes the requirement for the full density data and reports to be delivered to the MCA and the UKHO for the update of nautical charts and publications. 3) Post construction monitoring must include vessel traffic monitoring by automatic identification system for a duration of three consecutive years following the completion of construction of authorised project,</p>	<p>Policy and Legislative Context</p>	<p>Project Description</p>	<p>Noted.</p>	<p>N</p>
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	<p>unless otherwise agreed in writing by the MMO. An appropriate report must be submitted to the MMO, Trinity House and the MCA at the end of each year of the three year period.</p>				
NFOWFS3_023_010_130 723	<p>Completion of Construction (1) The undertaker must submit a close out report to the MMO, MCA, UKHO and the relevant statutory nature conservation body within three months of the date of completion of construction. The close out report must confirm the date of completion of construction and must include the following details— (2) the final number of installed wind turbine generators; (3) as built plans; and (4) latitude and longitude coordinates of the centre point of the location for each wind turbine generator and offshore platform, substation, booster station and meteorological mast; provided as Geographical Information System data referenced to WGS84 datum. (5) latitude and longitude coordinates of the inter array and export cable routes; provided as Geographical Information System data referenced to WGS84 datum. Last updated 18/05/23</p>	Policy and Legislative Context	Technical Consultation	Noted.	N

	NOTE: These are standard conditions to be applied to all DMLs, other maybe requested for site specific projects.				
NFOWFS3_024_001_130 723	Dear Sir / Madam Ref: North Falls Offshore Wind Farm Statutory Consultation Planning Act 2008 Section 42 I refer to your letter dated 11th May 2023 regarding the Proposed Development. This is a response on behalf of National Grid Electricity Transmission PLC (NGET). Having reviewed the available information, I would like to make the following comments regarding NGET infrastructure within or in close proximity to the current red line boundary.	Introduction		Noted.	N

<p>NFOWFS3_024_002_130 723</p>	<p>Norwich to Tilbury The Norwich to Tilbury project is required to achieve the UK Government's ambition of achieving net zero emissions by 2050 by upgrading the existing transmission network to allow communities across the country to benefit from this clean energy, the proposed project by National Grid Electricity Transmission (National Grid) is to reinforce the high voltage power network in East Anglia between the existing substations at Norwich Main in Norfolk, Bramford in Suffolk and Tilbury in Essex, as well as connect new offshore wind generation.</p> <p>The project as a whole and as one DCO application would comprise the construction of c.158km new overhead line and c. 25km of underground cabling over a total route of 183km between the existing National Grid Norwich Main and Bramford substations in the North East Anglia (NEA) region, continuing from Bramford down to Tilbury substation in the South East Anglia (SEA) region, via a New East Anglia Connection Node Substation located in the Tendring District, east of Ardleigh. The East Anglia Connection Node (EACN) Substation will be the point of operational interface where the connection between the North Falls Onshore Substation and the National Grid Electricity Transmission System will be established.</p> <p>As such National Grid recognise the importance of early and continued collaboration between National Grid and the North Falls project teams across the aspects of:</p> <ul style="list-style-type: none"> • Engineering 	<p>Technical Consultation</p>	<p>Infrastructure and Other Users</p>	<p>Noted. As the Project's National Grid connection point, the Applicant has engaged with NGET to identify the infrastructure required to interface with the EACN substation in order to connect with the national Grid. This infrastructure is outlined in section 5.7.4.7 of Chapter 5 (Project Description).</p> <p>Further information on the relationship between eh project and National Grid can be found in the Consultation Report (document reference 4.1).</p>	<p>N</p>
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	<ul style="list-style-type: none">• Property & Lands• Consents and Environment• External Affairs <p>National Grid House Warwick Technology Park Gallows Hill, Warwick CV34 6DA</p> <p>National Grid is a trading name for: National Grid Electricity Transmission plc Registered Office: 1-3 Strand, London WC2N 5EH Registered in England and Wales, No 2366977</p> <p>The purpose of such is to ensure all interfaces between the projects are aligned and impacts minimised throughout the project lifecycle stages:</p> <ul style="list-style-type: none">• Design/Development• Construction• Operation & Maintenance.				
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<p>NFOWFS3_024_003_130 723</p>	<p>Furthermore, National Grid shall consider further interfacing projects who plan to connect at the same EACN Substation and work collaboratively. I confirm that NGET has no existing apparatus within or in close proximity to the proposed site boundary. I hope the above information is useful. If you require any further information, please do not hesitate to contact me. In the meantime, we look forward to receipt of further information and consultation relating to potential impacts on our assets. The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity customer services. Yours faithfully ELaycock Ellie Laycock Development Liaison Officer, Complex Land Righ</p>	<p>Infrastructure and Other Users</p>	<p>Site Selection and Assessment of Alternatives</p>		
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<p>NFOWFS3_025_001_140 723</p>	<p>Dear Thomas, North Falls Offshore Array Development Preliminary Environmental Information Report (PEIR) consultation Section 42 Planning Act 2008 Thank you for your letter dated 11 May 2023, to the Marine Management Organisation (the MMO) of North Falls Offshore Wind Farm Limited's (the Applicant) intention to submit an application for development consent under the Planning Act 2008 (the 2008 Act) to build an offshore wind farm (OWF) with a generating capacity exceeding 100 megawatts (MW) located in the southern North Sea, approximately 20 kilometres (km) from the East Anglia coast. Under Section 42 of the 2008 Act the MMO is a statutory consultee and the MMO has provided consultation comments below, to help assist in the production of the ES. The MMO's role in Nationally Significant Infrastructure Projects The MMO was established by the Marine and Coastal Access Act 2009 (the 2009 Act) to make a contribution to sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas. The responsibilities of the MMO include the licensing of construction works, deposits and removals in English inshore and offshore waters and for Welsh and Northern Ireland offshore waters by way of a marine licence¹. Inshore waters include any area which is submerged at mean high water spring (MHWS) tide. They also include the waters of every</p>	<p>Policy and Legislative Context</p>		<p>Noted.</p>	<p>N</p>
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	<p>estuary, river or channel where the tide flows at MHWS tide. Waters in areas which are closed permanently or intermittently</p> <p>1 Under Part 4 of the 2009 Act Page 2 of 21</p> <p>by a lock or other artificial means against the regular action of the tide are included, where seawater flows into or out from the area. In the case of Nationally Significant Infrastructure Projects (NSIPs), the 2008 Act enables Development Consent Order's (DCO) for projects which affect the marine environment to include provisions which deem marine licences².</p> <p>As a prescribed consultee under the 2008 Act, the MMO advises developers during pre-application on those aspects of a project that may have an impact on the marine area or those who use it. In addition to considering the impacts of any construction, deposit or removal within the marine area, this also includes assessing any risks to human health, other legitimate uses of the sea and any potential impacts on the marine environment from terrestrial works. Where a marine licence is deemed within a DCO, the MMO is the delivery body responsible for post-consent monitoring, variation, enforcement and revocation of provisions relating to the marine environment. As such, the MMO has a keen interest in ensuring that provisions drafted in a deemed marine licence (DML) enable the MMO to fulfil these obligations.</p> <p>Further information on licensable activities can be found on the MMO's website³. Further information on the interaction between the Planning Inspectorate and the MMO can be found in our</p>				
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	<p>joint advice note4. 2 Section 149A of the 2008 Act 3 https://www.gov.uk/planning-development/marine-licences 4 https://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/04/Advice-note-11-v2.pdf Page 3 of 21 Contents 1. North Falls Offshore Array Development..... 4 2. Chapter 3 Policy and Legislative Context 5 3. Chapter 8: Marine Geology Oceanography and Physical Processes 5 4. Chapter 9: Marine Water and Sediment Quality 5 5. Chapter 10: Benthic and Intertidal Ecology 6 6. Chapter 11: Fish and Shellfish Ecology - Shellfish 6 7. Chapter 11: Fish and Shellfish Ecology - Fish 7 8. Chapter 12 Marine Mammals 12 9. Appendix 12.2: Underwater Noise Modelling Report 13 10. Appendix 12.3 Underwater Noise Technical Assessment. 16 11. Appendix 12.4 Unexploded Ordnance Clearance Information and Assessment 16</p>				
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	<p>12. Chapter 13 Offshore Ornithology 17</p> <p>13. Chapter 14: Commercial Fisheries 17</p> <p>14. Chapter 15 Shipping and Navigation 18</p> <p>15. Chapter 16 Offshore Archaeology and Cultural Heritage 18</p> <p>16. Chapter 29 Seascape, Landscape and Visual Impact Assessment (SLVIA) 18</p> <p>17. Habitats Regulations Assessment..... 18</p> <p>18. Marine Conservation Zone (MCZ) Assessment..... 19</p> <p>19. Conclusion 19</p> <p>References 21</p> <p>Page 4 of 21</p> <p>1. North Falls Offshore Array Development North Falls Offshore Wind Farm Ltd are proposing to construct an OWF located in the southern North Sea, approximately 20 km from the East Anglia coast at its nearest point. The site is in two parts which covers a total area of 150 square kilometres (km²). North Falls OWF comprises of:</p> <ul style="list-style-type: none"> • Up to 72 offshore wind turbine generators • Up to two offshore substation platforms 				
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	<ul style="list-style-type: none"> • platform interconnector cables • inter-array cables • Options for transmission infrastructure including: <ul style="list-style-type: none"> o Option 1: Onshore electrical connection at a National Grid connection point within Tendring, Essex, with a project alone onshore cable route and onshore substation infrastructure; o Option 2: Onshore electrical connection at a National Grid connection point within Tendring, Essex, sharing all or part of an onshore cable route with separate onshore export cables with another project (such as Five Estuaries) where practicable, or o Option 3: Offshore electrical connection supplied by a third-party electricity network provider. Such a connection will potentially be identified through the Offshore Transmission Network Review (OTNR) process. <p>The MMO has reviewed the consultation documents received 11 May 2023 in consultation with our scientific advisors at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and has provided our initial comments below.</p> <p>The MMO has focused on the following chapters of the PEIR technical chapters, figures and appendices:</p> <ul style="list-style-type: none"> • Chapter 1: Introduction • Chapter 2: Need for the Project • Chapter 3 Policy and Legislative Context • Chapter 5: Project Description • Chapter 8 Marine Geology Oceanography and Physical Processes • Chapter 9: Marine Water and Sediment Quality • Chapter 10: Benthic and Intertidal Ecology • Chapter 11: Fish and Shellfish 				
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	<p>Ecology</p> <ul style="list-style-type: none"> • Chapter 12 Marine Mammals • Chapter 13 Offshore Ornithology • Chapter 14: Commercial Fisheries • Chapter 15 Shipping and Navigation • Chapter 16 Offshore Archaeology and Cultural Heritage • Chapter 29 Seascape, Landscape and Visual Impact Assessment (SLVIA) • Habitats Regulations Assessment • Marine Conservation Zone Assessment <p>Page 5 of 21</p> <p>The MMO reserves the right to make further comments on the Project throughout the pre-application process and may modify its present advice or opinion in view of any additional information that may come to our attention.</p> <p>2. Chapter 3 Policy and Legislative Context</p> <p>2.1. Section 3.3.2.6.2 highlights the assessment against the East Inshore and East Offshore Marine Plans, the MMO welcomes this assessment. The MMO would request that a conclusion against each policy is set out in this document or ES chapter to show compliance against each policy along with the current information in Table 3.2.</p>				
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<p>NFOWFS3_025_002_140 723</p>	<p>3. Chapter 8: Marine Geology Oceanography and Physical Processes 3.1. Table 8.2 in Chapter 8 provides a comprehensive summary of the potential impacts throughout the construction, operation and decommissioning phase. These are appropriate the MMO has no concerns regarding any impacts on coastal processes being scoped out. 3.2. Chapter 8 sets out the evidence base and potential impacts to be scoped-in to the assessment and these are appropriate. Where there is uncertainty about the exact design of the windfarm infrastructure, the Applicant has considered the most likely worst-case scenario, which is an appropriate method for undertaking such impact assessments. 3.3. The proposed embedded mitigative steps, including maximising the spacing between individual wind turbines to reduce their impact on coastal processes; Favouring pile driving over drilling for installation; micro-siting cables and turbines, and; burying cables wherever possible to minimise impacts, are welcomed.</p>	<p>Marine Geology Oceanography and Physical Processes</p>		<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_025_003_140 723</p>	<p>4. Chapter 9: Marine Water and Sediment Quality 4.1. The Applicant has undertaken sampling and analysis of material from across the array and cable areas (undertaken in May and August 2021), with 9 samples collected from the export cable area, and 10 samples from the array/interconnector cable area. The samples were analysed for levels of trace metals, polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) by SOCOTEC, who are validated by the MMO to undertake such analyses. 39 samples were also collected for particle size analysis (PSA), which was undertaken by Fugro, who are validated by the MMO to undertake PSA. 4.2. The MMO notes that the sediment sampling undertaken is lower than that recommended by OSPAR, however the MMO is content that they provide sufficient spatial coverage, particularly considering the majority of material to be disturbed is sand (confirmed by the PSA results), which is considered to be at a lower risk of contamination than finer particle size fractions, and that material will be redistributed within the same area. 4.3. The results of the sampling (provided in Tables 9.12 to 9.15 of the PEIR, and Appendix 10.1, Volume III) show levels of trace metals in excess of Cefas Action Level 1 (AL1), namely for arsenic and nickel, with one sample also exceeding AL1 for copper. However, no samples approach or exceed their respective AL2. The PAH results show no exceedances of AL1, and the PCB results are all at or below the limits of detection.</p>	<p>Marine Water and Sediment Quality</p>		<p>Noted.</p>	<p>N</p>
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	<p>The MMO therefore agrees with the Applicant's conclusion that the likelihood of impact from the resuspension of contaminated sediment can be considered negligible.</p> <p>Page 6 of 21</p>				
NFOWFS3_025_004_140 723	<p>4.4. In Table 9.1 of Chapter 9 (Marine Water and Sediment Quality), it is noted from previous MMO comments regarding the potential requirement for a disposal site, stating that "worst case is for material to be released at the surface in the location in which it was removed". The MMO is of the opinion that, although material will be maintained within the same area, a designation of a disposal site will be required for these works. This site would cover the array and cable areas, in order to comply with the UK's obligations under OSPAR and the London Convention and Protocol.</p> <p>4.5. Please note, this would only be required were it is anticipated that material will be removed from the water, however briefly this may be (i.e. bed levelling works carried out by means of plough dredging for example, may not be subject to the requirement of a disposal site,</p>	Marine Water and Sediment Quality		<p>The Applicant is in the process of seeking a disposal licence from the MMO.</p> <p>A Site Characterisation Report (document reference 7.26) has been submitted to the MMO and included within the DCO application.</p>	N

	<p>whereas removal via trailer suction dredging, for example, for release at the sea-surface would be subject to this requirement). In line with this requirement, annual disposal returns must be submitted to the MMO during the project's construction. A site Characterisation Report must be submitted to enable the MMO to designate one or more disposal sites.</p>				
NFOWFS3_025_005_140 723	<p>5. Chapter 10: Benthic and Intertidal Ecology 5.1. The MMO does not have any concerns regarding the scoping out of transboundary effects and the potential impact of invasive non-native species (INNS) associated with the construction and decommissioning phases. The MMO does note that the impact of INNS will be assessed as part of the operation phase of the development.</p>	Benthic and Intertidal Ecology		Noted. The impact of INNS has been assessed in Section 10.6.2.7 of Chapter 10 (Benthic and Intertidal Ecology).	N
NFOWFS3_025_006_140 723	<p>5.2. Table 10.30 of Chapter 10 of the PEIR summarises the assessment of the range of impacts identified for benthic and intertidal ecology and these are appropriate.</p>	Benthic and Intertidal Ecology		Noted.	N
NFOWFS3_025_007_140 723	<p>5.3. One of the recommendations in Kirchgeorg et al. 2018 was to consider corrosion protection systems during Environmental Impact Assessments (EIA) for offshore wind platforms and to develop monitoring strategies to determine the long-term environmental impact of the introduction of paint flakes into the marine environment around OWFs. 5.4. The MMO recommends that consideration is given to the</p>	Benthic and Intertidal Ecology		<p>The issue of paint flakes was discussed with the Seabed ETG and the MMO expanded that their assumption is it will have a very low environmental impact but should be considered, perhaps in the monitoring plan.</p> <p>Monitoring of the integrity of the North Falls infrastructure, including flaking paint, is included in the Offshore In-principle Monitoring Plan (document reference 7.10).</p>	Y

	<p>impact of paint flakes (as microplastic pollution), originating from maintenance and operation (specifically application of corrosion resistant paints) of the North Falls OWF, on benthic receptors. It may be useful to provide an estimate of the quantity of paint expected to be used during the lifetime of the project and the percentage of that which may be expected to result in microplastic pollution. Please also see comments in Section 18.</p>				
NFOWFS3_025_008_140 723	<p>6. Chapter 11: Fish and Shellfish Ecology - Shellfish 6.1. The receptors scoped in and out are appropriate for shellfish and shellfisheries, the assessment is proportionate to fully identify and assess the potential impacts. 6.2. The MMO notes that the Kent and Essex Inshore Fisheries Conservation Authority (KEIFCA) have been consulted in relation to location of cockle and native oyster beds. The MMO defers to KEIFCA for comments on potential impacts of the development on those features. Page 7 of 21 6.3. The Applicant has outlined embedded mitigation in the design in Table 11.3 of Chapter 11 Fish and Shellfish Ecology and Table 14.4 of Chapter 14 Commercial Fisheries. The MMO agrees with the mitigation measures proposed for shellfish.</p>	Fish and Shellfish Ecology		Noted.	N
NFOWFS3_025_009_140 723	<p>6.4. The assessment of impacts to fish from underwater noise and habitat disturbance for some species (primarily herring and sandeel) requires further consideration and some changes are needed to ensure the ES is robust and fit for the purpose of assessing the likelihood of</p>	Fish and Shellfish Ecology		An updated assessment on the impacts to fish from habitat disturbance and underwater noise are presented in Section 11.6.1.1 and Section 11.6.1.4 of ES Chapter 11 (Fish and Shellfish Ecology), respectively.	N

	significant impacts occurring to fish.				
NFOWFS3_025_010_140 723	<p>7. Chapter 11: Fish and Shellfish Ecology - Fish</p> <p>7.1. The assessment of impacts to fish from underwater noise and habitat disturbance for some species (primarily herring and sandeel) requires further consideration and some changes are needed to ensure the ES is robust and fit for the purpose of assessing the likelihood of significant impacts occurring to fish. The MMO has outlined the key areas of concern in the comments below under the topics of sandeel, herring, underwater noise, mitigation, cumulative impacts and unexploded ordnance (UXO).</p> <p>Sandeel</p> <p>7.2. In the Fish and Shellfish Ecology Figures document (Chapter 11: Fish and Shellfish Ecology - Figures (Volume II)) the spawning and nursery grounds for sandeel have been mapped using Coull et al. (1998) and Ellis et al. (2012). Figure 11.5 presents catch rates of sandeel for the North Sea International Bottom Trawl Survey (IBTS) for the years 2017 – 2021. Whilst IBTS data does demonstrate that sandeel are caught in the study area, the GOV trawl used in the survey does not adequately target sandeel, and may be under representative of sandeel abundance. Figure 11.6 (from Jensen et al. 2011) shows the study area to be situated within an ICES sandeel assessment area, but not within one of the</p>	Fish and Shellfish Ecology		A multi-layered map characterising sandeel habitat, including broad-scale BGS data, PSA data from the Cefas' OneBenthic Portal, PSA data collected from the offshore project area as well as the data presented in Coull et al. (1998) and Ellis et al. (2012) and relevant commercial fishing data is presented in Figure 11.7 in Chapter 11 (Fish and Shellfish Ecology).	N

	<p>commercial sandeel fishing banks. Whilst the data presented in the PEIR overall do not suggest that the study area is of particularly high importance as sandeel habitat, the characterisation of sandeel habitat should include some additional sources of data, primarily to characterise seabed sediments in the array and cable corridor areas as the PSA data collected for the array areas is somewhat sparse and this should be included in the ES.</p>				
NFOWFS3_025_011_140 723	<p>7.3. The MMO recommends the inclusion of a multi-layered map which presents broad-scale British Geological Survey (BGS) data indicating the sediment types in the study area, combined with the sandeel spawning and nursery grounds data as per Coull et al. (1998) and Ellis et al. (2012), and the existing PSA data collected during the benthic surveys. Further site-specific PSA data may also be available from Cefas' OneBenthic Portal</p> <p>██████████ which contains benthic datasets including PSA from past surveys. Additional PSA from the OneBenthic portal could be used to supplement the Applicant's existing PSA data.</p>	Fish and Shellfish Ecology		<p>A multi-layered map presenting broad-scale BGS data, PSA data from the Cefas' OneBenthic Portal, PSA data collected from the offshore project area as well as the data presented in Coull et al. (1998) and Ellis et al. (2012) and relevant commercial fishing activity is shown in Figure 11.7 in Chapter 11 (Fish and Shellfish Ecology).</p>	N

<p>NFOWFS3_025_012_140 723</p>	<p>Herring 7.4. As with sandeel, the characterisation of Downs herring spawning habitat should include a multi-layered map presenting BGS data, herring spawning and nursery grounds data as per Coull et al. (1998) and Ellis et al. (2012), the existing PSA data collected during the benthic surveys, and PSA data from the Cefas' OneBenthic Portal. Page 8 of 21 7.5. International Herring Larvae Survey (IHLS) data for the years 2012 – 2017 and 2019 - 2022 have been used to inform the assessment, which is appropriate, and the limitations relating to the absence of data and the change in the temporal extent of the Downs IHLS survey have been recognised. The plotted IHLS data in Figures 6.32 and 6.33 (Chapter 11: Fish and Shellfish Ecology - Figures (Volume II)) indicate the larvae are consistently caught in the study area and close to the array in all years where data are available. Plotting individual years of data as per Figures 6.32 and 6.33 is helpful to demonstrate the inter-annual variations in larval density as a proxy for spawning intensity.</p>	<p>Fish and Shellfish Ecology</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_025_013_140 723</p>	<p>7.6. In order to provide a more complete picture of the extent of Downs spawning activity over time the MMO recommends that a 'heat' map of all IHLS data combined for the years 2012 – 2017 and for 2018 – 2022 is presented. The mapped data for years 2018 – 2022 will account for the change in temporal extent of the IHLS survey. Please see MarineSpace (2013) for example of a heat map approach which assigns confidence scores to the</p>	<p>Fish and Shellfish Ecology</p>		<p>A multi-layered map presenting IHLS data combined for the years 2012-2017 and for 2018-2022, using the MarineSpace (2013) approach is presented in Figure 6.33, Appendix 11.1 (document reference 3.3.5).</p>	<p>N</p>

	various data layers used in heatmaps for determining potential herring spawning habitat.				
NFOWFS3_025_014_140 723	7.7. The overlap of the inshore portion of the study area with the spawning ground of the Thames/Blackwater herring population is acknowledged in the PEIR, however, their spawning season (between February and May) is not included in Table 11.12 (Chapter 11 Fish and Shellfish Ecology) for spawning seasons and nursery grounds in the study area. This should be corrected in the ES.	Fish and Shellfish Ecology		The spawning period of the Blackwater herring has been added to Table 11.12 of Chapter 11 Fish and Shellfish Ecology.	Y
NFOWFS3_025_015_140 723	7.8. In point 85 (Chapter 11: Fish and Shellfish Ecology - Figures (Volume II)) it is noted that the Blackwater herring is a receptor of 'low sensitivity' in the context of negligible magnitude due to the distance between the spawning ground and the project. Whilst it is accepted that this will be the case for impacts arising from physical seabed disturbance, the MMO does not agree that Blackwater herring will be a receptor of 'low sensitivity' in the context of underwater noise from piling and UXO clearance. The MMO recommends that in the ES, Blackwater herring are reclassified as a 'high sensitivity' receptor due to their sensitivity to underwater noise.	Fish and Shellfish Ecology		The Applicant has updated the noise and habitat disturbance assessments both for herring and sandeels (see Chapter 11, Fish and Shellfish Ecology). High sensitivity scores have been applied to these receptors where appropriate. The assessment presented in the PEIR provided lower sensitivities for these receptors in some cases, taking account of the limited potential exposure of the receptor to the impact/limited potential overlap between receptors and impact. This is a critical factor to define impact significance and inform assessments. In the ES chapter, aspects relating to the level of overlap between the impact and these receptors have been accounted for under impact magnitude instead, and therefore, magnitude scores have also been reviewed as appropriate.	N

<p>NFOWFS3_025_016_140 723</p>	<p>7.9. In point 84 (Chapter 11: Fish and Shellfish Ecology, Document Reference No: 004447021-04, Revision: 04.) it is noted that Downs herring are a receptor of 'medium sensitivity' owing to the slight overlap of the southern array with the Downs herring spawning ground. The MMO does not agree with a 'medium sensitivity' classification for the reasons of herring's sensitivity to underwater noise from UXO clearance, and because herring are benthic spawners that rely on specific gravel substrates to lay their eggs. Direct disturbance to the seabed sediments caused by construction activities can cause damage to, and removal of spawning habitat, eggs, and yolk-sac larvae. Furthermore, the deposition of suspended sediments that arise from construction works on the seabed can cause smothering of spawning habitat affecting the development of eggs and larvae. For these reasons the MMO believes Downs herring should be reclassified as a receptor of 'high sensitivity'.</p> <p>7.10. Concerning the effects of electro-magnetic fields (EMF) on electro-sensitive fish receptors such as elasmobranchs, eels and lampreys, the MMO notes that the intended average cable burial depth for array, interconnector and export cables will be 1.2m. In line with the National Policy Statement EN3 (Department of Energy & Climate Change, 2011) The MMO recommends that where possible, cables are buried to a minimum depth of 1.5m (subject to local geology or seabed obstructions) as this will further increase the distance</p> <p>Page 9 of 21</p>	<p>Fish and Shellfish Ecology</p>		<p>The Applicant is committed to bury cables to appropriate depths, taking account of the outputs of the Cable Burial Risk Assessment (CBRA). Burial depth will bury along the cable route and may be ≥ 1.5 m at suitable locations. For the purposes of the assessment, however, the average cable burial depth (1.2m) and the target minimum cable burial depth (0.65m) have been presented (Table 11.2 of Chapter 11 Fish and Shellfish Ecology) as these represent the realistic worst-case scenario.</p> <p>The Applicant notes that reference to 1.5m made in the former version of the National Policy Statement EN3 (2011) is no longer referred to in the updated in effect version EN3 (DESNZ, 2023).</p>	<p>N</p>
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	<p>between electro-sensitive fish receptors and EMF, as well as reduce the risk of snagging and damage to cables by other marine vessels e.g. anchors, bottom-towed gear.</p>				
NFOWFS3_025_017_140 723	<p>Underwater Noise 7.11. Figures 11.9 – 11.19 (Chapter 11: Fish and Shellfish Ecology - Figures (Volume II)) present the modelled noise impact contours overlaid onto the spawning and nursery grounds of fish in the study area. 7.12. Figures 11.9 (sole), 11.10 (plaice), 11.13 (sandeel), 11.14 (cod), 11.15 (whiting), 11.16 (sprat), 11.17 (Downs herring) and 11.19 (tope) present: a) Noise impact contours overlaid with the spawning and nursery grounds for a sequential monopile at the east location, based on a hearing threshold of 186 Decibel (dB) for a stationary receptor. b) Noise impact contours overlaid with the spawning and nursery grounds for a sequential pin pile at the east location, based on a hearing threshold of 186dB for a fleeing receptor. 7.13. Figures 11.11 (lemon sole), 11.12 (mackerel), 11.18</p>	Fish and Shellfish Ecology		Figure 11.9 to Figure 11.19 (document reference 3.2.7) have been updated to include a visual representation of the impact ranges for mortality and potential mortal injury and recoverable injury.	N

	<p>(Blackwater herring) and 11.19 (thornback ray) present:</p> <p>a) Noise impact contours overlaid with the spawning and nursery grounds for a sequential monopile at the south location, based on a hearing threshold of 186dB for a stationary receptor.</p> <p>b) Noise impact contours overlaid with the spawning and nursery grounds for a sequential pin pile at the south location, based on a hearing threshold of 186dB for a fleeing receptor.</p> <p>7.14. The 186dB threshold presented in Figures 11.9 – 11.19 only show the predicted range of effect for temporary threshold shift (TTS) which is a temporary reduction in hearing sensitivity caused by exposure to intense sound. The impact ranges for mortality and potential mortal injury and recoverable injury have been provided in Tables 11.19 – 11.34, however these do not provide a complete visual representation of the overlap of noise effects with the spawning and nursery grounds.</p>				
<p>NFOWFS3_025_018_140 723</p>	<p>7.15. For the ES, underwater noise modelling should be presented using thresholds for mortality and potential mortal injury (as per Popper et al., 2014, which classifies fish according to their hearing capabilities). For fish with no swim bladder (i.e., sole, plaice, lemon sole, sandeel, mackerel and elasmobranchs) the threshold for mortality and potential mortal injury is >219 dB cumulative sound exposure level (SELcum) or >213dB peak, for fish with a swim bladder that is not involved in hearing the threshold is 210dB SELcum or >207dB peak, and for fish with a swim bladder involved in hearing (i.e., herring, sprat and</p>	<p>Fish and Shellfish Ecology</p>		<p>The thresholds for mortality and potential mortal injury described in Popper et al. (2014) were used to inform the assessment and presented in tables within section 11.6.1.4 of the PEIR. These have also been included in Table 11.17 to Table 11.34 in Chapter 11 (Fish and Shellfish Ecology) and used to inform the assessment in the ES. Additionally, mortality and potential mortal injury impact ranges have also been included within relevant Figures (Figure 11.9 to Figure 11.19) in support of the underwater noise assessment included in Section 11.6.1.4.2 of ES Chapter 11.</p>	<p>N</p>

	cod) the threshold is 207 dB SELcum or >207 dB peak. For eggs and larvae, a threshold of >210 dB SELcum or >207 dB peak should be used.				
NFOWFS3_025_019_140 723	7.16. Given the specific spawning habitat requirements of herring and their sensitivity to underwater noise, the MMO requests that additional noise modelling for the received levels of single strike sound exposure levels (SELs) at the Downs and Blackwater herring spawning grounds based on the 135dB (SELs) startle response (as per Hawkins et al. (2014) are presented (in mapped form) in order to predict the range of effect for behavioural responses in herring.	Fish and Shellfish Ecology		Charts presenting modelling for the received levels of SELs at the Downs and Blackwater herring spawning grounds based on the 135dB (SELs) startle response (as per Hawkins et al. (2014)) are provided in Figure 11.17 and Figure 11.18 respectively (document referenced 3.2.7). The Applicant notes, however, that Hawkins et al. (2014) acknowledge that “these data cannot yet be used to define the sound exposure criteria” due to the limited nature of the study. Of particular note was that the study was conducted in a quiet lough (lake). The background noise generated in a calm lough environment is far quieter than that generated in the open-water North Sea where 135 dB SEL is likely to be only slightly above the background noise level in a busy shipping area, based on measurements at the Hornsea Project Two Offshore Wind Farm. As such it is not appropriate to attempt to translate reaction patterns from one distinct environment to the other distinct environment.	N
NFOWFS3_025_020_140 723	7.17. For the ES, the maps (Figures 11.9 – 11.19) should state the hammer energy and pile diameter used in the modelling. Modelling should be based on the maximum hammer energy (6000 kilojoules (kJ)) and pile diameter (17 metres (m)).	Fish and Shellfish Ecology		Figure 11.9 to Figure 11.19 (document reference 3.2.7) have been updated to state the hammer energy and pile diameter used in the modelling.	N

<p>NFOWFS3_025_021_140 723</p>	<p>7.18. In Figures 11.18 and 11.19 there is no clear differentiation between the Downs and the Blackwater herring spawning grounds on the map, as both spawning grounds are shown in both maps. For the ES the MMO suggests that the Downs and Blackwater herring spawning grounds are each depicted on the maps using different colours or patterns.</p> <p>7.19. Please note that whilst the MMO has no objection to additional modelling based on a fleeing receptor being presented, the MMO does not support the use of a fleeing animal model due to a lack of empirical evidence on fleeing speeds, direction and behaviour. The 'fleeing' speed of 1.5 metres per second (m/s) which has been used in the modelling is based on Hirata (1999). It should be noted that the assessments in Hirata (1999) are based upon a swimming speed, rather than fleeing speed, and do not constitute empirical evidence that fish will flee from a source of disturbance.</p> <p>7.20. In studies that have sought to quantify swimming speed in fish, swimming performance is categorised into sustained, burst and prolonged swimming (Beamish, 1978; Cano-Barbacil et al., 2020), which are defined in literature as follows: a) Sustained swimming is aerobically generated and can be maintained for periods of time in without muscular fatigue (excess of 200 minutes). b) Burst swimming is the maximum achievable swimming speed, this type of swimming is anaerobically generated and can only be</p>	<p>Fish and Shellfish Ecology</p>		<p>Both the fleeing and stationary receptors scenarios have been modelled and are included in the tables that summarise modelling result for fish in Section 11.6.1.4 of the ES Chapter 11 (Fish and Shellfish Ecology) and in Appendix 12.3 Underwater Noise Modelling Report (Volume III) (document reference 3.3.8). For the purposes of assessing impacts and taking a conservative worst case scenario, consideration has only been given to the outputs of the stationary receptors modelling outputs.</p> <p>It is noted however, that basing the modelling on a stationary (zero flee speed) receptor is likely to greatly overestimate the potential risk to fish species, assuming that an individual would remain in the high noise level region of the water column, especially when considering the precautionary nature of the parameters already built into the cumulative exposure calculations.</p>	<p>N</p>
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	<p>sustained over short periods (20-30 seconds).</p> <p>c) Prolonged swimming is a transitional speed between burst and sustained swimming which can be maintained for intermediate lengths of time (1-200 minutes).</p> <p>7.21. Fish will respond to loud noise and vibration, through observed reactions including schooling more closely; moving to the bottom of the water column; swimming away, and burying in substrate (Hawkins and Popper, 2014; Popper et al., 2014). However, this is not the same as fleeing, which would require a fish to flee directly away from the source over the distance shown in the modelling. The MMO is not aware of scientific or empirical evidence to support the assumption that fish will flee in this manner.</p> <p>7.22. The assumption that a fish will flee from the source of noise is overly simplistic as it overlooks factors such as fish size and mobility, philopatric behaviours (foraging, reproductive or migratory) which may cause an animal to remain/return to the area of impact. This is of particular relevance to herring, as they are benthic spawners which spawn in specific locations with specific substrate composition.</p>				
NFOWFS3_025_022_140 723	<p>7.23. It is not obvious from reading the PEIR whether concurrent or simultaneous piling will be carried out during construction of the project. If there is potential for concurrent or simultaneous piling to be undertaken then MMO would expect this scenario to be modelled and presented in the ES, especially as it is expected that concurrent piling would result in a larger impact range than</p>	Fish and Shellfish Ecology		Modelling is presented in Appendix 12.3 Underwater Noise Modelling Report (Volume III) (document reference 3.3.8) using the worst-case monopile and pin pile sequential piling scenarios, for simultaneous piling at the East and South locations, representing a worst case spread of locations.	N

	sequential piling. Alternatively, it should be made clear in the ES if concurrent piling is or is not to be undertaken. Page 11 of 21				
NFOWFS3_025_023_140 723	<p>Mitigation</p> <p>7.24. 'Best practise' embedded mitigation measures have been proposed, which the MMO supports, but they have not proposed any additional fisheries-specific mitigation. Regardless of comments regarding the need for further UWN modelling, based on the predicted range of effect for mortality and potential mortal injury, recoverable injury and TTS presented. The possibility of a temporal piling restriction during the Blackwater herring spawning season will very much depend on the outcomes of the modelling. Given the potential likelihood of temporal mitigation, which can create delays in the construction schedules of OWFs, the use of additional noise abatement measures for piling, such as bubble curtains (see Würsig et al. (1999)), or other alternative measures should be considered.</p> <p>7.25. Further temporal restrictions may be necessary for other construction works that cause disturbance to the seabed during the herring spawning season, however, this will be subject to review of the herring spawning habitat characterisation in the ES.</p>	Fish and Shellfish Ecology		<p>Due consideration is given to the spawning grounds and sensitivity of herring in the assessment of impacts that result in physical disturbance to the seabed e.g. temporary habitat loss, SSC etc given the herring are demersal spawners (see Chapter 11, Fish and Shellfish Ecology).</p> <p>Multi-layered maps presenting broad-scale BGS data, PSA data from the Cefas' OneBenthic Portal, PSA data collected from the offshore project area as well as the data presented in Coull et al. (1998) and Ellis et al. (2012) is shown in Figure 11.3 (document reference 3.2.7).</p>	N

<p>NFOWFS3_025_024_140 723</p>	<p>Unexploded Ordinance (UXO) 7.26. The MMO notes that underwater noise modelling for UXO clearance has also been carried out, using the appropriate unweighted peak sound pressure level (SPL_{peak}) explosions threshold for fish of 229 - 234 dB peak (as per Popper et al., 2014). At this stage, a UXO survey of the seabed has not yet been carried out. However, MMO has the following comments to make based on review of the provisional assessment in points 234 – 236 (Chapter 11: Fish and Shellfish Ecology). 7.27. The assessment on the magnitude of impact and the sensitivity of the receptor is very high-level and does not consider the various sensitivities of fish receptors, particularly those with a swim bladder involved in hearing. Nor does the discussion consider the sensitive spawning periods of fishes or identify those fish with specific habitat requirements for part of all of their life cycles (e.g., herring, sandeel and oviparous elasmobranchs). For these primary reasons, the MMO does not agree that the impact to fish from UXO clearance will be of 'minor significance'. The MMO would expect a more detailed assessment on the impacts to fish from UXO clearance to be undertaken to support the ML application.</p>	<p>Fish and Shellfish Ecology</p>		<p>The assessment for UXO has been updated and now includes consideration of different species sensitivities and likely significant effects on spawning and nursery grounds (see Section 11.1.1.1 of Chapter 11 (Fish and Shellfish Ecology)).</p>	<p>N</p>
<p>NFOWFS3_025_025_140 723</p>	<p>Cumulative impacts 7.28. No coastal developments in the planning stages have been included in the list of projects for the cumulative and inter-related impact assessment. Projects in the planning stages such as port/harbour developments, power stations etc, should also be</p>	<p>Fish and Shellfish Ecology</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>The assessment has been updated to take into account coastal developments. Table 11.52 of Chapter 11 (Fish and Shellfish Ecology) provides the screening results for coastal developments.</p>	<p>N</p>

	identified and assessed (where appropriate) in the ES, particularly in respect of construction works for the nearshore part of the cable corridor.				
NFOWFS3_025_026_140 723	7.29. In light of comments in respect of the UWN modelling, it should be recognised that the range of effect for cumulative and inter-related effects may increase if the modelling shows an impact range exceeding 100km. With this in mind, there may be other offshore developments further afield that will require scoping into the assessment, should the UWN modelling show a range of effect of >100km. Page 12 of 21	Fish and Shellfish Ecology	Site Selection and Assessment of Alternatives	As detailed in Appendix 12.3 Underwater Noise Modelling Report (Volume III) (document reference 3.3.8) and summarised in Section 11.6.1.4 of Chapter 11 (Fish and Shellfish Ecology) the worst-case impact range modelled in relation to underwater noise for fish is considerably smaller than 100 km.	N
NFOWFS3_025_027_140 723	7.30. For the reasons in relation to sandeel, herring and underwater noise respectively, the MMO does not currently agree with the conclusions on cumulative effects. A more detailed characterisation of herring spawning habitat and sandeel habitat is required in order to ascertain the likely extent of impacts to these habitats in relation to the predicted range of effects. When the habitat characterisations have been completed and the sensitivity of herring changed to 'high' the magnitude and significance of effects should be re-evaluated. Once this is done, cumulative and inter-related impacts can also be re-assessed.	Fish and Shellfish Ecology	Site Selection and Assessment of Alternatives	Multi-layered maps presenting broad-scale BGS data, PSA data from the Cefas' OneBenthic Portal, PSA data collected from the offshore project area as well as the data presented in Coull et al. (1998) and Ellis et al. (2012) and commercial fishing activity (sandeel) is shown in Figure 11.3 and Figure 11.7 (document reference 3.2.7) for herring and sandeel respectively. The Applicant has updated the noise and habitat disturbance assessments both for herring and sandeels (see Chapter 11, Fish and Shellfish Ecology, document reference 3.1.13). High sensitivity scores have been applied to these receptors where appropriate.	N

NFOWFS3_025_028_140 723	8. Chapter 12 Marine Mammals 8.1. All relevant / applicable marine mammal functional hearing groups have been considered in the underwater noise modelling assessment. Furthermore, all fish groups have been considered as per Popper et al. (2014). The marine mammal species scoped into the PEIR assessment, which sit within these four hearing groups, are harbour porpoise, minke whale, grey seal and harbour seal. The MMO defers to Natural England to ensure that all relevant marine mammal species have been scoped in.	Marine Mammals		Noted.	N
NFOWFS3_025_029_140 723	8.2. The MMO believes that all relevant impacts have been scoped in for assessment. Specifically, the potential effects of auditory injury (Permanent Threshold Shift, PTS) and TTS and disturbance resulting from the following activities, have been considered a. Piling (and disturbance to ADD activation, noting that final requirements for mitigation in the MMMP will be determined prior to construction), b. Other construction activities including seabed preparations, rock placements and cable installation, c. Construction vessels, d. Noise from operational wind turbines and O&M activities and vessels	Marine Mammals		Noted.	N
NFOWFS3_025_030_140 723	8.3. Chapter 12 Marine Mammals confirms that a Marine Mammal Mitigation Plan/Protocol (MMMP) will be developed for piling. The MMO supports this approach. The final MMMP will include the standard measures as per the JNCC (2010) guidance, including a monitoring zone of at least 500 m	Marine Mammals		Outline MMMP (document reference 7.7) has been produced and submitted as part of the DCO application, with JNCC guidance included.	Y

	(or higher if required to cover the PTS range for a single strike of the hammer), soft start procedures and acoustic deterrent devices (ADDs).				
NFOWFS3_025_031_140 723	8.4. The MMO notes that Paragraph 138, states: 'The potential for PTS due to a single strike at the starting hammer energy (of 900kJ) will be provided in the ES, and to inform the in-principle Marine Mammal Mitigation Plan (MMMP). Underwater noise modelling for a single strike at the starting hammer energy has not been provided at this stage, however it will be required to inform mitigation requirements which will be confirmed at ES stage.' The MMO will provide further comments once this is provided.	Marine Mammals		Noted. The results of the underwater noise modelling for a single strike of the starting hammer energy are provided in Appendix 12.3 (Volume III), and an assessment of these effect ranges is provided in Appendix 12.4 Underwater Noise Technical Assessment (Volume III) (document reference 3.3.9).	N
NFOWFS3_025_032_140 723	8.5. Paragraph 145, states: "It is important to note that assessment for PTS from cumulative exposure is highly precautionary". The results are not necessarily highly precautionary given the variable modelling parameters, and uncertainties regarding source levels, please see comments in Section 7 and 9 on modelling. Page 13 of 21	Marine Mammals		The text in this section has been amended to remove reference to the assessment being highly precautionary. Further detail on how results are used within the assessments have been added, see Section 12.6.1 OF Chapter 12 Marine Mammals (document reference 3.1.14) of the ES.	Y
NFOWFS3_025_033_140 723	8.6. Paragraph 308 (and comments also applies to paragraphs 355, 366, 499, 538 and elsewhere in this chapter) states: "There is unlikely to be any significant risk of any TTS, as again the modelling indicates that the marine mammal would have to remain <100m for 12 hours in a day, with the exception of harbour porpoise which would have to remain 200m or less during	Marine Mammals		This has been corrected throughout the relevant assessments in Chapter 12 Marine Mammals (Volume I) (document reference 3.1.14) of the ES.	Y

	<p>dredging for 12 hours, or for seal species, which would have to remain with 1km or less of rock placement for 12 hours to be at risk of TTS".</p> <p>The MMO believes that this statement is not accurate. The modelling is based on a fleeing receptor, and, therefore, the receptor is simply at risk if they are within 100 m of the vessel when they start to move away (fleeing is about the receptor starting position). This should be corrected throughout the report as part of the ES.</p> <p>agement.org.uk</p>				
NFOWFS3_025_034_140 723	<p>9. Appendix 12.2: Underwater Noise Modelling Report</p> <p>9.1. This report appropriately provides details of the underwater noise modelling undertaken to support the PEIR.</p> <p>Section 2.2 Analysis of environmental effects</p> <p>For the assessment of the cumulative sound exposure, a fleeing animal receptor has been assumed for marine mammals, with 'fleeing' speeds of 3.25m/s for low-frequency cetaceans and 1.5 m/s for all other receptors. For fish receptors, both a fleeing and stationary animal model has been assumed. As above the MMO is not aware of empirical evidence to support fleeing in fish, and therefore the predictions based on a stationary receptor will be the most appropriate/relevant.</p> <p>Fleeing assumptions can have a significant effect on the assessment outcomes. For example, as per Table 4-23 in the report, maximum TTS ranges of 33 km are predicted for a stationary (fish) receptor, whereas for a fleeing (fish) receptor, a range of</p>	Marine Mammals		Noted.	N

	15 km is predicted. Section 3				
NFOWFS3_025_035_140 723	9.2. The general approach / methodology to the underwater noise modelling is largely appropriate, and effort has been undertaken to produce an informative report, along with details of the input parameters used in the modelling. The assessment refers to appropriate noise exposure criteria for marine receptors. The MMO agrees with the report that at the time of writing, Southall et al. (2019) and Popper et al. (2014) represent the most up-to-date and authoritative criteria for marine mammals and fish respectively.	Marine Mammals		Noted.	N
NFOWFS3_025_036_140 723	9.3. Figure 3-1 (Appendix 12.2 Underwater Noise Modelling Report) shows a comparison between example measured impact piling data and modelled data using INSPIRE version 5.1. Firstly, the pile sizes used in this comparison are much smaller than the proposed 12 or 17 m diameter for North Falls OWF (i.e., 1.8 m pile, 9.5 m pile, 6.1 m pile, and 6 m pile). 9.4. Secondly, providing the hammer energies as well as pile diameter would be helpful (it is very unlikely that the hammer energies will be close to the	Marine Mammals		The lack of data available for the assessment of the largest foundations and largest hammer energies is acknowledged; this data is not available. INSPIRE uses an extrapolation based on the best available data at the time of modelling and to date this extrapolation has produced results that have been demonstrated to be reasonable when monitoring of the piling has been undertaken on previous developments. In respect of validation for single strike Sound Exposure Level (SELss), any future revision of the Underwater Noise Modelling Report (document reference 3.3.8) will include charts equivalent to those provided for peak Sound Pressure Level (SPLpeak).	N

	<p>proposed 6,000 kJ hammer Page 14 of 21 energy for North Falls OWF. Thirdly, further evidence is required in terms of the SELss and not just the SPLpeak. The MMO recommends these points should be addressed in the ES.</p>				
<p>NFOWFS3_025_037_140 723</p>	<p>9.5. In section 3.1 the report states: “The current version of INSPIRE (version 5.1) is the product of re- analysing all the impact piling noise measurements in Subacoustech Environmental’s measurement database and cross- referencing it with blow energy data from piling logs.... This analysis showed that, based on the most up-to-date measurement data for large piles at high blow energies, the previous iterations of INSPIRE tended to overestimate the predicted noise levels at these blow energies.... . With this in mind, the current version of INSPIRE attempts to calculate closer to the average fit of the measured noise levels at all ranges”.</p> <p>The MMO welcomes this clarification, and acknowledges the drive for reducing unnecessary conservatism in modelling. Allegedly, the current version of INSPIRE should produce more realistic predictions.</p>	<p>Marine Mammals</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_025_038_140 723</p>	<p>Section 4 Modelling Results 9.6. In Section 4.1 Single location modelling – monopiles the following maximum PTS(SELcum) injury ranges in marine mammals are predicted: a. 3.2 km for very-high frequency (VHF) cetaceans (i.e., harbour porpoise), b. 7.0 km for low frequency cetaceans (i.e., minke whale), and c. < 100 m for phocid pinnipeds (i.e., seals) 9.7. TTS ranges of 24 km, 30 km and 8.9 km were predicted for VHF cetaceans, LF cetaceans and phocids respectively. 9.8. For fish, a maximum range of 33 km (stationary receptor) was predicted for TTS using the Popper et al. (2014) criteria, as well as potential mortal injury (6.0 km) and recoverable injury (9.3 km).</p>	<p>Marine Mammals</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_025_039_140 723</p>	<p>9.9. The predicted ranges for fish look credible based on the modelling parameters. The MMO has been able to somewhat match the Subacoustech predictions for marine mammals, but it is important to note that predictions will vary greatly, depending on a particular transect and chosen sound propagation parameters (i.e., seabed sediment parameters). This, however, also means that varying certain parameters (e.g., source levels, or the choice of geo-acoustic properties for a generic sandy-type seabed) can lead to sizeable differences in predictions. The salient point to note is that the results are certainly within the plausible range of outcomes but at the same time not necessarily over-precautionary.</p>	<p>Marine Mammals</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_025_040_140 723</p>	<p>9.10. In relation to pin ypiles, overall, larger effect ranges are predicted for pin piles, for the reasons explained in the assessment (i.e., the piling profile and fleeing assumptions). The following maximum PTS (SELcum) injury ranges in marine mammals are predicted: d. 5.1 km for VHF cetaceans (i.e., harbour porpoise), e. 10 km for low frequency cetaceans (i.e., minke whale), and f. < 100 m for phocid pinnipeds (i.e., seals) TTS ranges of 26 km, 35 km and 11 km were predicted for VHF cetaceans, low frequency (LF) cetaceans and phocids respectively. Page 15 of 21 For fish, a maximum range of 25 km (stationary receptor) was predicted for TTS using the Popper et al. (2014) criteria, as well as potential mortal injury (3.3 km) and recoverable injury (5.5 km).</p>	<p>Marine Mammals</p>		<p>Noted. For pin piles, the soft-start and ramp-up procedure has been amended with the result of lower effect ranges. See Appendix 12.3 Underwater Noise Modelling Report (Volume III) (document reference 3.3.8) of the ES for further information.</p>	<p>N</p>
<p>NFOWFS3_025_041_140 723</p>	<p>9.11. In relation to Section 4.1 Sequential pile installation, for monopiles it is expected that in a 24-hour period, up to two monopile foundations, or four pin pile foundations can be installed. For marine mammals, and for two monopiles, the predicted ranges are the same as those predicted for a single monopile. The time it takes to install one monopile is 7.5 hours. Therefore, by the time the subsequent pile is installed, the fleeing receptor (in the case of marine mammals) is at such a distance that the additional exposure is minimum (assuming the animal continues to flee throughout the piling period).</p>	<p>Marine Mammals</p>		<p>Noted.</p>	<p>N</p>

NFOWFS3_025_042_140 723	9.12. However, when considering a stationary animal (as in the case of fish), the ranges are increased because the receptor is receiving noise from double the number of strikes. For example, for a single monopile, the predicted TTS (SELcum) range is 33 km, which increases to 39 km based on the cumulative exposure of two monopiles.	Marine Mammals		Noted.	N
NFOWFS3_025_043_140 723	9.13. For pin piles, in general, there is no increase in effect from multiple pin piles for marine mammals (due to the fleeing animal assumptions). For fish, there is an increase in the predicted effect zones, as expected. TTS (SELcum increases from 25 km to 36 km, for example.	Marine Mammals		Noted.	N
NFOWFS3_025_044_140 723	9.14. It is appropriate that simultaneous piling has also been considered, although please double check the TTS prediction for VHF cetaceans in Table 4-35, as this is incorrect.	Marine Mammals		VHF cetaceans TTS prediction has been updated based on new modelling results; see Appendix 12.3.	N
NFOWFS3_025_045_140 723	Section 5 Other Noise Sources 9.15. Small effect ranges (largely <100m, with the exception of suction dredging, rock placement and large vessels) have been predicted for other sources of noise (i.e., cable laying, suction dredging, trenching, rock placement and vessel noise). A fleeing animal receptor has been assumed for all marine mammals, and therefore the predicted effect ranges are minimal. Small effect ranges are predicted for fish receptors.	Marine Mammals		Noted.	N

<p>NFOWFS3_025_046_140 723</p>	<p>9.16. "Figure 5-2 (Appendix 12.2. Underwater Noise Modelling Report) presents a level against range plot for the two turbine sizes using the Tougaard et al. (2020) calculation, assuming an average 6 ms⁻¹ wind speed". This formula represents a statistical model that was used to assess the correlation between sound pressure level (SPL) and various parameters (distance, wind speed, turbine size) for the data in the Tougaard study. However, the MMO considers that this is not suitable for estimation of the sound levels (SLs) @1m in a bespoke model, or as substitute for modelling the propagation loss to the far field. In particular, in terms of estimating propagation, the use of the formula would imply a loss of 23.7 log R, which is unrealistically large, and thus will lead to underestimation of the levels in the far field.</p>	<p>Marine Mammals</p>		<p>This is agreed to some extent: the Applicant would not recommend that this formula be used to predict noise levels at 1m from the pile, nor in the far field, e.g. beyond 500m at the closest. However, all estimations of impact are less than 100m, and so no prediction is made at this order of distances. It is worth noting that new research by Holme et al (2023) found that Tougaard et al. (2020) overestimated the noise measured near (70m) from a 6.3MW and an 8.3MW wind turbine. Data for larger turbines is not yet available.</p>	<p>N</p>
<p>NFOWFS3_025_047_140 723</p>	<p>Page 16 of 21 9.17. For UXO clearance the MMO notes that the maximum equivalent charge weight for the potential UXO devices that could be present within the North Falls OWF site boundary has been estimated as 698 kg + donor (which equates to 698.5 kg). This has been modelled alongside a range of smaller devices. In addition, low-order deflagration has been assessed, which assumes that the donor or shaped-charge (charge weight 0.5 kg) detonates fully to initiate a burnout of the explosive but without the follow-up detonation of the UXO.</p>	<p>Marine Mammals</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_025_048_140 723</p>	<p>9.18. To estimate the potential impact from UXO detonation, an attenuation correction has been added to the Soloway and Dahl (2014) equations for the absorption over long ranges (i.e., of the order of thousands of metres), based on measurements of high intensity noise propagation taken in the North Sea and Irish Sea (section 5.3.1 of the report). The maximum PTS range calculated (based on the worst-case UXO) is 13 km for VHF cetaceans (SPL_{peak} criteria) (with a TTS range of 25 km). For fish, the maximum range is 890 m. The MMO has conducted a spot check of the worst-case predictions which look reasonable (a PTS prediction of ~14 km for VHF cetaceans assuming the methodology from Soloway and Dahl and no attenuation correction). This is standard for OWF developments.</p>	<p>Marine Mammals</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_025_049_140 723</p>	<p>10. Appendix 12.3 Underwater Noise Technical Assessment. 10.1. Appendix 12.3 provides a helpful high-level summary of the underwater noise modelling (full details are in Appendix 11.2). An assessment of potential effects (and magnitude) has also been undertaken in this appendix, based on density estimates and reference populations, and the MMO defers to Natural England for comments on the suitability of the data presented for marine mammals.</p>	<p>Marine Mammals</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_025_050_140 723</p>	<p>10.2. In relation to Table 1.14, the magnitude of effect for TTS (temporary hearing loss) from the cumulative exposure of one monopile in a 24-hour period, has been assessed as negligible for all marine mammal species. As an example, for harbour porpoise, an estimated 0.63% of the North Sea Management Unit reference population (based on the site-specific worst-case aerial annual density estimate) is at risk. However, this equates to 2,168 individual harbour porpoises at risk, so the numbers are far from insignificant. . It is vital that appropriate mitigation is put in place to reduce the risk of potential impact on sensitive marine receptors, especially considering the cumulative effect from offshore wind development across UK waters.</p>	<p>Marine Mammals</p>		<p>All potential mitigation measures are being considered such including noise reduction measures (such as bubble curtains). Further information is provided within the Outline MMMP (document reference 7.7).</p>	<p>N</p>
<p>NFOWFS3_025_051_140 723</p>	<p>10.3. Please could the values in Table 1.24 be double checked for harbour porpoise and seals (the values for minke whale look correct based on an impact range of 0.1 km). For harbour porpoise, impact ranges are greater than 0.1 km (100 m) for some of the activities (i.e., 1.0 km for rock placement).</p>	<p>Marine Mammals</p>		<p>Assessments have been checked and updated in Appendix 12.4 Underwater Noise Technical Assessment (document reference 3.3.9).</p>	<p>N</p>

<p>NFOWFS3_025_052_140 723</p>	<p>11. Appendix 12.4 Unexploded Ordnance Clearance Information and Assessment 11.1. Paragraph 57 states: “The proposed mitigation measures for consideration in the MMMP for UXO clearance include, the use of low-order clearance techniques, such as deflagration, establishing a Page 17 of 21 monitoring zone and surveying prior to UXO clearance, the use of ADDs if any high-order detonations are required”. The MMO recommends that viable noise abatement measures are also considered within the MMMP for UXO clearance. As noted in para 54 of the appendix, “there is the potential for injury to occur for harbour porpoise for a high-order clearance of UXO of higher than 55kg. Alternative mitigation or noise reduction options would be required (e.g. bubble curtains) to avoid injury to this European Protected Species (EPS), or, if not possible to wholly mitigate the potential for auditory injury, an EPS licence for injury would be applied for, at the time of the Marine Licence application”. For an EPS licence to be issued, there must be no satisfactory alternatives.</p>	<p>Marine Mammals</p>		<p>Proposed mitigation for UXO clearance has been reviewed and described further in the Outline MMMP (document reference 7.7).</p>	<p>N</p>
<p>NFOWFS3_025_053_140 723</p>	<p>11.2. Para 65 Minor Comment 11.3. In relation to disturbance for low-order clearance (the preferred clearance method) and Effective Deterrent Radius (EDR) paragraph 65 states: “As a precautionary approach, it has been assumed that there could be an estimated worst-case of 5 km disturbance range (78.54 km²) including vessels”. Evidence to support the 5 km EDR</p>	<p>Marine Mammals</p>		<p>Reference to why the 5km EDR has been used has been added to the text in Appendix 12.5 Unexploded Ordnance Clearance Information and Assessment (document reference 3.3.10).</p>	<p>N</p>

	must be provided; this this is standard for OWF developments.				
NFOWFS3_025_054_140 723	12. Chapter 13 Offshore Ornithology 12.1. The MMO defers to Natural England regarding the potential impacts to offshore ornithology and will maintain a watching brief on anything that may fall within the MMO's remit – such as DML conditions.	Offshore Ornithology		Noted.	N
NFOWFS3_025_055_140 723	13. Chapter 14: Commercial Fisheries 13.1. The main issues raised by those within the commercial fishing include problems of spatial squeeze leading to the displacement of fishing activity, exclusion from established fishing grounds, loss of fishing opportunity, gear conflict and an increased pressure on fish stocks in the area surrounding the project.	Commercial Fisheries		The likely significant effects on commercial fisheries as a result of displacement and exclusion from established fishing grounds has been considered for construction (Section 14.6.1.1 and Section 14.6.1.2 of Chapter 14 Commercial Fisheries), operation (Section 14.6.2.1, Section 14.6.2.2 and Section 14.6.2.3 of Chapter 14), decommissioning (Section 14.6.3 of Chapter 14) and cumulative effects (Section 14.7.3.1 and Section 14.7.3.2 of Chapter 14).	N
NFOWFS3_025_056_140 723	13.2. The report identifies an impact of 'minor adverse effects' on commercial fisheries, this could be disputed by those within the fishing industry as an understated impact assessment.	Commercial Fisheries		Available fisheries data, information from relevant publications and consultation with local fisheries stakeholders has informed the baseline. The methodology used to assess the potential impacts on commercial fisheries is provided in section 14.4.3 of Chapter 14 (Commercial Fisheries). The assessment of the likely significance of the effects of the Project on relevant commercial fisheries receptors caused by each identified impact is given in Section 14.6 of Chapter 14. The Project has proposed a wide range of embedded mitigation measures which will reduce impacts on commercial fishing and have been accounted for when identifying effect significance. These are listed in Section 14.3.3 of Chapter 14 and in the Outline FLCP (2023).	N

NFOWFS3_025_057_140 723	13.3. The issues have been identified as having 'minor adverse effects', again this could be disputed by those within the commercial fishing industry. Permanent habitat loss and the suspension of contaminated sediments in the water column could cause issues with commercially important fish stocks.	Commercial Fisheries		The likely significant effects arising from habitat loss and the suspension of sediments are assessed in Chapter 9 Marine Water and Sediment Quality (Volume I) (document reference 3.1.11) of the ES, Chapter 10 Benthic and Intertidal Ecology (Volume I) (document reference 3.1.12) of the ES and Chapter 11 Fish and Shellfish Ecology (Volume I) (document reference 3.1.13) of the ES.	N
NFOWFS3_025_058_140 723	13.4. The commercial fishing industry between The Wash and The Thames are currently expressing increased concerns, through various forms of media, over the increasing number of projects in this area at both local, and national level. 13.5. There are increased concerns amongst the industry that the spatial squeeze created by this, and other projects are having an adverse effect on their livelihood. Page 18 of 21	Commercial Fisheries		The cumulative likely significant effects on commercial fishing arising from the Project in conjunction with other projects in the area are assessed in Section 14.7.3 of Chapter 14 (Commercial Fisheries).	N
NFOWFS3_025_059_140 723	13.6. The MMO recommends early engagement with National Federation of Fishermen's Organisations (NFFO) and local harbour authorities and fishermen is encouraged, including the early engagement with a Fisheries Liaison Officer. 13.7. The MMO will maintain a watching brief on anything that may fall within the MMO's remit – such as DML conditions.	Commercial Fisheries		The NFFO is a stakeholder of the CFWG with members directly involved in meetings. Consultation undertaken by the FLO has been summarised in Table 14.2 of Chapter 14 (Commercial Fisheries)	N
NFOWFS3_025_060_140 723	14. Chapter 15 Shipping and Navigation 14.1. The MMO defers to the Maritime and Coastguard Agency and Trinity House and relevant Harbour Authority's regarding the potential impacts on shipping and navigation that may occur because of the North Falls OWF. 14.2. The MMO will maintain a watching brief on anything that	Shipping and Navigation		Noted.	N

	may fall within the MMO's remit – such as DML conditions.				
NFOWFS3_025_061_140 723	15. Chapter 16 Offshore Archaeology and Cultural Heritage 15.1. The MMO defers to Historic England regarding the potential impacts to offshore archaeology that may occur because of the North Falls OWF. 15.2. The MMO will maintain a watching brief on anything that may fall within the MMO's remit – such as DML conditions.	Offshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_025_062_140 723	16. Chapter 29 Seascape, Landscape and Visual Impact Assessment (SLVIA) 16.1. The MMO defers to the statutory advice provided by the Natural England or Local Planning Authority regarding the potential impacts to the seascape that may occur because of the North Falls OWF. 16.2. The MMO will maintain a watching brief on anything that may fall within the MMO's remit – such as DML conditions.	Seascape, Landscape and Visual Assessment (SLVIA)		Noted.	N
NFOWFS3_025_063_140 723	17. Habitats Regulations Assessment 17.1. The MMO defers to the statutory advice provided by the relevant Statutory Nature Conservation Body's regarding the potential impacts to the protected features of the identified nature conservation areas that may occur because of the North Falls OWF. 17.2. The summary of potential effects screened into Table 6-1 of (document reviewed in point 7i) of the HRA for fish ecology during the construction, operation and decommissioning phases is appropriate.	Fish and Shellfish Ecology		Noted.	N

	<p>17.3. The nearest SACs which have Annex II fish as qualifying features are outside the scope of the study area. I am therefore content that qualifying migratory fishes have been screened out but defer to Natural England as the Statutory Nature Conservation Body (SNCB) for further comment. Page 19 of 21</p> <p>17.4. The MMO will maintain a watching brief on anything that may fall within the MMO's remit – such as DML conditions.</p>				
NFOWFS3_025_064_140 723	<p>18. Marine Conservation Zone (MCZ) Assessment</p> <p>18.1. The MMO defers to the statutory advice provided by the relevant Statutory Nature Conservation Body's regarding the potential impacts to the protected features of the identified nature conservation areas that may occur because of the North Falls OWF.</p> <p>18.2. The MMO agrees with the pressures screened into the MCZ assessment and notes that three MCZs were identified during the first stage of the screening assessment due to their proximity to the site (i.e., Blackwater, Crouch, Roach and Colne Estuaries MCZ, Kentish Knock East MCZ and Orford Inshore MCZ). The protected features of each MCZ are reported clearly and the potential impacts during construction, operation and maintenance, and decommissioning stages have been presented for each.</p> <p>18.3. The MMO recommends that consideration also be given to the impact of paint flakes (as microplastic pollution), within the</p>	Fish and Shellfish Ecology	Marine Water and Sediment Quality	Monitoring of the integrity of the North Falls infrastructure, including flaking paint, is included in the Offshore In-principle Monitoring Plan (document reference 7.10).	Y

	<p>Kentish Knock MCZ when developing monitoring plans.</p> <p>18.4. For the Blackwater, Crouch, Roach and Colne Estuaries MCZ, the protected features are the intertidal mixed sediments, native oyster (<i>Ostrea edulis</i>) beds, native oyster (<i>O. edulis</i>) and Clacton Cliffs and foreshore. For Kentish Knock MCZ, the protected features are the subtidal sand, subtidal coarse sediments and subtidal mixed sediments. For Orford Inshore MCZ the protected features are the subtidal mixed sediments. As none of the protected features are fin-fish receptors it is beyond my remit to comment on whether the pressures screened into the assessment are appropriate, and therefore defer to Natural England as the Statutory Nature Conservation Body (SNCB) to comment on the suitability of the assessment approach.</p> <p>18.5. The MMO will maintain a watching brief on anything that may fall within the MMO's remit – such as DML conditions.</p>				
<p>NFOWFS3_025_065_140 723</p>	<p>19. Conclusion</p> <p>19.1. The MMO welcomes the progress the Applicant has made to date to assess the environmental impacts of the North Falls OWF. The MMO requires the points raised in this response to be addressed within the ES.</p> <p>Your feedback</p> <p>We are committed to providing excellent customer service and continually improving our standards and we would be delighted to know what you thought of the service you have received from us. Please help us by taking a few minutes to</p>	<p>N/A</p>		<p>Noted.</p>	<p>N</p>

	<p>complete the following short survey https://www.surveymonkey.com/r/MMOMLcustomer. If you require any further information please do not hesitate to contact me using the details provided below.</p>				
NFOWFS3_026_001_170 723	<p>RE: North Falls Offshore Wind Farm – Response to Statutory Consultation Thank you for the opportunity to review the Preliminary Environmental Information Report and associated documents for the North Falls Offshore Wind Farm Project. The detail provided has been helpful for the Five Estuaries Offshore Wind Farm Project team to be able to assess the potential cumulative environmental effects and benefits of both projects. The Five Estuaries Project team look forward to continuing to cooperate with the North Falls team in order to consider ways to minimise impacts on the local community and on the onshore and offshore environment where possible. This will be a positive factor as the Five Estuaries team progresses its project, to support the government's target to achieve 50 gigawatts of offshore wind capacity in the UK by 2030 in line with the revised draft National Policy Statements, which are expected to be designated this year.</p>	Need for the Project	Technical Consultation	Noted. The Applicant has worked with Five Estuaries throughout the pre-application stage to develop co-ordinated proposals as discussed in Section 5.3.1 and Section 5.7 of Chapter 5 (Project Description).	Y

<p>NFOWFS3_027_001_240 523</p>	<p>Dear Tom Crawford,</p> <p>Re: North Falls Offshore Wind Farm: Statutory Consultation</p> <p>Thank you for your letter notifying the Canal & River Trust of the consultation with regards to the North Falls Offshore Wind Farm.</p> <p>We are the charity who look after and bring to life 2000 miles of canals & rivers. Our waterways contribute to the health and wellbeing of local communities and economies, creating attractive and connected places to live, work, volunteer and spend leisure time. These historic, natural, and cultural assets form part of the strategic and local green-blue infrastructure network, linking urban and rural communities as well as habitats. By caring for our waterways and promoting their use we believe we can improve the wellbeing of our nation. The Trust is a prescribed consultee in the Nationally Significant Infrastructure Projects (NSIPs) process.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_027_002_240 523</p>	<p>The Trust has reviewed your proposals and, considering the proposed works would not be within close proximity to our network, the Canal & River Trust have no comments to make on the proposals.</p> <p>Kind regards</p> <p>Anne</p>	<p>N/A</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_028_001_150 623</p>	<p>Good afternoon,</p> <p>Please find attached our comments in respect of the below notification.</p> <p>Kind regards For the attention of Tom Crawford - Offshore Consents Manager</p> <p>[By email: contact@northfallsoffshore.com]</p> <p>15 June 2023</p> <p>Dear Mr Crawford</p> <p>Section 42 of the Planning Act 2008 and/or Regulation 13 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017</p> <p>Proposed offshore wind farm</p> <p>NORTH FALLS OFFSHORE WIND FARM, EAST ANGLIA</p> <p>Thank you for your notification of 15 May 2023 seeking the views of the Coal Authority on the above.</p> <p>I have checked the site location plan against the information held by the Coal Authority and can confirm that the proposed development site is located outside of the defined coalfield.</p> <p>On this basis, the Planning team at the Coal Authority have no comments to make.</p> <p>Please do not hesitate to contact me if you would like to discuss this matter further.</p> <p>Yours sincerely</p>	<p>N/A</p>		<p>Noted.</p>	<p>N</p>
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	<p>The Coal Authority Planning Team</p> <p>Disclaimer</p> <p>The above consultation response is provided by The Coal Authority as a Statutory Consultee and is based upon the latest available data on the date of the response, and electronic consultation records held by The Coal Authority since 1 April 2013. The comments made are also based upon only the information provided to The Coal Authority by the Local Planning Authority and/or has been published on the Council's website for consultation purposes in relation to this specific planning application. The views and conclusions contained in this response may be subject to review and amendment by The Coal Authority if additional or new data/information (such as a revised Coal Mining Risk Assessment) is provided by the Local Planning Authority or the Applicant for consultation purposes.</p>				
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<p>NFOWFS3_029_001_220 623</p>	<p>North Falls Offshore Wind Farm Limited 22 June 2023 Windmill Hill Business Park Whitehall Way Swindon Wiltshire SN5 6PB Sent by email to: contact@northfallsoffshore.com Dear Sir/Madam, North Falls Offshore Wind Farm Project ("North Falls Project") Public Consultation We acknowledge your consultation for the North Falls Project. Low Carbon has an ongoing project which could be impacted by the North Falls Project. Attached to this letter is a decision notice (reference: 22/02117/FUL) and plan (LCS034- PLE-01_rev14) for a solar farm under your proposed route within the Tendring District, Essex; more particularly, to be located on land currently registered at HM Land Registry with freehold title number EX706653. The solar farm is known as Thorpe Park Solar Farm and is owned by Low Carbon Solar Farm 12 Limited (company number 13097982) (the "Company").</p>	<p>Infrastructure and Other Users</p>		<p>Noted. The Applicant has refined its onshore cable route away from the boundary of the Low Carbon project (reference: 22/02117/FUL). Haul routes for the project are still located within the Low Carbon project boundary.</p>	<p>N</p>
<p>NFOWFS3_029_002_220 623</p>	<p>With respect to the North Falls Project, Low Carbon does have concerns on the proposal and would like to engage further with you during your own respective development process. We are open to further discussions following the conclusion of the current consultation period in order to preserve Low Carbon's current position.</p>	<p>Technical Consultation</p>			

NFOWFS3_029_003_220 623	Low Carbon's concerns relate to: (i) part of your potential cable route being situated within our site boundary;	Infrastructure and Other Users		Noted.	N
NFOWFS3_029_004_220 623	(ii) the impact on our construction and operational plans for the main site; and	Infrastructure and Other Users			
NFOWFS3_029_005_220 623	(iii) any potential impact on the solar farm point of connection and the ability to export into the electricity network.	Infrastructure and Other Users			
NFOWFS3_029_006_220 623	The Company is expected to start and complete construction within the next 12 months. As the area could be a potential construction site, it is advised to make early contact for access arrangements for surveyors. Furthermore, the area for the solar farm will undergo a change from what exists today and so this will need to be considered for your assessment work.	Infrastructure and Other Users			
NFOWFS3_029_007_220 623	We responded to the recent Five Estuaries Offshore Wind Farm Limited statutory consultation in a similar manner to this letter and have recently met with members of the RWE team to discuss our respective proposed developments. The North Falls Project was mentioned during this meeting and it was acknowledged by us and the RWE team that a future tripartite meeting to discuss the co-existence of all three projects would be beneficial. Please do not hesitate to contact me or Andrew Thomassen should you have any queries related to this letter. Yours sincerely, Grace Humphries Business Development Manager	N/A			

	<p>Low Carbon</p> <p>[REDACTED]</p> <p>CC:</p> <p>[REDACTED]</p>				
NFOWFS3_030_001_270 623	<p>Great Horkesley Parish Council supports the OffSET Task Force and the campaigns for an offshore grid.</p> <p>We fully support the concept of North Sea wind farms to generate abundant, cheap, clean electricity.</p>	Need for the Project		<p>The feasibility of an offshore connection is subject to the outcomes of the OCSS which is expected to conclude in March 2025. Therefore radial transmission to an onshore connection location must be included in the North Falls DCO application.</p>	N
NFOWFS3_030_002_270 623	<p>Our strongly preferred approach is an upgrade to the offshore route.</p>	Site Selection and Assessment of Alternatives			
NFOWFS3_030_003_270 623	<p>By doing so, the environmental damage and disruption that would be caused to East Anglia by the installation of onshore cables would be minimised.</p>	Onshore Ecology			

NFOWFS3_030_004_270 623	Great Horkesley Parish Council is pleased to learn that an offshore route is now to be considered and formally compared with the intrusive overland route, which it continues to oppose. Thanks again, Teri Duckworth Parish Clerk & RFO Great Horkesley Parish Council	Site Selection and Assessment of Alternatives			
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<p>NFOWFS3_031_001_130 723</p>	<p>11th July 2023</p> <p>Email: northfallsoffshore.com</p> <p>To whom it may concern</p> <p>Re: North Falls Offshore Wind Farm: Statutory Consultation</p> <p>Thank you for inviting Harwich Haven Authority to provide feedback on the North Falls Wind Farm Project.</p> <p>Harwich Haven Authority acknowledges the importance of renewable energy and is supportive of all initiatives that reduce carbon emissions and are aligned to net zero targets.</p> <p>As the Statutory Harbour Authority and Trust Port our core remit is to provide safety of navigation to vessels using the waters within our 150 square mile jurisdiction area. Our jurisdiction covers a 12-mile approach to Harwich Harbour, the River Stour, and parts of the River Orwell. We are responsible for the conservancy of the main navigation channel into the Haven, which requires an ongoing maintenance dredging programme to maintain the depth required to accommodate the very largest container vessels in operation.</p> <p>We operate a 24/7, 365 day a year service to provide pilotage services to five port operators in the Haven, Port of Felixstowe, Navyard, Harwich International Port, Port of Mistley and the Port of Ipswich. The continuous, and uninterrupted flow, of vessels into the Port of Felixstowe is critical to UK trade, with almost 40% of all</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
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	<p>containerised goods entering the UK via this gateway. Leisure vessel activity is also very high within our areas of jurisdiction, and we estimate that more than 10,000 yachts pass through the approaches and Harwich Harbour each year.</p> <p>The largest trade gateway in the UK</p> <p>Later in 2023 we will complete a £130m large-scale project to deepen the navigational approach channel into Harwich Harbour to 16.5m BCD. The purpose of the project is to accommodate the ever-growing breed of Megamax vessels in operation that (400 metres with a draught of 17.5 metres) call at the Haven ports. With a deeper navigational channel, and new deeper berths at the Port of Felixstowe, we envisage the combined value proposition will attract many more shipping lines to use the Port of Felixstowe and therefore vessels arriving and departing the Haven will increase. The worldwide maritime industry trend for less ship movements but larger vessels carrying equivalent tonnage looks set to continue.</p> <p>The Haven trade gateway is critical to UK PLC and our pilotage services cannot be interrupted. Delayed or missed Megamax arrivals would cause significant cost implications to Harwich Haven Authority. The ports industry is highly competitive and dissatisfied shipping lines are highly likely to look for an alternative port, potentially in Europe, if they do not receive the service standards they require.</p> <p>Harwich Haven Authority's Trust</p>				
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	<p>Port stakeholder values</p> <p>As a Trust Port we operate commercially but we do not have shareholders, which allows us to reinvest a percentage of our surplus profits back into the Haven for the benefit of stakeholders. We define a stakeholder as anyone that uses, or has an interest in, the Haven and/or our operations. Harwich Haven Authority acts as a custodian of the Haven, and we have responsibility to Protect, Conserve and Improve our area of jurisdiction.</p> <p>We understand that regulatory bodies such as Natural England and the Environment Agency will have been included within your consultation. We would therefore echo any concerns they may have raised in relation to the legally protected and designated areas that exist within the Haven.</p>				
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<p>NFOWFS3_031_002_130 723</p>	<p>PRELIMINARY ENVIRONMENTAL INFORMATION REPORT Chapter 15 Shipping and Navigation Section Topic Comment 15.6.1.6 Impact 6: Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage 109. The Applicant has engaged with PLA and HHA regarding cable routeing and has implemented changes to the offshore cable corridor to minimise impacts on the key areas raised as being of concern. Changes made include: • Shifting the offshore cable corridor further south from the Sunk Pilot Station; Chapter 15 Shipping and Navigation Page 42 of 73 • Shifting the offshore cable corridor south of the Harwich Deep Water Channel; • TSS crossing angle moved closer to 90 degrees; and • Offshore cable corridor moved as far as practicable from the Sunk roundabout feature Due to draught of vessels and future dredging, consider a maximum draught of 20m plus 10% UKC, as such minimum depth required above the cables is 22m BCD.</p> <p>Section Topic Comment 110. During the construction phase, the vessels associated with cable installation may impact vessel transits and pilotage operations. However, any potential impact will be temporary and spatially limited to the area around the operation. Liaison will take place with PLA and HHA to agree appropriate arrangements for cable installation in sensitive areas, including in relation to promulgation of information. This</p>	<p>Shipping and Navigation</p>		<p>Consultation has been undertaken with shipping stakeholders throughout the pre-application process and is discussed in Chapter 15 Shipping and Navigation (Volume I) (document reference 3.1.17) of the ES.</p> <p>Compliance with MGN 654 including in relation to reduction in under keel clearance is included as mitigation in Section 15.3.3 and this requirement is considered in the impact assessment in Section 15.6.</p> <p>Collision risk and disruption from project vessels during construction is considered in Sections 15.6.1.4 and 15.6.1.6. This includes consideration of the Outline Navigation Installation Plan (NIP) (document reference 7.24).</p> <p>Collision risk and disruption from project vessels during operation is considered in Sections 15.6.2.4 and 15.6.2.6. This includes consideration of the Outline NIP (document reference 7.24).</p> <p>Further consultation has been undertaken with Harwich Haven Authority HHA, PLA, and London Gateway including via the Sunk User Group in relation to impacts on port access and pilot operation. Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage is assessed in Section 15.6.2.6. This includes consideration of the Outline NIP (document reference 7.24).</p> <p>Interaction with subsea cables is assessed in Section 15.6.2.7.</p> <p>Additional resourcing is discussed in the Outline NIP (document reference Ref TBC7.24).</p>	<p>Y</p>
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	<p>is of particular importance for works required in the vicinity of the Sunk Pilot Station given its location relative to the offshore cable corridor. Construction operations must not impede vessel traffic movements within the Sunk area or normal operations such as pilot boarding</p> <p>15.6.2.6 Impact 6: Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage</p> <p>15.6.2.6 Impact 6: Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage</p> <p>Maintenance operations must not impede vessel traffic movements within the Sunk area or normal operations such as pilot boarding</p> <p>170. The Applicant has engaged with PLA and HHA regarding cable routeing and has implemented changes to the offshore cable corridor to minimise impacts on the key areas raised as being of concern. Changes made include:</p> <ul style="list-style-type: none"> • Shifting the offshore cable corridor further south from the Sunk Pilot Station; • Shifting the offshore cable corridor south of the Harwich Deep Water Channel; • TSS crossing angle moved closer to 90 degrees; and • Offshore cable corridor moved as far as practicable from the Sunk roundabout feature. <p>Due to draught of vessels and future dredging, consider a maximum draught of 20m plus 10% UKC, as such minimum depth required above the cables is 22m BCD</p> <p>Section Topic Comment</p> <p>171. During the operational phase, the vessels associated with any cable maintenance may impact vessel transits and pilotage</p>				
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	<p>operations. Surface operations associated with cable maintenance during the operational phase are likely to be less frequent than during construction and again with temporary and spatially limited impact. Liaison will take place with PLA and HHA to agree appropriate arrangements for cable maintenance in sensitive areas, including in relation to promulgation of information. This is of particular importance for works required in the vicinity of the Sunk Pilot Station given its location relative to the offshore cable corridor. Maintenance operations must not impede vessel traffic movements within the Sunk area or normal operations such as pilot boarding</p> <p>5.6.2.6.3 Impact significance 176. It is recognised that impacts on port access and pilotage operations have been raised as a key concern notably by the HHA and PLA. On this basis the Applicant is in the process of Project Design refinement of the offshore cable corridor and will continue to liaise with and consult the MCA, Trinity House, PLA and HHA to ensure the impact is minimised and ALARP. Based on suitable mitigation being agreed, the impact is assessed as being Tolerable for the purposes of PEIR, noting that further assessment at ES stage will be needed to determine the extent of mitigation required to ensure the impact is ALARP. Not in agreement with the impact being assessed as tolerable. It is not currently tolerable or tolerable with mitigation proposed.</p> <p>Section Topic Comment 15.6.2.7 Impact 7: Interaction with subsea cables including cable</p>				
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	<p>protection 177. Any changes in water depth associated with the installed cable protection could lead to an increase in under keel interaction risk for third party vessels navigating in the area. This was raised as a key concern by local port authorities notably the HHA and PLA during consultation with the Sunk VTS User Group. Due to draught of vessels and future dredging, consider a maximum draught of 20m plus 10% UKC, as such minimum depth required above the cables is 22m BCD.</p> <p>179. MGN 654 requires that any reduction in water depth of greater than 5% must be discussed with the MCA to agree appropriate mitigation. Changes in water depth within any "areas of critical depths in relation to under keel clearance" including routeing measures and port approaches must also be discussed with the MCA regardless of the extent of the change. This aligns with consultation input received during the cable corridor selection process, with any reductions in water depth in the dredged channels raised as being of concern. 5% is not acceptable in the Sunk area as vessel navigation with only 10% UKC</p> <p>Section Topic Comment</p> <p>182. It should also be considered that the offshore cable corridor and interconnector cable corridor intersect areas of high commercial vessel density, the Sunk TSS East and South lanes, and the precautionary areas. The route has been designed to minimise impacts, such as by crossing TSS lanes at close to right angles where possible. In an emergency incident it may be necessary for a</p>				
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	<p>vessel to drop anchor to avoid drifting into danger e.g., towards wind turbines.</p> <p>The locations of charted cables would be taken into consideration when deciding whether to drop anchor in such a situation, however the prevention of an allision or collision incident would take priority over the risk of potential cable interaction. Vessel may anchor in any area in an emergency, this may include dredging their anchor.</p> <p>183. As per Section 15.3.3, the Applicant will determine suitable cable burial depths and protection measures via a cable burial risk assessment process. This will consider the vessel densities, types, and sizes across and in the vicinity of the offshore cable corridor and interconnector cable corridor to ensure protection / burial is sufficient relative to the potential anchor sizes that may be used in the area. The full NRA will include a more detailed assessment of vessel anchoring. This must consider future dredging of the deep-water channels to 20meters, and then allow for an additional 10% UKC.</p> <p>Section Topic Comment 15.6.2.7.3 Impact significance 188. It is recognised that reductions in water depth have been raised as a key concern notably by the HHA and PLA. The need to consult with the MCA in the event that under keel clearance is reduced by more than 5% is secured under MGN 654, however further assessment is considered necessary of the impact given the sensitivity of the area including routeing measures, large traffic volumes, port approaches and limited under keel clearance for deep-draughted</p>				
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	<p>vessels at present. Based on suitable mitigation being agreed, the impact is assessed as being Tolerable for the purposes of PEIR, noting that further assessment at ES stage will be needed to determine the extent of mitigation required to ensure the impact is ALARP. As above, 5% loss of UKC is not acceptable in the Sunk area.</p> <p>15.6.3.6 Impact 6: Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage 216. It is anticipated that this impact will be similar in nature to the equivalent construction phase impact (see Section 15.6.1.6) noting similar activities will be occurring and mitigations in place, and a similar scenario in terms of increased vessel numbers. As discussed in that section, liaison with HHA and PLA would be undertaken to agree appropriate arrangements for any required works in sensitive areas, including in relation to promulgation of information. Additional VTS coverage may be required. This will include resources and equipment.</p> <p>Section Topic Comment 15.6.3.6.3 Impact significance 219. It is recognised that impacts on port access and pilotage operations have been raised as a key concern notably by the HHA and PLA. On this basis the Applicant is in the process of Project Design refinement of the offshore cable corridor and will continue to liaise with and consult the MCA, Trinity House, PLA and HHA to ensure the impact is minimised and ALARP. Based on suitable mitigation being agreed, the impact is assessed as being</p>				
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	<p>Tolerable for the purposes of PEIR, noting that further assessment at ES stage will be Chapter 15 Shipping and Navigation Page 56 of 73 needed to determine the extent of mitigation required to ensure the impact is ALARP. Not in agreement with the impact being assessed as tolerable. It is not currently tolerable or tolerable with mitigation proposed.</p> <p>15.7.3.5 Cumulative Impact 5: Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage 251. Vessels or activities associated with the operation of North Falls may restrict or hinder third party traffic access to local ports and facilities, including approach channels and pilotage. Additional activities and vessels associated with other developments may increase the impact on a cumulative basis. Operations must not impede vessel traffic movements within the Sunk area or normal operations such as pilot boarding</p> <p>Section Topic Comment 15.7.3.5.3 Impact significance 258. It is recognised that impacts on port access and pilotage operations have been raised as a key concern notably by the HHA and PLA. On this basis the Applicant is in the process of Project Design refinement of the offshore cable corridor and will continue to liaise with and consult the MCA, Trinity House, PLA and HHA to ensure the impact is minimised and ALARP. Based on suitable mitigation being agreed, the cumulative impact is assessed as being Tolerable for the purposes of PEIR, noting that</p>				
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	<p>further assessment at ES stage will be needed to determine the extent of mitigation required to ensure the impact is ALARP. Not in agreement with the impact being assessed as tolerable. It is not currently tolerable or tolerable with mitigation proposed</p> <p>15.7.3.6 Cumulative Impact 6: Interaction with subsea cables including cable protection 260. As discussed in Section 15.6.2.7, MGN 654 requires that any reduction in water depth of greater than 5% must be discussed with the MCA to agree appropriate mitigation. Changes in water depth within any “areas of critical depths in relation to under keel clearance” including routeing measures and port approaches must also be discussed with the MCA regardless of the extent of the change.</p> <p>The MCA will consider cumulative issues in this regard in terms of acceptability and appropriate mitigation. As above, 5% loss of UKC is not acceptable in the Sunk area.</p> <p>Section Topic Comment 15.7.3.6.3 Impact significance 265. It is recognised that reductions in water depth have been raised as a key concern notably by the HHA and PLA. The need to consult with the MCA in the Chapter 15 Shipping and Navigation Page 65 of 73 event that under keel clearance is reduced by more than 5% is secured under MGN 654, however further assessment is considered necessary of the impact given the sensitivity of the area including routeing measures, large traffic volumes, port approaches and limited under keel clearance for deep-draughted vessels at present. Based on</p>				
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	<p>suitable mitigation being agreed, the cumulative impact is assessed as being Tolerable for the purposes of PEIR, noting that further assessment at ES stage will be needed to determine the extent of mitigation required to ensure the impact is ALARP. Not in agreement with the impact being assessed as tolerable. It is not currently tolerable or tolerable with mitigation proposed</p>				
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<p>NFOWFS3_031_003_130 723</p>	<p>Appendix 15.1 Navigational Risk 004447078-02_Appendix-15.1- Navigational-Risk-Assessment- Baseline.pdf ()Section Topic Comment 3.1 Study Area The study area and cable corridor study area are shown in Figure 3.1. The AIS study area should have included the area to the west of the study area used, so that it include vessels on the Harwich Deep Water Route into the Harwich Deep Water Channel.</p> <p>Section Topic Comment 4.9 63. VTS is in operation in the area 24 hours a day managed by the Dover Maritime Rescue Coordination Centre (MRCC) (see Section 5.3). There are radio reporting points located at various locations within the study area, mainly at the entrances/exits of the precautionary areas (as seen in Figure 4.2). VTS with HHA SHA is operated 24 hours a day by HHA. 70. It is also noted that there are sand waves in the study area which influence navigation in the area. These form in several locations within the area and reach their maximum amplitude after periods of calm, settled weather, resulting in least depths over them at Neap tides. Frequent and rapid changes of depths can occur in the main ship channels. Please note that if there is a significant change in the channel depth / location, shipping channels may be moved to take advantage of the deepest available depth of water. 6.1.3.1 Vessel Length Figure 6.16 illustrates the distribution of vessel</p>	<p>Shipping and Navigation</p>		<p>A 10nm study area for the array area and a 2nm study area for the offshore cable corridor is standard for shipping and navigation assessments and was discussed with MCA and Trinity House prior to the assessment. The offshore cable corridor study area covers the approach to the Harwich DW Channel, and traffic using the Sunk and Trinity DW routes. Detailed analysis of vessel traffic within this study area is included in the NRA (Appendix 15.1, document reference 3.3.16).</p> <p>Sand waves are noted in Navigational Features detailed in Appendix 15.1 Navigational Risk Assessment (document reference 3.3.16) and water depth changes are discussed in Section 15.6.2.7 of Chapter 15 Shipping and Navigation.</p> <p>A detailed vessel length analysis has been undertaken in Appendix 15.1 Navigational Risk Assessment (document reference 3.3.16).</p> <p>A detailed vessel draught analysis has been undertaken in the NRA (Appendix 15.1, document reference 3.3.16).</p> <p>Impacts have been assessed via the FSA in Section 15.6 of Chapter 15 Shipping and Navigation.</p>	<p>N</p>
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	<p>lengths recorded during each survey period. This table does not represent the number of Ultra Large Container Vessels using the area. There is a significant difference between a 200m vessel and a 400m vessel. Please can this table be extended to show/ represent the other sizes of ships in the area. At the bottom end of the scale please break down the 50m box. For example, there is a significant difference between a 50 offshore vessel and 10-meter yacht.</p> <p>Section Topic Comment</p> <p>147. Excluding the proportion of vessels for which a length was not available, the average length of vessels within the study area during the winter and summer survey periods was 165m and 145m, respectively. The difference in average vessel length between the two survey periods may be attributed to the greater presence of small recreational vessels in the summer period This number has no relevance as it is not representative in any way for the vessels using the area.</p> <p>148. Figure 6.17 presents a plot of the vessel tracks recorded during the combined survey periods, colour-coded by vessel length. As above, this need breaking down.</p> <p>Figure 6.18 Vessel Draught Distribution (Winter and Summer 2022) 154. Figure 6.19 presents a plot of the vessel tracks recorded during the survey periods, colour-coded by vessel draught. Again, this need breaking down. HHA currently receive vessels up to 16m draught, this is a stark difference from a 9m draught vessel. As such the image and text are not representative.</p> <p>155. Similar to the vessel length</p>				
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	<p>distribution, the largest vessels by draught were typically commercial vessels associated with the TSS routes and the smaller vessels were typically wind farm or recreational vessels seen in the vicinity of the array areas and Greater Gabbard and Galloper. Pilot vessels to the west of the study area were also among the vessels with smallest draught. It is worth noting that pilot vessel are attending vessels of all draughts, and so their own draught is not relevant.</p> <p>Section Topic Comment B.3.3 Vessel Length 197. The vessel traffic recorded during the 12-month period within the study area is shown in Figure B.7, colour-coded by vessel length As above, this need breaking down. 199. The average vessel length recorded during the 12-month period was 144m. The largest vessels recorded measured 400m, which were container ships. This number has no relevance as it is not representative in any way for the vessels using the area. Annex C Risk Control Log Impact 2: Vessel displacement There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable. Impact 3: Increased vessel to vessel collision risk (third party to third party) There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable. Impact 4: Increased vessel to vessel collision risk (third party to project vessel) There is currently not enough project detail for the</p>				
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	<p>cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable.</p> <p>Section Topic Comment Impact 6: Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable.</p> <p>Operational Phase Impact 2: Vessel displacement There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable.</p> <p>Impact 3: Increased vessel to vessel collision risk (third party to third party) There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable.</p> <p>Impact 4: Increased vessel to vessel collision risk (third party to project vessel) There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable.</p> <p>Section Topic Comment Impact 6: Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be</p>				
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	<p>discussed. As such Risk cannot be stated as tolerable.</p> <p>Impact 7: Interaction with subsea cables including cable protection</p> <p>There is currently not enough project detail for the cable route to assess this. Additionally, control measures have not be discussed. As such Risk cannot be stated as tolerable.</p> <p>Yours faithfully</p> <p>William Barker Marine Director (Harbour Master)</p>				
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<p>NFOWFS3_032_001_140 723</p>	<p>Dear Sirs</p> <p>Please find attached the UK Health Security Agency's response to the above consultation.</p> <p>Kind regards</p> <p>Ms Carol Richards NSIP Admin Team Environmental Hazards and Emergencies Department Radiation, Chemical and Environmental Hazards UK Health Security Agency Carol.richards@ukhsa.gov.uk</p> <p>www.gov.uk/ukhsa Follow us on Twitter @UKHSA Environmental Hazards and Emergencies Department Seaton House, City Link London Road Nottingham, NG2 4LA nsipconsultations@ukhsa.gov.uk www.gov.uk/ukhsa Your Ref: 004788663-01 Our Ref: 63518CIRIS FREEPOST NORTH FALLS 14th July 2023</p> <p>Dear Sirs Nationally Significant Infrastructure Project Public Consultation Section 42 Stage Thank you for your consultation regarding the above development. The UK Health Security Agency (UKHSA) welcomes the opportunity to comment on your proposals and Preliminary Environmental Information Report (PEIR) at this stage of the Nationally Significant Infrastructure Project (NSIP). Please note that we request views from the Office for Health Improvement and Disparities (OHID) and the</p>	<p>Human Health</p>		<p>Noted. All four themes (access,; traffic and transport; socioeonomi; land use) have been addressed in Chapter 28 (Human Health) and the following chapters of the ES as relevant: Chapter 22 Land Use and Agriculture (Volume I) (document reference 3.1.24), Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) and Chapter 31 Socio-economics (Volume I) (document reference 3.1.33).</p>	<p>N</p>
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	<p>response provided is sent on behalf of both UKHSA and OHID. Please note that we have replied to earlier consultations as listed below and this response should be read in conjunction with that earlier correspondence: Request for Scoping Opinion 13/08/2021 The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from, for example emissions to air or road traffic incidents is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.</p>				
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<p>NFOWFS3_032_002_140 723</p>	<p>We have assessed the submitted documentation and wish to make the following comments: 2 Environmental Public Health We have considered the submitted documentation and can confirm that we are satisfied with the overall approach taken in preparing the Environmental Impact Assessment (EIA) and the conclusions drawn. We wish to make the following comments: We would note that although it does not affect the results of the assessment, the developer has stated that the annual mean NO2 Objective of 40µg.m-3 has been not exceeded at any diffusion tube location across the five-year period, whereas the data presented indicate that the annual monitored concentrations at three of the diffusion tube monitoring locations from 2017 exceed the annual mean NO2 objective; in our view this statement should be corrected both within the Air Quality chapter and throughout the submission. Reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), and maximise co-benefits (such as physical exercise) and encourage their consideration during development design, environmental and health impact assessment, and development consent. In relation to EMF potential human health impact, please specify in</p>	<p>Onshore Air Quality</p>		<p>The monitoring data carried out by Tendring District Council has been updated since the PEIR, including description of the monitoring results including in Section 20.5.</p>	<p>N</p>
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	<p>section 28.5.9 that the magnetic field range quoted is based on typical levels calculated at 1 metre above ground level for buried 400 kV cables.</p>				
<p>NFOWFS3_032_003_140 723</p>	<p>Human Health and Wellbeing This section of OHIDs response, identifies the wider determinants of health and wellbeing we expect the Environmental Statement (ES) to address, to demonstrate whether they are likely to give rise to significant effects. OHID has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are:</p> <ul style="list-style-type: none"> • Access • Traffic and Transport • Socioeconomic • Land Use 	<p>Introduction</p>		<p>Noted. All four themes have been addressed in Chapter 28 (Human Health) and the following chapters of the ES as relevant: Chapter 22 Land Use and Agriculture (Volume I) (document reference 3.1.24), Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) and Chapter 31 Socio-economics (Volume I) (document reference 3.1.33).</p>	<p>N</p>

<p>NFOWFS3_032_004_140 723</p>	<p>Having considered the submitted consultation documents OHID wish to make the following specific comments and recommendations: 3 Chapter 27 Traffic and Transport Link screening We note the use of the Guidelines for the Environmental Assessment of Road Traffic (GEART) and welcome the ongoing discussions within the traffic and transport Expert Topic Group (ETG) meetings. The assessment uses GEART to screen and allocate sensitivity for the 42 separate highway sections known as links. This is reported within Table 27.17 Link screening. Link ID 5 reports a concentration of sensitive receptors along the link including residential properties, a public house and a shop. The link is also crossed by PRoW and has limited separation from traffic which is provided with a narrow footway only along some of the link. Route ID 5 is therefore assessed as having high sensitivity and reports a 12% increase in all vehicles' peak movements. GEART requires sensitive links that are showing greater than 10% increase in total traffic flows (or HGV component) should be screened in, yet Table 27.17 does not include this link for further assessment. Recommendation The screening for Link 5 should be reviewed and further assessment completed in accordance with GEART</p>	<p>Traffic and transport</p>		<p>Table 27-16 of Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES identifies that Link 5 would experience a change in traffic flows below EATM screening thresholds. In accordance with EATM the link is therefore screened out of the assessment.</p>	<p>Y</p>
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<p>NFOWFS3_032_005_140 723</p>	<p>Accident clusters Table 27.23 identifies an existing pattern of collisions at the A133/B1027 St John's Roundabout (cluster site 1) involving collisions between pedestrians/cycles and vehicles. It is assessed that the change in HGV traffic associated with the construction of North Falls could result in a potentially significant highway safety effect at this roundabout. It is therefore proposed that a series of additional mitigation measures will be outlined within a future OCTMP (as part of the DCO application) and secured by a DCO Requirement. The measures are outlined in Table 27.25. The potential mitigation measures do not appear to consider HGV design in relation to cyclist and pedestrian visibility. Transport for London have successfully improved road safety involving HGVs and cyclists / pedestrians and are currently consulting on further improvements to vehicle design. HGVs over 12 tonnes will be required to have a minimum three-star DVS rating or fit a system of updated safety features - the Progressive Safe System (PSS). 4 Recommendation This potential additional mitigation of a DVS rating or PSS should be considered and discussed with the traffic and transport Expert Topic Group (ETG). This potential mitigation should be reported within the ES with suitable justification for any decisions to include or exclude from mitigation measures.</p>	<p>Traffic and transport</p>		<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_032_006_140 723</p>	<p>If you require any clarification on the above points or wish to discuss any particular issues, please do not hesitate to contact us. Yours faithfully On behalf of UK Health Security Agency nsipconsultations@ukhsa.gov.uk Please mark any correspondence for the attention of National Infrastructure Planning Administr</p>	<p>N/A</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_033_001</p>	<p>North Falls FREEPOST 14th July 2023 Dear Project Team, Reference: North Falls Statutory Consultation Thank you for consulting the Woodland Trust on the second stage of consultation for the proposed scheme. We remain concerned regarding potential detrimental impact to Simon's Wood LoWS (grid reference: TM1601624022) and Holland Mill Wood WT site (grid reference: TM200195) due to their proximity to the scheme boundary. Further information is outlined below.</p>	<p>Onshore Ecology</p>		<p>Noted.</p>	<p>N</p>

NFOWFS3_033_002	<p>Ancient Woodland</p> <p>Natural England and the Forestry Commission, the Government's respective bodies for the natural environment and protecting, expanding and promoting the sustainable management of woodlands, define ancient woodland as follows within their standing advice¹:</p> <p>"Ancient woodland takes hundreds of years to establish and is defined as an irreplaceable habitat. It is a valuable natural asset important for: wildlife (which include rare and threatened species); soils; carbon capture and storage; contributing to the seed bank and genetic diversity; recreation, health and wellbeing; cultural, historical and landscape value. It has been wooded continuously since at least 1600AD. It includes:</p> <ul style="list-style-type: none"> • Ancient semi-natural woodland [ASNW] mainly made up of trees and shrubs native to the site, usually arising from natural regeneration. • Plantations on ancient woodland sites – [PAWS] replanted with conifer or broadleaved trees that retain ancient woodland features, such as undisturbed soil, ground flora and fungi" <p>Both ASNW and PAWS woodland are given equal protection in government's National Planning Policy Framework (NPPF) regardless of the woodland's perceived condition, its size, or features it contains.</p>	Onshore Ecology		Noted.	N
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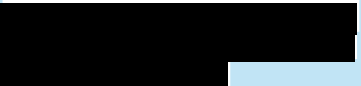
NFOWFS3_033_003	<p>Veteran Trees Natural England's standing advice on veteran trees states that they "can be individual trees or groups of trees within wood pastures, historic parkland, hedgerows, orchards, parks or other areas. They are often found outside ancient woodlands. They are also irreplaceable habitats. A veteran tree may not be very old, but it has significant decay features, such as branch death and hollowing. These features contribute to its exceptional biodiversity, cultural and heritage value." 1 https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions</p>	Onshore Ecology		Noted.	N
NFOWFS3_033_004	<p>Planning Policy Paragraph 5.3.14 of the Overarching National Policy Statement for Energy (EN-1) states: "Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat. Aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons why." The National Planning Policy</p>	Policy and Legislative Context		Noted.	N

	<p>Framework, paragraph 180, states: "When determining planning applications, local planning authorities should apply the following principles: c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶³ and a suitable compensation strategy exists,"</p>				
NFOWFS3_033_005	<p>Impacts to Ancient Woodland/Woodland Trust Sites The proposed corridor boundary is sited adjacent to our Holland Mill Wood site, plus an area of ancient woodland known as Simon's Wood LoWS. As previously outlined, we are specifically concerned about the following impacts to the ancient woodland/Woodland Trust Site:</p> <ul style="list-style-type: none"> • Permanent fragmentation due to the removal of adjacent semi-natural habitats, such as small wooded areas, hedgerows, individual trees and wetland habitats if continued access to the cable once constructed is required. 	Onshore Ecology		<p>The outlined impacts are addressed in Sections 23.6.1.2 and 23.6.1.5 of Chapter 23 (Onshore Ecology). Related mitigation is outlined in the OLEMS (document reference 7.14).</p> <p>The impact of construction traffic movements on other ecological receptors within 200m of construction traffic routes is considered in Section 20.6.1.3.2 of Chapter 20 (Onshore Air Quality).</p> <p>Where the in-combination values are above 1% of the Critical Load or Level, an ecologist determined whether any significant effects may be experienced at the affected habitats. The determination of the significance of effects associated with nutrient nitrogen/acid deposition and airborne NOx concentrations is detailed in Chapter 23 Onshore Ecology (Volume I) (document reference 3.1.25) and Chapter 24 Onshore Ornithology (Volume I) (document reference 3.1.26).</p>	N
NFOWFS3_033_006	<ul style="list-style-type: none"> • Noise and dust pollution impact to woodlands within close proximity of the cable installation area. 	Noise and Vibration	Onshore Ecology		
NFOWFS3_033_007	<p>Root damage to woodland boundary trees during installation of the cable.</p> <ul style="list-style-type: none"> • The potential for trampling of sensitive ancient woodland flora and soils if access is required within any ancient woodland. Natural England and Forestry Commission have identified 	Onshore Ecology		<p>Noted. Impacts relating to ancient woodland are addressed in Sections 23.6.1.2 and 23.6.1.5 of Chapter 23 (Onshore Ecology)..</p> <p>No significant effects are predicted to occur on ancient woodlands.</p>	N

	impacts of development on ancient woodland within their standing advice (please see the annex at the foot of this document for the full range of impacts outlined). This guidance should be considered Government's position with regards to development impacting ancient woodland, although Natural England and Forestry Commission should still be consulted for specific comment on this proposal.				
NFOWFS3_033_008	Furthermore, we hold concerns with regards to potential nitrogen deposition to several ancient woodlands within the surrounding area. The Trust is of the opinion that all developments should ensure that the process contribution of ammonia/nitrogen does not exceed 1% of the critical level and load. We would therefore recommend that the cable's location should be designed using detailed ammonia modelling to achieve insignificant process contributions on the surrounding ancient woodlands.	Onshore Ecology		<p>The onshore cable route has been designed incorporating environmental considerations including sites designated for nature conservation. Air quality impacts upon ancient woodlands assessed in Section 23.6. With regards to the comment below, Holland Hall Wood is located over 200 m from the onshore cable route and roads used by project traffic and therefore has been scoped out of the assessment. Simon's Wood has been included in Sections 23.6.1.2 and 23.6.1.5.</p> <p>No significant effects are predicted to occur on ancient woodlands.</p> <p>Chapter 20 Onshore Air Quality (Volume I) (document reference 3.1.22) provides further detail.</p>	Y
NFOWFS3_033_009	<p>Mitigation for ancient woodland</p> <p>Buffering ancient woodland can be an ideal mitigation measure as buffer zones can be used to establish distance between the development and habitat, which helps to alleviate harmful impacts, while also creating new areas of habitat around the woodland.</p> <p>This development should allow for a buffer zone of at least 30 metres to prevent adverse impacts such as pollution and disturbance and ensure avoidance of root damage. Although not ancient, we would also request that a 30-metre buffer is afforded to Holland Mill Wood to ensure detrimental impacts to our site are avoided.</p>	Onshore Ecology		<p>It is not possible for the Project to cross Little Clacton Road without being within 30m of Holland Mill Wood (part of the Great Holland Pits site). The boundary is approximately 10m from the Holland Mill Wood at its closest point. This was raised in the October 2023 ETG, where EWT confirmed they are satisfied with the proposals.</p> <p>No significant effects are predicted to occur on ancient woodlands.</p> <p>This is addressed in Sections 23.6.1.2 and 23.6.1.5 of Chapter 23 (Onshore Ecology).</p>	N

	<p>Additional mitigation approaches are also outlined in our Planners' Manual2; these measures would help ensure that the development meets policy requirement and guidance and include:</p> <ul style="list-style-type: none"> - Retaining and enhancing natural habitats around ancient woodland to improve connectivity with the surrounding landscape. 				
NFOWFS3_033_010	<p>Measures to control noise, dust and other forms of water and airborne pollution.</p> <ul style="list-style-type: none"> - Implementation of an appropriate monitoring plan to ensure that proposed measures are effective over the long term and accompanied by contingencies should any conservation objectives not be met. 	Noise and Vibration	Onshore Air Quality		
NFOWFS3_033_011	<p>Veteran trees Paragraph 265 (23.6.1.5) of the Preliminary Environmental Information Report (PEIR) outlines that 11 veteran trees are located within the project boundary. It is essential that no veteran trees are lost as part of the proposals. The loss of any such trees can have a significant impact on local wildlife, particularly those which depend on the habitat provided by veteran trees.</p>	Onshore Ecology		<p>No veteran trees are to be lost as part of the Project's development. This is addressed in Section 23.6.1.5 of Chapter 23 (Onshore Ecology).</p> <p>No significant effects are predicted to occur on veteran trees.</p>	Y
NFOWFS3_033_012	<p>Trees are susceptible to change caused by construction/development activity. As outlined in 'BS5837:2012 - Trees in relation to design, demolition and construction' (the British Standard for ensuring development works in harmony with trees), construction work often exerts pressures on existing trees, as do changes in their immediate</p>	Onshore Ecology		<p>Noted. This is addressed in Section 23.6.1.5 of Chapter 23 (Onshore Ecology) and in the OLEMS (document reference 7.14).</p>	N

	environment following construction of any new infrastructure. Root systems, stems and canopies, all need allowance for future movement and growth, and should be taken into account in all proposed works on the scheme through the incorporation of the measures outlined in the British Standard.				
NFOWFS3_033_013	While BS5837 guidelines state that trees should have a root protection area (RPA) of 12 times the stem diameter (capped at 15m), this guidance does recognise that veteran trees need particular care to ensure adequate space is allowed for their long-term retention. It is imperative that Natural England and Forestry Commission's standing advice on root protection areas for veteran trees is taken into account as the proposals progress. This advice states: "For ancient or veteran trees (including those on the woodland boundary), the buffer zone should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter. This will create a minimum root protection area. Where assessment shows other impacts are likely to extend beyond this distance, the proposal is likely to need a larger buffer zone."	Onshore Ecology		All veteran trees are more than 15m from the onshore project area. Impacts relating to woodlands and veteran trees are addressed in Section 23.6.1.5 of Chapter 23 (Onshore Ecology). No significant effects are predicted to occur on woodland habitats.	Y

<p>NFOWFS3_033_014</p>	<p>Conclusion Ancient woodland is an irreplaceable habitat, once lost it is gone forever. Any development resulting in loss or deterioration of ancient woods and trees must consider all possible measures to ensure avoidance of adverse impact. We hope our comments are of use to you. Should you wish to discuss our response further, please do not hesitate to contact us. 2  Yours faithfully, Nicole Moses Campaigner – Woods Under Threat Woods Under Threat team</p>	<p>Onshore Ecology</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_034_001_140 723</p>	<p>Thank you for consulting the PLA on the proposed North Falls Offshore Wind Farm and the Preliminary Environmental Information report (PEIR) which has been produced. The PLA is the statutory harbour authority for the tidal River Thames between Teddington and the outer Thames Estuary. Governed by the Port of London Act 1968 its statutory functions include responsibility for conservancy, hydrographic surveying, dredging, managing the public navigation and controlling vessel movements. The proposed wind farm lies outside the PLA's statutory limits under the 1968 Act. However, the PLA's functions include the promotion of the use of the River for freight and passengers as an important and sustainable transport corridor. The Port of</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>

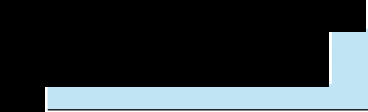
	<p>London is the country's biggest port – 55m tonnes of goods were handled in the Port in 2022 - and its contribution to international trade is critical. Over 48,000 jobs depend on the Port, which generates more than £4.5 billion in economic value added annually, and there is significant ongoing investment taking place within the Port. It is therefore imperative that the existing and future capacity and operation of the Port of London are not compromised during construction and operation of the wind farm.</p>				
NFOWFS3_034_002_140 723	<p>The PEIR is written on the basis that subsequent assessment in the Environmental Statement will achieve a tolerable outcome and relies on being able to agree mitigation with the MCA. This seems premature - how can the risk be determined before the assessment is carried out?</p>	EIA Methodology		<p>Mitigation for Shipping and Navigation has been developed in consultation with the MCA and other stakeholders (discussed in ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17)), and was informed by feedback on the PEIR.</p>	N
NFOWFS3_034_003_140 723	<p>The NRA manages to gloss over the idea that the Port of London could be affected by the proposed development by avoiding mention of the port. It notes there are three deep water routes leading from the Sunk Pilot station (4.2 Routeing Measures) but there is no comment on the importance of Black Deep and King's Channel as being the deep water access routes for the port. It seems that as the port is outside of either the 10nm or 2nm assessment areas its significance has not been considered. In 4.9 Port, Harbour and Related Facilities, the port is not mentioned and in the assessment of Main Commercial Routes (7.2) the assessment</p>	Shipping and Navigation		<p>These DW routes are outside of the study area, however detailed draught analysis of associated vessels has been undertaken in Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16).</p>	N

	relates to those within the 10nm of the array areas, so despite the data captured on the chart showing the 90th percentile traffic approaching Black Deep, it is not listed as a main commercial route.				
NFOWFS3_034_004_140 723	In responding to the MGN 654 checklist, under 'Assessment of the cumulative and individual effects' point vi. asks 'Whether the nearby area contains prescribed routing schemes or precautionary areas' – only IMO routing schemes have then been considered in proximity to the array and local traffic routes to the Port of London or Harwich have not been considered. In Table A.2, the Annex 1 checklist specifically mentions 'Analysis of the marine traffic, including base case and future traffic densities and types' but the response only considers current traffic and make no mention of assessing future traffic concerns.	Shipping and Navigation		Future case vessel traffic is assessed in Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16) Detailed analysis of the Sunk and Trinity DW is also provided in this appendix.	N
NFOWFS3_034_005_140 723	In the section on vessel draughts (6.1.3.2) it is noted that the maximum draught vessel recorded during the survey was 20.7m but this was using the North Hinder TSS and as Figure 6.19 sets the upper limit of analysis as a category of vessels with a draught over 9m, those using the Port of London's deep water routes which are over 9m but less than 20.7m are not captured and do not highlight current maximum draughts of vessels in the area in order for the report to consider how these draughts may increase over time.	Shipping and Navigation		Vessel draught analysis is included within the Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16) including a focus on greater vessel draughts within the offshore cable corridor and DW routes. This includes consideration of the potential for increasing draughts.	N

<p>NFOWFS3_034_006_140 723</p>	<p>In response to Harwich's concerns, the cable route has been moved south and now in direct conflict with the Sunk Deep Water Route (DWR). Dredged Areas had automatically been discounted from the selection process, but "dredged area" appears to have been defined by the cartographic depiction on a navigation chart rather than review of the legal powers parties may already hold for dredging. The London Gateway HEO (which is not referenced), has powers for dredging to 16.5m + 1m tolerance along the Sunk DWR. It would appear the cable corridor crosses the Sunk DWR in approx. 18m of water. If the cable were laid with a 5% reduction in water depth as a result of cable lay there would be 17.1m of water which is in the zone for which London Gateway already have powers to dredge. There is also no consideration of future deepening of the channel and the disbenefits that the presence of a cable crossing would bring.</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>This has been considered and assessed in Section 15.6 of Chapter 15 Shipping and Navigation. The Project is committing to not reducing depths over the Sunk or Trinity DW routes.</p>	<p>Y</p>
<p>NFOWFS3_034_007_140 723</p>	<p>Where cable interaction is considered with vessels in the Shipping and Navigation chapter, paragraph 177 misses the point entirely and talks about an 'increase in underkeel interaction'. The dredge requirements have not been considered and the focus is instead on the keel of the vessel getting too close to the cable itself. Whilst underkeel clearance is important, the cable cannot limit the future of the UK's largest port by being laid at a depth that is insufficient to allow a dredge to occur at a later date. Paragraph 180 considers the risk in not laying the cable at depth but again this only refers to interaction with</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>Impacts on port access, including in terms of future case trends has been assessed in ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17). Cable crossings and the associated cable protection are also considered in the assessment. MGN 654 requires that any reduction in water depth of greater than 5% must be discussed with the MCA to agree appropriate mitigation.</p>	<p>N</p>

	vessels and not the risk to the Port. There is also no consideration of interaction with other cables or consideration of contingencies for areas where cable cannot be buried due to surface nature. Neuconnect is mentioned in table 15.11 on cumulative effects, but there is no consideration of crossing points and effect on burial depths.				
NFOWFS3_034_008_140 723	The PLA, in line with other projects in the Estuary and as set out during the consultation process, highlighted the importance of future proofing and emphasised the PLA's requirement of a safeguarding of 20m of water plus any burial depth required for cable protection.	Offshore Archaeology and Cultural Heritage		Impacts on port access including in terms of future case trends are assessed in Section 15.6 of Chapter 15 Shipping and Navigation. Equivalent assessment on a cumulative basis is provided in Section 15.7 of Chapter 15.	N
NFOWFS3_034_009_140 723	Opportunities to have a combined cable corridor with Five Estuaries have not been considered and in combination effects with Five Estuaries with regard to current and future port access need to be assessed in the ES. It is also noted that the scheme has a lifespan of approx. 30 years and upon decommissioning, cables would be abandoned and any scour protection (with its resultant impact on water depths) is likely to be left in situ.	Offshore Archaeology and Cultural Heritage	Site Selection and Assessment of Alternatives	See Chapter 4 Site Selection and Assessment of Alternatives (Volume I) (document reference 3.1.6) of the ES. Cumulative impacts are assessed in 15.7. Further, the Outline NIP (document reference 7.24) provides commitments around concurrent activities between North Falls and Five Estuaries. The Applicant will comply with its decommissioning obligations under Chapter 3 (Decommissioning of Offshore Installations) of the Energy Act 2004 which require the Applicant to prepare a decommissioning programme following notice from the Secretary of State.	Y
NFOWFS3_034_010_140 723	The Shipping and Navigation Chapter of the PEIR makes no reference in the "reduced port access" worst case scenarios to burial depths not being achieved during construction or to the potential for reduced port access due to the burial depths that are proposed.	Shipping and Navigation		Impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage is assessed in Section 15.6.2.6 of Chapter 15 Shipping and Navigation.	N

<p>NFOWFS3_034_011_140 723</p>	<p>Notably under the impact 'interaction with subsea cables' there is reference to an offshore export cable target burial depth of only 0.5m and a minimum of 0m. Rock berm protection has an indicative height of 1.4m. The PEIR appears to rely on the cable burial risk assessment to determine depths for the cable, but this hasn't been completed yet and there is lots of resultant uncertainty for the PLA as to what is proposed and where. Discussion of risks relating to anchor strike of the cable are dismissive. The scale of navigation chart used in the figures for the Navigation and Shipping chapter is worse than that used in commercial fisheries chapter, the latter actually showing the location of the charted deep water routes referenced in the assessment text.</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>Charted DW routes have been assessed in detail within Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16).</p>	<p>N</p>
<p>NFOWFS3_034_012_140 723</p>	<p>With regard to construction further consideration needs to be given to the disruption to services around the Sunk Pilot station – the PLA previously raised that any construction and eventually maintenance needs to be done in close cooperation with the PLA and Harwich in order to minimise the disruption over a 3 year period.</p>	<p>Shipping and Navigation</p>		<p>Collision risk and disruption from project vessels during construction is considered in Sections 15.6.1.4 and 15.6.1.6 and in sections 15.6.2.4 and 15.6.2.6 of Chapter 15 Shipping and Navigation. This includes consideration of the Outline NIP (document reference 7.24) which North Falls have developed in liaison with local ports including PLA to manage impacts on pilotage.</p> <p>Embedded mitigation measures detailed in Section 15.3.4 of Chapter 15 including the marine coordination of Project vessels.</p>	<p>N</p>
<p>NFOWFS3_034_013_140 723</p>	<p>It is also suggested that communication and consultation needs to occur with London Gateway and other terminal operators using the deep water routes so that scheduling can be carefully managed throughout this time.</p> <p>Given the seriousness of the issues raised in this response the PLA would welcome the opportunity of a meeting to go</p>	<p>Technical Consultation</p>		<p>Noted.</p>	<p>N</p>

	through the points in detail. Regards Lucy				
NFOWFS3_035_001	Dear Sir or Madam, The Netherlands acknowledges the receipt of the Espoo notification and information regarding the proposed North Falls Offshore Wind Farm (reference: 004788663-01). The Netherlands does not have objections concerning the developments. However, we wish to point out that a number of crucial aspects deserve more attention. We would ask to inform us on if/ how our concerns, and the identified omissions in the assessment will be addressed and if deemed necessary, what additional mitigating measures will be proposed.	N/A		Noted.	N
NFOWFS3_035_002	The Netherlands would like to stress the importance of including: 1) up-to-date information of policy and spatial plans of other North Sea countries. The current report does not consider the Natura2000 area "Bruine Bank" in the Dutch EEZ (which lies near the North Sea Falls area) nor the more recent windfarm plans (Dutch offshore wind farm developments until 2030). Therefore the current assessment of the environmental effects is deemed insufficient. Information on Dutch offshore wind development can be found here (the information will be further updated during this summer): 	Infrastructure and Other Users		Bruine Bank Special Protection Area and other transboundary Natura 2000 sites are considered in Appendix 1.1 to the Report to Inform Appropriate Assessment (Appendix 1.1 Habitats Regulations Assessment Screening (Document Reference 7.1.1.1)).	N

NFOWFS3_035_003	<p>2) an assessment of cumulative effects as part of the Environmental Impact Assessment. We refer here to cumulative impacts on several of the considered species of the windfarms from different North Sea countries. These should be considered to get a comprehensive picture of the transboundary effects in cumulation on:</p> <ul style="list-style-type: none"> - (migratory) birds, especially considering effects on the Natura2000 areas relevant for migratory species 	Offshore Ornithology		Noted.	N
NFOWFS3_035_004	<p>mobile species such as the harbour porpoise (regarding underwater noise) It is unclear how cumulative effects are assessed. The assessment indicates that habitat loss and collisions are included in the assessment, but also due to not all Dutch Offshore Wind Developments (planned windfarms) being included, the cumulative assessment is in our view insufficient. There is no cumulating of effects on an international level for birds, and certainly for Common guillemot and Northern gannets this would be of utmost importance.</p>	Marine Mammals		ES Appendix 12.6 Marine Mammal Cumulative Effect Assessment Screening (Document Reference: 3.3.11) considers relevant international developments, including Dutch offshore wind farms.	N
NFOWFS3_035_005	<p>3) mitigation measures: including considering options on limiting underwater noise for marine mammals. The Netherlands (and Germany and Belgium) include this kind of information in EIAs including establishing a standard for underwater noise (impacts).</p>	Marine Mammals		All potential mitigation measures are being considered such as noise reduction measures, and timing of piling, see Section 12.78 of Chapter 12 Marine Mammals (Volume I) (document reference 3.1.14) and the Outline MMMP (document reference 7.7).	Y

NFOWFS3_035_006	4) (broader) ecosystem effects (e.g. stratification) in the assessment (those are missing now). In the current report it is not clear on the basis of which information the conclusion was drawn that there are no transboundary ecosystem effects to be expected.	Onshore Ecology		<p>Given that the likely impacts of the Project will be localised and small scale, and the prevailing physical processes are in a northeast to southwest direction, the zone of influence (shown in Figure 10.2, document reference 3.2.6) has no pathway for transboundary impacts on benthic and intertidal ecology. Transboundary effects have therefore been scoped out of further assessment in accordance with the Scoping Opinion (Planning Inspectorate, 2021).</p> <p>The fish and shellfish impact assessment takes account of the distribution of fish stocks and populations irrespective of national jurisdictions. Therefore, the Applicant considers that a specific assessment of transboundary effects in relation to fish and shellfish ecology is unnecessary. The suitability of this approach has been confirmed by the MMO and PINS in their Scoping Opinion.</p> <p>Further information and clarification for the conclusions reached for transboundary effects have been added, see Section 12.10 Chapter 12, Marine Mammals.</p>	N
NFOWFS3_035_007	5) effects on marine mammals, for instance related to underwater noise. More information over which species were included and on which information is available for (a part of) the species.	Marine Mammals		Text has been reviewed, further information for the inclusion of marine mammal species in assessments have been detailed in Appendix 12.2 Marine Mammal Baseline Information (document reference 3.3.7).	N
NFOWFS3_035_008	6) effects on bats. Bats are only mentioned in relation to effects on ecology on land (linked to the planned infrastructure on land). The effects of offshore wind farms on migrating bats are not included in the assessment.	Onshore Ecology		Migratory bats are considered in Chapter 23 of the ES (Onshore Ecology), as described in Section 23.5.4.2.3.	N

<p>NFOWFS3_035_009</p>	<p>7) effects on birds: a. The Northern fulmar and the Sandwich tern are not considered concerning habitat loss, please do consider these as they are sensitive species. b. The Razorbill and the Sandwich tern are included, but they need some extra attention concerning cumulative impacts and the effects of international offshore windfarm developments. With the reasoning applied it is concluded that the ecological effects are lower. However we do not agree with the reasoning. The effects should be assessed in a quantitative manner. c. For the Razorbill (<i>Alca torda</i>) birds there are quite high mortality rates. This is problematic. The same applies to the Northern gannet. How will this be taken into consideration in the developments? Will specific measures be taken or will the plans be altered in any way? Will this be assessed further?</p>	<p>Offshore Ornithology</p>		<p>Northern fulmar and Sandwich tern were considered in relation to habitat loss resulting from displacement from North Falls but neither species was scoped in for assessment.</p> <p>Fulmar is considered to have low susceptibility to disturbance, although it may show some avoidance of OWFs. However, the species ranges over extensive areas (during the breeding season a mean maximum foraging range plus one standard deviation of 1,200.2 km; Woodward et al. 2019) and it is not considered that displacement from OWFs would materially affect the foraging area available to the species or its ability to meet energy from foraging requirements throughout the year.</p> <p>Sandwich terns were recorded in very low numbers in the baseline surveys for North Falls. The array area for North falls is not considered of any importance to this species, and therefore there would be no effect in relation to habitat loss.</p> <p>As stated, information on the reference populations of seabirds at the spatial scale that would be required for a quantitative transboundary assessment is not currently available, and therefore it is possible only to undertake a qualitative assessment. As stated in the North Falls PEIR, based on expert judgement, because of the increased reference populations that would result from the expansion of the area of search, it is anticipated that the inclusion of non-UK OWFs is highly likely to reduce the cumulative effect assessed for each species (as presented in Section 13.7.3 of Chapter 13, Offshore Ornithology, PEIR).</p> <p>After the publication of the PEIR, the boundary of the North Falls array has been revised so that it now covers a smaller area, which will reduce the predicted effects of collision and displacement on all species scoped in for assessment. The Habitats Regulation Assessment for the revised boundary, which will be produced to accompany the DCO application for consent, will include population models for razorbill, gannet and other species screened in, as a context for assessing the predicted impacts of North Falls alone, and in combination with other offshore wind farms.</p>	<p>N</p>
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NFOWFS3_035_010	8) effects on commercial fisheries. There is an impact on the Dutch commercial fisheries as chapter 14 of the offshore PEIR describes. The area consists of important fishing grounds for various demersal and pelagic fisheries that use beam trawls and seine netting (demersal) and midwater otter trawls (pelagic). Chapter 14 already analyses the expected short- and long-term impact for different fisheries on the access to the fishing grounds.	Commercial Fisheries		The economic effects resulting from disruption to fishing have been assessed in Chapter 31 Socioeconomics (Volume I) (document reference 3.1.33) of the ES. Consideration has been given to the Dutch fishing fleet for construction (Section 14.6.1.1.3 of Chapter 14 Commercial Fisheries) and operation (Section 14.6.2.1.3 of Chapter 14).	N
NFOWFS3_035_011	The Netherlands would like to request that the analysis also looks at the economic value of the fisheries and accounts for possible economic losses that may occur due to lack of or lesser access to important fishing grounds.	Commercial Fisheries		The economic effects resulting from disruption to fishing have been assessed in Chapter 31 Socioeconomics (Volume I) (document reference 3.1.33) of the ES. Consideration has been given to the Dutch fishing fleet for construction (Section 14.6.1.1.3 of ES Chapter 14 Commercial Fisheries), and operation (Section 14.6.2.1.3 of Chapter 14).	N
NFOWFS3_035_012	It is important to note that whilst the Dutch do not have historic rights in the given area, the Netherlands does have a share in the quota in these waters, for instance mackerel (MAC/2A34) and horse mackerel (JAX/4BC7D and JAX/2A-14). The construction of North Falls poses the risk that fisheries may fail to take advantage of fishing their share of quota due to the construction in these specific areas. Therefore the Netherlands would like to know what the government or wind farm operators can do to further mitigate potential losses and facilitate commercial fisheries in the area.	Commercial Fisheries		Consideration has been given to the Dutch fishing fleet for construction (Section 14.6.1.1.3 of ES Chapter 14 Commercial Fisheries), and operation (Section 14.6.2.1.3 of Chapter 14). The cumulative effects on commercial fishing arising from the Project in conjunction with other projects in the area are assessed in Section 14.7.3 of Chapter 14.	N

<p>NFOWFS3_035_013</p>	<p>9) aspects concerning safety of navigation: Transboundary effects on shipping are not expected. However, multiple conflicts with local ships' routing measures require attention. International coordination is recommended and the Netherlands likes to be involved. The following conflicts are identified:</p> <ul style="list-style-type: none"> a. The distances between the traffic separation schemes and the planned wind farms may not comply with paragraph 3.14 of the general provisions on ship routing. To ensure safe distances, it is recommended to adopt the NCSR 7-INF.15 report from the World Association for Waterborne Transport Infrastructure (PIANC). b. The impact of the irregular shapes on ships' situational awareness. c. The overlap between the southern wind farm and the precautionary area. d. The positioning of the western border of the northern wind farm that is located within the boundaries of the adjacent traffic separation scheme. e. The galloper recommended route (ferries) located within the southern wind farm area. <p>We would appreciate if you could inform us to which degree the aspects we mention above concerning gaps in the assessment can still be filled.</p> <p>With kinds regards,</p> <p>Mareike Erfeling</p>	<p>Shipping and Navigation</p>		<p>The array area has been refined in response to the PEIR feedback. The northern array has been removed and the southern array area reduced in size. Further details on the consultation with shipping stakeholders and responses to stakeholder comments are provided in Chapter 15 Shipping and Navigation (Volume I) (document reference 3.1.17) of the ES.</p>	<p>Y</p>
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<p>NFOWFS3_036_001_140 723</p>	<p>To whom it may concern, This letter is in response to the consultation on the North Falls Preliminary Environmental Information Report (PEIR). The National Federation of Fishermen's Organisation (NFFO) represents the interests of over 500 commercial fishing businesses in England and Wales. We are responding to this consultation as we feel that there are potential impacts to the commercial fisheries in the proposed area and the species that they rely upon. Commercial fisheries have existed in the proposed region for generations, both UK and EU fleets, and are already faced with extensive spatial restrictions such as existing offshore wind developments, aggregate extraction areas and dredge spoil grounds, Marine Protected Areas, and legislative restrictions in the region. Further displacement of commercial fishing in the region will result in economic harm, through loss of earnings from the ground and additional operating costs due to increased steaming times during construction and operation of the project, this is compounded by the cumulative scale of spatial restrictions in the Inner and Outer Thames region. The response below has been separated to specific concerns we have with regards to the Fish and Shellfish Ecology chapter and the Commercial fisheries chapter.</p>	<p>Commercial Fisheries</p>		<p>The likely significant effects on commercial fisheries as a result of displacement from fishing grounds has been considered for construction (Section 14.6.1.2), operation (Section 14.6.2.2), decommissioning (Section 14.6.3) and cumulative effects (Section 14.7.3).</p> <p>The likely significant effects of the Project on fish and shellfish receptors is addressed in Chapter 11 Fish and Shellfish Ecology (Volume I) (document reference 3.1.13) of the ES.</p>	<p>N</p>
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<p>NFOWFS3_036_002_140 723</p>	<p>Fish and Shellfish Ecology The following comments are in reference to the Fish and Shellfish Ecology chapter of the PEIR, Chapter 11, Volume I and the Fish and Shellfish Ecology Technical Report, Appendix 11.1, Volume III. We are concerned with many of the data sources used to characterise the baseline environment within this chapter. The PEIR uses data from studies that are temporally and spatially limited, mostly to areas that are beyond the boundaries of the The National Federation of Fishermen's Organisations Ltd 30 Monkgate, York YO31 7PF Tel: 01904 635430 Email: nffo@nffo.org.uk Web: www.nffo.org.uk development area and makes assessments of impacts from such data. This methodology only provides a 'temporal snapshot' of data specific to the studies cited and their spatial limits – a fundamental flaw in impact assessments. The reliance of offshore wind impact assessments on Coull et al., (1998) and Ellis et al., (2012) has been called into question in nearly all our responses to offshore developments. These data are over a decade old but seem to be used as a 'gold standard' to assess impacts on spawning and nursery grounds. We would expect to see a more precautionary use of these data within the assessments based on their well described limitations. There is minimal site-specific and contemporary data used that can support the assessments made within this chapter and little precautions given to the impacts assessed and conclusions drawn,</p>	<p>Fish and Shellfish Ecology</p>		<p>A description of the key sources of data and information used, including their limitations, are provided in Appendix 11.1 Fish and Shellfish Ecology Technical Report (Volume III) (document reference 3.3.5).</p> <p>The Applicant notes, that whilst Coull et al. (1998) and Ellis et al. (2012) are dated, both are conservative in nature as they identify wide spawning /nursery areas as well as overall spawning seasons and are currently accepted as the main references to provide an indication of spawning/nursery area potential for fish around the UK.</p>	<p>N</p>
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	<p>not demonstrating a robust and sufficient approach. For example, Chapter 14 documented that shellfish species such as whelk, crab and lobster are important commercial fisheries species in the region. Minimal data has been presented in the PEIR with regards to potential impacts to these specific receptors, but any proposed impacts have been assessed as negligible in all cases with no mitigation needed (this is prevalent for all receptors assessed). A paucity of data and evidence should be treated with caution when assessing impacts to the described receptors. Data was analysed from monitoring projects of other OWF developments, however the methodology used for these monitoring projects (e.g. beam trawl) is not the correct methodology for sampling receptors that the data have been used to assess (e.g. shellfish and pelagic fish). This incorrect use of data, from inappropriate methodologies, should be accounted for when assessing impacts to receptors. Acknowledging the limitations of the data but subsequently ignoring them and treating that data as concrete evidence, with no caveats, misinforms the assessment of the impacts and calls into question their validity. The National Federation of Fishermen's Organisations Ltd 30 Monkgate, York YO31 7PF Tel: 01904 635430 Email: nffo@nffo.org.uk Web: www.nffo.org.uk We acknowledge the difficulties with the lack of site-specific, contemporary data, but we would expect to see some element of precaution taken when assessing</p>				
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	impacts to fish and shellfish ecology, specifically when advised by inappropriate methodologies.				
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<p>NFOWFS3_036_003_140 723</p>	<p>Commercial Fisheries The following comments are in reference to the Commercial Fisheries chapter of the PEIR, Volume I, Chapter 14 and the Commercial Fisheries Technical Baseline Report, Volume III, Appendix 14.1. The proposed North Falls wind farm site supports a diverse and economically important fishing fleet this is well characterised within the PEIR, we also welcome the inclusion of fisheries-based data within the PEIR. We welcome the commitment to the development of a Fisheries Liaison and Co-Existence Plan; we would like to see this developed with all fisheries stakeholders in the region. However, the assessment of potential impacts makes several assumptions and conclusions that we disagree with when reviewing the data presented and feedback from our membership in the region. Chapter 14 describes the importance of the area to the UK potting fleet, with whelk being the species with greatest landings for the UK fleet in the assessment area. The impacts to shellfish receptors in Chapter 11, however, do not demonstrate a robust assessment of the impacts to this commercially important receptor. It is unclear what level of fisheries exclusion will be needed as described in Chapter 14. What is meant by "... where construction activities are taking place."? Does this equate to the whole site level or individual turbine installation? Clarity on this matter is needed to ensure the impact on the receptors is accurate.</p>	<p>Commercial Fisheries</p>		<p>It is the Applicant's position that the level of displacement would be a function of the extent of temporary loss or restricted access to fishing grounds for both UK and EU fleets.</p> <p>The worst case scenario for maximum temporary fishing area lost/maximum restriction in access to fishing as a result of construction activities are detailed in Table 14.3 of Chapter 14 Commercial Fisheries.</p>	<p>N</p>
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<p>NFOWFS3_036_004_140 723</p>	<p>We feel that the assumption with regards to displacement effects being equal to exclusion effects is inappropriate. Justification for this was given due to the challenging nature of assessing displacement without a framework to do so. This is not acceptable as displacement is one of the major impacts felt by the fishing industry when spatial restrictions are put in place. Displacement effects include but are not limited to: fishing The National Federation of Fishermen's Organisations Ltd 30 Monkgate, York YO31 7PF Tel: 01904 635430 Email: [REDACTED]</p> <p>effort squeeze and increased chance of gear conflict, increasing economic loss and safety risks – these impacts through displacement are not the same as through exclusion, displacement specific effects need assessing correctly. These issues are compounded when considering the EU fleets operating in the region that have been demonstrated to have extensive overlap with the development and a high intensity of effort. The impacts on other fisheries, predominantly the UK whelk fleet through displacement of the EU fleet, is likely to significant.</p>	<p>Commercial Fisheries</p>		<p>It is the Applicant's position that the level of displacement would be a function of the extent of temporary loss or restricted access to fishing grounds.</p> <p>Consideration has been given to the effects of displacement in Table 14.3 of Chapter 14 (Commerical Fisheries).</p> <p>The assessment of the likely significance of the effects of the Project on relevant commercial fisheries receptors caused by each identified impact is given in Section 14.6 of Chapter 14. The Project has proposed a wide range of embedded mitigation measures which will reduce/minimise impacts on commercial fishing and have been accounted for when identifying effect significance. These are listed in Section 14.3.3 of ES Chapter 14 and in the Outline FLCP (2023).</p>	<p>N</p>
<p>NFOWFS3_036_005_140 723</p>	<p>Extrapolation from non-site-specific examples should be done with caution when demonstrating potential co-existence. Examples of other offshore wind developments where fishing activity has taken place post construction does not justify the assumption that fishing activity can continue in the North Falls site during the operational phase. Environmental factors, array and</p>	<p>Commercial Fisheries</p>		<p>Examples of both mobile and static fishing methods occurring within various project sites has been included in Section 14.6.2.2 of Chapter 14 Commerical Fisheries.</p> <p>The other projects cited in the aforementioned Section have similar dimensions to North Falls with regard to turbine spacing (North Falls – minimum 820m between turbines, Westermost rough – minimum 800m between turbines, Walney extension – minimum 737m between turbines, Beatrice – 1170m between turbines).</p>	<p>N</p>

	<p>cable orientation differ greatly between developments and are key factors if a fishing vessel operates within a wind farm and if these are not suitable then preclusion is observed. Assumptions should be tempered when using examples from other sites as justification of “no impact” to the different receptors assessed for this development.</p>				
NFOWFS3_036_006_140 723	<p>The PEIR assesses no impacts to any receptors beyond a minor impact, resulting in no mitigation or monitoring proposed whether at the site level or cumulative scale. The Inner and Outer Thames Region has undergone, and continues to face, extensive spatial restrictions and there are specific concerns that the region has reached an over-saturated state, and this is having an ever-increasing effect on the regional and wider fishing industry. Further consideration of this needs to be undertaken within the cumulative assessments. For example, scoping out the cumulative snagging hazards through exposed cabling is inappropriate when it is well documented that buried cables can become exposed. This is especially worrying when the minimum target depth for this proposal is only 0.5 m alongside other cables in the region with a target depth of 0.6 m. This, combined with a highly diverse fishing fleet, has the potential to become a safety risk and should be scoped into the assessment. We welcome the commitment</p> <p>The National Federation of Fishermen’s Organisations Ltd 30 Monkgate, York YO31 7PF Tel: 01904 635430 Email: nffo@nffo.org.uk Web:</p>	Commercial Fisheries		<p>The justification for the significance assigned to the impacts on commercial fishing are presented in Section 14.6 of Chapter 14 (Commercial Fisheries).</p> <p>The likely significant effects arising from snagging risks to vessels are assessed in Section 14.6.1.5 of Chapter 14.</p> <p>These likely significant effects are further assessed in Chapter 15 Shipping and Navigation (Volume I) (document reference 3.1.17) of the ES.</p> <p>Snagging hazards have been sufficiently assessed in the Project alone assessment.</p> <p>Please note that 0.6m is the target minimum burial depth proposed, the final burial depth is yet to be determined and will be informed by a Cable Burial Risk Assessment (CBRA) (Table 14.4 of Chapter 14).</p>	N

	<p>to cable monitoring and reburial, however it is unclear what the mechanisms for this or the protocols for dissemination of snagging hazards when identified will be.</p>				
NFOWFS3_036_007_140 723	<p>The commercial fisheries in the region will be expected to see a vastly changing landscape through the lifespan of the North Falls project. The spatial squeeze on fisheries due to offshore developments in the region is already extensive and the likelihood of further restrictions with regards to the potential ban on all mobile gear within MCZs. There are also factors associated with the renegotiation of the Trade and Cooperation Agreement that will affect opportunities in the region. Whilst these elements are acknowledged in the PEIR as possible factors, they are not accounted for in the assessments.</p>	Commercial Fisheries		<p>The cumulative likely significant effects on commercial fishing arising from the Project in conjunction with other projects in the area are assessed in Section 14.7.3 of Chapter 14 (Commercial Fisheries) based on the information available.</p>	N

<p>NFOWFS3_036_008_140 723</p>	<p>It is recognised that the PEIR attempts to characterise a commercial fisheries baseline by analysing many different data sources to describe and analyse the commercial fisheries impact, including stakeholder expertise. The limitations of the data are well understood and described. However, the assumptions made, and subsequent impacts assessed from these data, do not seem to be influenced by their pedigree or confidence levels used, leading to not a single impact identified. We find this difficult to agree with when considering the proposal is a national energy infrastructure that will directly interact with the current users of the region.</p>	<p>Commercial Fisheries</p>		<p>The data utilised were agreed and accepted by the industry during the scoping phase.</p> <p>The justification for the significance assigned to the impacts on commercial fishing are presented in Section 14.6 of Chapter 14 (Commercial Fisheries).</p> <p>The Project has proposed a wide range of embedded mitigation measures which will reduce/minimise impacts on commercial fishing and have been accounted for when identifying impact significance. These are listed in Section 14.3.3 of Chapter 14 and in the Outline FLCP (2023).</p>	<p>N</p>
<p>NFOWFS3_036_009_140 723</p>	<p>In fisheries management, a precautionary principle is enacted with regards to a paucity of relevant data or uncertainties. This does not seem to be the case for impact assessments. Limitations of data are acknowledged but do not seem to influence the outcomes of assessed impacts, a flaw in the methodological design and interpretation. Whilst we appreciate the difficulties in assessing impacts with limited data sources, we feel that the relevant impacts assessed are affected by such and this needs to be accounted for in the methodology. This development will have a direct impact on commercial fisheries and their communities, and we feel the impacts assessed in the PEIR under-represent these impacts. The National Federation of Fishermen's Organisations Ltd 30 Monkgate, York YO31 7PF Tel: 01904 635430 Email: nffo@nffo.org.uk Web: [REDACTED]</p>	<p>Commercial Fisheries</p>		<p>The data utilised were agreed and accepted by the industry during the scoping phase.</p> <p>The justification for the significance assigned to the impacts on commercial fishing are presented in Section 14.6 of Chapter 14 (Commercial Fisheries).</p>	<p>N</p>

	<p>Mike Roach Deputy Chief Executive Officer National Federation of Fishermen's Organisations</p>				
<p>NFOWFS3_037_001_140 723</p>	<p>Dear Sir/Madam The UK Chamber of Shipping Response to North Falls Offshore Wind Farm Preliminary Environmental Information Report Consultation Introduction The UK Chamber of Shipping (hereafter "the Chamber") welcomes the opportunity to comment on the Preliminary Environmental Information Report (PEIR) consultation for the proposed North Falls Offshore Wind Farm development. The Chamber is the primary trade association for the UK shipping industry and its voice. The Chamber represents more than 200 members, operating in excess of 900 vessels equalling 18 million GT in capacity, trading around the UK and globally. Chamber members operate across the full breadth of the industry, including: containers, dry bulk and tanker trades; passenger transport, comprised of international and domestic cruise & ferry operators, including lifeline services; offshore supply and construction engaged</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>

	<p>in oil & gas and renewables; towage and specialist operations; along with professional service providers supporting the shipping industry.</p> <p>The Chamber is a firm advocate for the UK's targets to decarbonise the country and reach net zero by 2050, a target the Chamber supports the UK Government in pushing the global shipping industry to also adopt. Offshore renewables will become a significant source of green energy and the Chamber supports the Government's targets for offshore wind, whilst championing the vital role the ports and shipping industries play in enabling those targets to be achieved. The shipping industry and supporting ports are essential to facilitate the proliferation of offshore renewables throughout the lifespan of developments during construction, operation & maintenance, and decommissioning.</p> <p>In order to achieve the Government's targets the planning and consultation system must support both the UK's offshore renewable goals and the shipping industry to ensure that navigational safety is not compromised nor economic contribution from the shipping industry jeopardised. This is a clear policy of the National Policy Statement for Renewable Energy EN-3 and it is apparent from the shipping and navigation related chapters of PEIR as presented, that the project would introduce unacceptable impediment to navigational safety upon a high density complex sea area.</p> <p>com 020 7417 2843</p>				
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<p>NFOWFS3_037_002_140 723</p>	<p>Consultation Process The Chamber and some other stakeholders have been informed that as yet unknown changes to the Project Design Envelope (PDE) including Red Line Boundary (RLB) will be made post PEIR. These are necessary and welcome; however it is highly frustrating and should be criticised that the developers have proceeded to progress to PEIR consultation showing a PDE and RLB for the array areas which are out of date and incorrect. Through this course of action, the developers are diminishing one of vital public and formal consultation periods. This reduces the feedback submitted by stakeholders who are aware of the incoming changes and for those who are unaware, their valuable time is being wasted by commenting upon an outdated PDE.</p>	<p>Technical Consultation</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_037_003_140 723</p>	<p>Red Line Boundary Changes The Chamber has very strong concerns for the proposed encroachment into IMO Traffic Separation Scheme areas and firmly supports the comments raised by the MCA and Trinity House in their meeting with the developer on 9 June 2022.</p>	<p>Site Selection and Assessment of Alternatives</p>		<p>The array area has been refined in response to the PEIR feedback. The northern array has been removed and the southern array area reduced in size. Further details on the consultation with shipping stakeholders and responses to stakeholder comments are provided in ES Chapter 15 Shipping and Navigation (Volume I) (document reference 3.1.17) of the ES.</p>	<p>Y</p>

<p>NFOWFS3_037_004_140 723</p>	<p>The southwest section of the north array area is unacceptable from a navigation standpoint and need removal because of the impact on northbound vessels exiting the Sunk TSS North traffic lane. The overlap of the south array area with the Sunk Precautionary Area is unacceptable for navigational safety. The south array area abuts directly to the Sunk TSS South which is unacceptable for navigational safety and a greater buffer will be required.</p>	<p>Site Selection and Assessment of Alternatives</p>		<p>The PDE has been refined using input from consultation including the array area to ensure it is safe from a shipping and navigation perspective including removal of the norther array and reduction of the southern array as detailed in Section 15.3.2.</p> <p>Distances from the structures to the local routeing measures is assessed and considered in Section 15.6.</p>	<p>Y</p>
<p>NFOWFS3_037_005_140 723</p>	<p>Transboundary Impacts The proposed south array would block and prevent usage of an international recommended route for ferries between UK and Ostend, Belgium. Whilst the Chamber acknowledges that the route is not in regular current use, some adverse weather routeing, it also is aware that the port of Ostend is looking to establish a green corridor between it and the UK, which may well see the regular reopening of the route. Furthermore, given the recommended status of the route, it would require agreement, at least in principle, with relevant operators, ports and IMO members, in particular the Belgian maritime administration, to remove the ferry route from the routeing measure. The Chamber does not find any meaningful analysis of this route nor consultation with Belgian administration in the PEIR documentation which is again a concern that need addressing post PEIR.</p>	<p>Shipping and Navigation</p>		<p>Assessment of the Galloper recommended ferry route is included within Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16) including adverse weather routeing and the establishment of a green corridor.</p>	<p>N</p>


<p>NFOWFS3_037_006_140 723</p>	<p>Designated Entry Exit Points for Project Vessels The Chamber recommends examination of set entry/exit points into the array areas for project vessels in particular for those entering from the Sunk TSS area as an additional risk mitigation and means to reduce collision risk between project vessels and third party. Whilst all vessels should be abiding by Collision Regulations, such an additional mitigation would provide assistance to commercial shipping in recognising where project vessels may be entering the TSS.</p>	<p>Shipping and Navigation</p>		<p>Embedded mitigation measures detailed in Section 15.3.3 of ES Chapter 15 (Shipping and Navigation), which include entry/exit points for project vessels.</p>	<p>Y</p>
<p>NFOWFS3_037_007_140 723</p>	<p>Cable Corridor The Chamber has along with other stakeholders has safety concerns with the cable route corridor in particular for Under Keel Clearance and cable burial depth. Over the last 20 years, vessel draught has increased considerably and further if more limited increases are expected. As such, the Chamber would not recommend permitting a development which has the potential to restrict future access to the UK's largest and most important container and goods ports.</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>An assessment of underkeel clearance has been provided in Section 15.6.2.7 of Chapter 15 (Shipping and Navigation). There will be a cable burial risk assessment process as per Section 15.3.4 of Chapter 15.</p>	<p>N</p>

<p>NFOWFS3_037_008_140 723</p>	<p>In this instance, where the developer has chosen a cable route which crosses IMO traffic routing measures and designated deep water routes specifically designed for deep draught vessels with restricted manoeuvrability there must be very careful consideration to cable burial depth so as not to impinge on navigational safety, restrict future access to ports and hamper the UK's economic prosperity. The Chamber has strong concern and objection where a target burial depth of 0-1m is stated in Chapter 15 page 21 as this would provide no opportunity for dredging necessary to maintain the future accessibility of key ports. To note, the Chamber has raised these same concerns with Five Estuaries. The Chamber recommends that fuller analysis of vessels with large draught be undertaken. Figures in the NRA which include an upper category of 9m+ draught omits necessary granularity when it comes to UKC with and cable collision risk with deeper draught vessels, especially when a vessel with draught in excess of 20m was recorded in the study area.</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>The Applicant will be fully compliant with MGN 654 as per Section 15.3.4 of Chapter 15 (Shipping and Navigation) including the provisions on underkeel clearance. Consultation has been undertaken with HHA, PLA, and London Gateway including via the Sunk User Group in relation to the offshore cable corridor including in relation to underkeel clearance.</p> <p>An assessment of underkeel clearance has been provided in Section 15.6.2.7 of Chapter 15 and the impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage is assessed in Section 15.6.2.6 of Chapter 15.</p>	<p>N</p>
<p>NFOWFS3_037_009_140 723</p>	<p>The Chamber therefore suggests that analysis be carried out with additional categorisation for aid granularity, and proposes 9-12m, 12-15m, 15-18m and 18m+ categories.</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>Detailed vessel draught analysis is included within Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16), including a focus on greater vessel draughts within the offshore cable corridor and DW routes.</p>	<p>N</p>
<p>NFOWFS3_037_010_140 723</p>	<p>The Chamber acknowledges that the cable burial risk assessment will be examined in detail at the ES stage and welcomes that closer examination. The Chamber wishes this to include careful consideration of interaction with other cables in the area in</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>Cumulative assessment is included in Section 15.7 of ES Chapter 15 (Shipping and Navigation) which includes cable developments.</p>	<p>N</p>

	particular Five Estuaries, NeuConnect, and Sea Link, and how cumulatively these may significantly reduce the ability for vessels to undertake emergency anchoring. Limiting the options for the prudent mariner between a drifting allision with a turbine, collision with another vessel or anchor drag with a cable, presents a cumulative increase in navigational risk with significant consequences.				
NFOWFS3_037_011_140 723	Hazard Log The Chamber has not reviewed the Hazard Log in detail given the recognised changes that are to happen to the Red Line Boundaries post PEIR.	N/A		Noted.	N
NFOWFS3_037_012_140 723	Future Traffic Case The Chamber could not locate figures for intended future case Commercial Vessel Activity within Chapter 15, but knows increases of 10% and 20% are typically used. The Chamber also recommends an additional scenario of 30% increase in overall vessel numbers is modelled. It is recognised that London Gateway is only 50% constructed and that there is also further expansion to Felixstowe in terms of port development. Whilst no project vessel trips are included in PEIR documentation, for a comparable wind farm Five Estuaries, it is stated there will be in the region of 1,800 annual round trips due to its presence during the O&M phase. It is reasonable to estimate a similar number for North Falls and East Anglia Two. Accordingly, an additional 3,600 annual round trips of vessels in the wider area singularly due to OWFs is a significant increase. Furthermore, looking at global figures for the size of the	Shipping and Navigation		Consultation with Chamber of Shipping has provided input into future case scenarios for assessment in traffic volumes and scenarios have been detailed within Appendix 15.1 Navigational Risk Assessment (Volume III) (document reference 3.3.16). This includes a 30% traffic growth scenario.	N

	<p>commercial shipping fleet. The world fleet above 100gt has increased from 68,000 vessels in 2005 and 105,500 vessels in 2023, a 55% increase in 18 years. Whilst these are global figures and not specific to the UK EEZ they nevertheless indicate the expansion of the shipping fleet. Hence the expansion of major ports within the area, in combination with the proximity of several other new wind farm projects in the area, for example Five Estuaries and East Anglia Two, leads the Chamber to suggest that 20% may be too low a figure.</p>				
NFOWFS3_037_013_140 723	<p>Decommissioning The Chamber objects to the preferred decommissioning assumption of leaving cabling and other infrastructure in situ as stated in Chapter 15 page 22. Where the OWF is to be fully decommissioned, the Chamber strongly advocates for the full removal of all infrastructure above and below the seabed, acknowledging BATNEEC when it comes to turbine foundations which penetrate deep into the seabed.</p>	Offshore Archaeology and Cultural Heritage		The Applicant will comply with its decommissioning obligations under Chapter 3 (Decommissioning of Offshore Installations) of the Energy Act 2004 which require the Applicant to prepare a decommissioning programme following notice from the Secretary of State.	N
NFOWFS3_037_014_140 723	<p>Firstly, the Chamber has concerns that buried cables left in situ may become exposed and therefore pose a hazard to anchoring activity, especially in an emergency when such activity is most likely to take place. This has been highlighted by the International Hydrographic Organization (IHO) who at their Assembly meeting held at Monaco in April 2017 highlighted: "Mariners are also warned that the seafloor where cables were originally buried may have</p>	Offshore Archaeology and Cultural Heritage		Noted.	N

	<p>changed and cables become exposed; therefore particular caution should be taken when operating vessels in areas where submarine cables exist especially where the depth of water means that there is a limited under-keel clearance”</p> <p>Such risk is minimised during the economic life of the wind farm, as navigational traffic through the development will be reduced and it is expected that regular monitoring of the cabling and its protection will be carried out with any necessary remedial works. However once decommissioned, the site will be open to a greater extent to surface navigation and other activity. The Chamber is not aware of commitments by developers post commissioning to regularly monitor and rebury or remove cabling which has become exposed.</p>				
NFOWFS3_037_015_140 723	<p>Secondly, it is widely recognised that ships’ anchors pose a significant hazard to submarine cables as they are designed to penetrate the seabed. The depth of penetration will depend on the size and type of anchor and the nature of the seabed. Hence, the Chamber is concerned that cable burial at typical depths does not fully safeguard against anchor fouling and entanglement. This was exemplified through the incident of the Stema Barge II incident in the English Channel when emergency anchoring led to the IFA interconnector being fouled and cut though. Passing the cost of potential fouling and disentanglement to the shipping company, authorities, insurers and any Search and Rescue (SAR) services required is not desirable.</p>	Offshore Archaeology and Cultural Heritage		Noted.	N

<p>NFOWFS3_037_016_140 723</p>	<p>Thirdly, through the leaving of cabling in situ, future seabed activity in the area is significantly constrained, either rendered unfeasible, or costly for the next seabed user to remove or work around such cabling. Yours faithfully, Robert Merrylees Policy Manager (Safety & Nautical) & Analyst </p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_038_001_140 723</p>	<p>North Falls Offshore Wind Farm Limited Windmill Hill Business Park Whitehill Way Swindon Wiltshire SN5 6BP By email only 14 July 2023 Dear Sir/Madam North Falls Offshore Wind Farm, Preliminary Environmental Information Report (PEIR), Stage 2 consultation Thank you for the opportunity for the RSPB to respond to the North Falls Stage 2 consultation. We provide our comments below, referring principally to Offshore Ornithology (PEIR, Chapter 13) and its appendices, unless stated otherwise. Due to staff constraints the RSPB has not fully reviewed the full PEIR documentation, but we present our high-level comments below. However, we have concerns about the potential impacts on a number of species including, red throated diver, gannet, kittiwake, lesser black-backed gull, guillemot and razorbill.</p>	<p>Offshore Ornithology</p>		<p>RSPB concerns are noted.</p>	<p>N</p>
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<p>NFOWFS3_038_002_140 723</p>	<p>1. Offshore ornithology Site Characterisation</p> <ul style="list-style-type: none"> • The RSPB welcome the Digital Aerial Survey work carried out by HiDef on behalf on the Applicant, and the details provided in the Offshore Ornithology Technical Report, Appendix 13.2. For the presentation of this information for the full assessment, we would recommend that the Applicant considers the recent NatureScot report on Digital Aerial Surveys, an output of work from its' Scientific Advisory Board, which includes recommendations on how best to present such work and necessary statistical consideration. 	<p>Offshore Ornithology</p>		<p>The report from NatureScot was published in January 2023 and includes 17 recommendations regarding Digital Aerial Survey. The NatureScot report postdates the North Falls surveys by some years. The majority of the NatureScot recommendations are included in the standard HiDef approach to survey and reporting.</p>	<p>N</p>
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<p>NFOWFS3_038_003_140 723</p>	<ul style="list-style-type: none"> • We welcome the presentation of the survey timings and note that very few surveys ended later than 1400, and so a full account should be given of any potential biases in the results that may arise from this. 	<p>Offshore Ornithology</p>		<p>Practical limitations mean that surveys are usually conducted during the 'middle' period of the day, especially; nocturnal flying, available daylight hours for working times and minimising glare.</p> <p>Surveys are designed to characterise the seabird use of an area of sea and variation in that use is explicitly acknowledged but the typical densities of birds at sea are expected to be sampled appropriately by this procedure.</p>	<p>N</p>
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<p>NFOWFS3_038_004_140 723</p>	<ul style="list-style-type: none"> • There is evidence that the neap/spring tidal cycle can influence that at sea distribution of birds. As such, the RSPB would welcome consideration of this in the presentation of the survey timings and a discussion of how this may affect the resultant site characterisation 	<p>Offshore Ornithology</p>		<p>Tidal data have been extracted via the UK Tide Gauge Network (2024) for the closest site to the OWF area (Harwich) for the relevant dates. Data for tide heights are provided at fifteen-minute intervals and were joined to the observations databased on the median time of each survey, rounded to the closest fifteen-minute interval.</p> <p>Tide height is plotted against apportioned density estimates (without availability bias corrections) in Appendix 13.2 , Figure 13.2.5 (document reference 3.3.13). Spearman's rank correlation coefficient and associated p value are provided for each species, limiting the data to species present in more than five surveys and with more than ten observations across all surveys.</p> <p>Two species (common tern and guillemot) show significant ($P < 0.05$) positive correlation between tide height and density, with lesser black-backed gull and razorbill showing weaker non-significant positive correlation. There are likely to be multiple correlated seasonal effects here that make it difficult to unpick the effects of tidal height from, e.g., meteorological effects and this would require substantial investigation across multiple study areas to draw any firm conclusions regarding these relationships.</p>	<p>N</p>
<p>NFOWFS3_038_005_140 723</p>	<p>Collision Risk</p> <ul style="list-style-type: none"> • The RSPB welcome the use of the Stochastic Collision Risk Model (CRM) to predict the mortalities that may arise from collision of birds with rotating turbine blades. We also welcome that the modelling will be carried out with avoidance rates given in the UK SNCBs (SNCB, 2014) advice note1 	<p>Offshore Ornithology</p>		<p>The SNCB 2014 advice on avoidance rates was used for PEIR, however for the ES and HRA CRM has been carried out using updated avoidance rates as advised by Natural England.</p>	<p>N</p>
<p>NFOWFS3_038_006_140 723</p>	<ul style="list-style-type: none"> • As the Applicant points out, there is more up to date advice on the parameterisation of the CRM due to be published by the SNCBs, and the RSPB will provide commentary on this once we have had an opportunity to review it. A key focus of this is likely to be how the available evidence used in the 	<p>Offshore Ornithology</p>		<p>RSPB's position is noted. As above, for the ES and HRA to accompany the DCO submission, CRM parameters and methodology have been updated to reflect the latest advice from Natural England. For gannet, reduction in density to reflect evidence relating macro-avoidance of OWF turbine arrays has been applied in all seasons, based on advice from Natural England.</p>	<p>N</p>

	advice relates to seasonality in gannet behaviour				
NFOWFS3_038_007_140 723	Distributional change • The RSPB notes that the Applicant is using the matrix approach to the assessment of mortality implications of distributional change arising through displacement and barrier effects. We would welcome discussion as to why the SeaBORD approach has not been used, an approach which is more biologically meaningful as it accounts not only for adult mortality but impacts on productivity and chick survival arising from that distributional change.	Offshore Ornithology		The SeaBORD modelling approach to displacement is not recommended for use by Natural England. For more information, See Appendix 13.1 of the ES (3.3.12).	N
NFOWFS3_038_008_140 723	• The RSPB also point out that if the matrix approach is used, that because it does not account for changes in productivity and chick survival, that an appropriate level of precaution is used in determining the displacement and mortality rates, as explicitly recommended in the SNCB guidance	Offshore Ornithology		The issue of potential effects of displacement on productivity and chick survival is referred to in the ES and RIAA, although it is not possible to make quantitative predictions for any potential changes in productivity and chick survival in relation to displacement. Thus, the displacement assessments focus on potential effects on the mortality of adult and subadult birds.	N
NFOWFS3_038_009_140 723	Compensation Measures The RSPB welcomes consideration of compensation measures but has not had an opportunity to fully review these (including Draft In Principle Compensation Options Review). However, currently we do not consider there has been full consideration of the mitigation hierarchy nor that there is sufficient evidence for the effectiveness of any of the proposed measures. We will	Offshore Ornithology		RSPB's position is noted. For the DCO submission, refinements have been made to the project design envelope in accordance with the mitigation hierarchy. This is discussed further in the HRA Derogation Case. Compensation measures have been further developed in consultation with the ETG, with evidence presented for success.	N

	provide more detailed comments when the final proposals are submitted.				
NFOWFS3_038_010_140 723	2. Onshore ornithology We have also considered Onshore Ornithology (PEIR, Chapter 24). We note the aspiration to deliver a minimum of 10% biodiversity net gain (BNG) for the onshore elements of the project (Table 24.5). The RSPB would welcome without prejudice discussions as an ecological stakeholder as to potential habitat and species projects for this, in advance of the submission of the project's Environmental Statement.	Onshore Ornithology		Noted. The Project would be keen to discuss with RSPB the options for BNG post-consent once detailed design has taken place and clearer understanding of the potential BNG achievable has been determined.	N
NFOWFS3_038_011_140 723	We welcome the headline commitment to avoid direct impacts on Holland Haven SSSI (and buffer zone) by selecting a landfall outside the protected site and by using HDD techniques. The RSPB reserves the right to amend our position on any of these or other matters when the full Application is submitted, and we have had adequate time to review. Yours faithfully, Renny Henderson Casework Officer [REDACTED] UK SNCBs (2014) Joint response from the Statutory Nature Conservation Bodies to the Marine Scotland Science Avoidance Rate Review	Onshore Ornithology		Noted.	N

<p>NFOWFS3_039_001_040 723</p>	<p>Dear Sir/Madam,</p> <p>I have read the plans and documents you sent BUUK recently in regard to North Falls Offshore Wind Farm.</p> <p>Processing your plans and details I have deduced that the onshore scoping boundary includes a lot of GTC assets within it.</p>	<p>Infrastructure and Other Users</p>		<p>The Project does include onshore landfall, export cable installation and construction of an onshore substation within the onshore project area. The offer of additional asset plans is welcomed. We have undertaken a utilities search for the onshore project area and sought to avoid utilities assets where practicable. Where we do interact with these, the effects are assessed in Chapter 22 Land Use and Agriculture (Volume I) (document reference 3.1.24) of the ES.</p>	<p>N</p>
<p>NFOWFS3_039_002_040 723</p>	<p>Is this area going to be developed or is just the off shore red line site boundary where construction will occur? Please see the attached the images showing all of the GTC networks within the scoping boundary area.</p>	<p>Site Selection and Assessment of Alternatives</p>			
<p>NFOWFS3_039_003_040 723</p>	<p>Please note there are no GTC assets in the offshore red line boundary.</p> <p>If you would require the onshore asset plans please let us know and we can forward them to you.</p> <p>If you require any other information or assistance, please do not hesitate to contact us further. Yours faithfully,</p> <p>William Price Project Officer</p>	<p>N/A</p>			

<p>NFOWFS3_040_001_17 0523</p>	<p>It appears that the turbine envelope (in terms of area covered and turbine sizes) is unchanged from that which we looked at in late 2021. Our position therefore remains as stated then (email attached).</p> <p>Please keep us informed as the development design matures and when you are ready we are happy to discuss what this radar impact means and what can potentially be done about it.</p> <p>Hi Tom</p> <p>Please see below assessment:</p> <p>The worst case scenario turbine dimensions of 229m to hub and 397m to tip have been used.</p> <p>Southern Turbines - no impact expected</p> <p>Northern Turbines Cromer - The turbines are expected to be visible Debden - The turbines are expected to be visible approx 5% of the time</p>	<p>Project Description</p>		<p>Noted. Further consultation has been undertaken to confirm that WTGs in the array area would have no impact on Cromer or Debden PSRs.</p>	<p>N</p>
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<p>NFOWFS3_041_001_14 0723</p>	<p>To whom it may concern: Thank you for identifying NHS Suffolk and North East Essex Integrated Care Board (SNEE ICB) as a prescribed consultee under section 42 of the Planning Act 2008 and/or Regulation 11 of the 2017 Infrastructure Planning (Environmental Impact Assessment) Regulations. SNEE ICB has reviewed the documentation provided for this consultation, along with the responses it previously submitted in one-one consultations carried out in March 2023, the Non-Statutory Public Consultation (December 2022) and Scoping Report (August 2021). It has also liaised with NHS partners in the local area and the following comments are a combined response on behalf of SNEE ICB and the following organisations:</p> <ul style="list-style-type: none"> · East Suffolk & North East Essex Foundation Trust (ESNEFT) · East of England Ambulance Service NHS Trust (EEAST) · North East Essex Health and Wellbeing Alliance · Essex Partnership University Trust (EPUT) <p>System partners are generally supportive of this proposal and can see the overall benefits of the scheme, as it is instrumental in introducing and harnessing renewable and affordable energy. The comments below, which we hope are helpful and supportive, build on the previous responses provided by SNEE ICB and its system partners to the earlier scoping exercise and consultations that have taken place and the subsequent review of the Preliminary Environmental Impact Report (PEIR).</p> <p>A) Demand on healthcare services</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_041_002_14 0723</p>	<p>1. The ICB identified a need to ensure that the Environmental Statement (ES) provides details on how the potential increase in demand on all healthcare services in the areas surrounding the proposed development, as a result of an influx of additional temporary workers, will be mitigated against.</p>	<p>Human Health</p>		<p>Section 31.6 of Chapter 31 (Socio-Economics) provides an assessment of the pressure on local onshore infrastructure services. The assessment was further explained and justified in the ETG meeting held in May 2024. NHS Suffolk and North-East Essex ICB provided no further evidence to suggest the significance of effect should be increased.</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES and in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) (document reference 3.1.33) of the ES and Chapter 27 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Cumulative effects with other projects are presented in Section 28.8.3 of Chapter 28 (Human Health).</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section 3 of the Consultation Report (document reference 4.1).</p>	<p>N</p>
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<p>NFOWFS3_041_003_14 0723</p>	<p>2. The ICB and its partners are pleased to see that a specific chapter (chapter 28) of the PEIR has been devoted to assessing the impact of the development on human health and in particular that a Health Impact Assessment (HIA) has been undertaken, which has looked at the health impact of various factors on the local population.</p> <p>3. In addition the ICB and its partners acknowledge that chapter 31 of the PEIR assess the demand on local healthcare services caused by an influx of temporary workers required for the duration of the project. It is pleasing to see that the PEIR recognises the current significant capacity constraints within primary care services in the geographical area surrounding the project, the higher than average waits for ambulance services and for Accident and Emergency (A&E) services at the local acute hospitals. All of this contributes to the assessment that the sensitivity of the health care receptor as being high.</p>	<p>Human Health</p>		<p>The data being referred to is set out within Section 31.5.4 of Chapter 31 (Socio-Economics). As part of the ETG held with NHS Suffolk and North- East Essex ICB in May 2024, The Applicant provided an opportunity for NHS Suffolk and North- East Essex ICB to highlight any additional data for consideration in the ES.</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES and in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) (document reference 3.1.33) of the ES and Chapter 27 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Cumulative effects with other projects are presented in Section 28.8.3 of Chapter 28 (Human Health).</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.</p>	<p>N</p>
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<p>NFOWFS3_041_004_14 0723</p>	<p>4. The PEIR also identifies that the pressure on local healthcare infrastructure, caused by the influx of construction workers, as minor adverse and not significant in terms of the Environmental Impact Assessment (EIA). 5. This is something that the ICB and its partners would challenge, as this assessment appears to have been made purely on the impact to primary care services and in particular the impact on the availability of the number of GPs per patient registrations.</p>	<p>Human Health</p>		<p>Section 31.6 of Chapter 31 (Socio-Economics) provides an assessment of the pressure on local onshore infrastructure services. The assessment was further explained and justified in the ETG meeting held in May 2024. NHS Suffolk and North-East Essex ICB provided no further evidence to suggest the significance of effect should be increased.</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES and in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) (document reference 3.1.33) of the ES and Chapter 27 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Cumulative effects with other projects are presented in Section 28.8.3 of Chapter 28 (Human Health).</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section 3 of the Consultation Report (document reference 4.1).</p>	<p>N</p>
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<p>NFOWFS3_041_005_14 0723</p>	<p>6. The assessment in chapter 31 doesn't appear, at this stage, to have considered the impact on wider healthcare services outside of a GP service, for instance the availability of alternative non-GP services in a primary care setting, the impact on ambulance waiting times and A&E attendance for emergency and non-emergency situations.</p> <p>7. This later point is especially relevant if the non-local temporary workforce are not expected to register with a local GP, as highlighted in chapter 31 of the PEIR. Instead they are more likely to attend one the local A&E or Urgent Treatment Centres (UTC) if they require access to local healthcare services.</p>	<p>Human Health</p>		<p>Section 31.6 of Chapter 31 (Socio-Economics) provides an assessment of the pressure on local onshore infrastructure services. The assessment was further explained and justified in the ETG meeting held in May 2024. NHS Suffolk and North-East Essex ICB provided no further evidence to suggest the significance of effect should be increased.</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES and in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) (document reference 3.1.33) of the ES and Chapter 27 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Cumulative effects with other projects are presented in Section 28.8.3 of Chapter 28 (Human Health).</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section 3 of the Consultation Report (document reference 4.1).</p>	<p>N</p>
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<p>NFOWFS3_041_006_14 0723</p>	<p>8. In addition this is increasingly relevant due to the cumulative effect of other NSIPs currently being planned for the locality, including but not limited to Sizewell C, widening of the A12 and the North Falls wind farm.</p>	<p>Human Health</p>		<p>The cumulative effects assessment is presented in Section 31.8 of Chapter 31 (Socio-Economics). This includes consideration of cumulative impacts on infrastructure and services (housing and health).</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) of the ES and in Section 28.6.1.5 of this Chapter 28 (Human Health).</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) (document reference 3.1.33) of the ES and Chapter 27 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Cumulative effects with other projects are presented in Section 28.8.3 of Chapter 28 (Human Health).</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section 3 of the Consultation Report (document reference 4.1).</p>	<p>N</p>
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<p>NFOWFS3_041_007_14 0723</p>	<p>9. Hence the ICB and its partners would encourage the developer to continue to assess the impact of the project on the availability of healthcare services and develop solutions for how the points made above will be mitigated against in its final Environmental Statement (ES) that will accompany the Development Consent Order application (DCO).</p>	<p>Human Health</p>		<p>Given no significant effects have been assessed related to pressures on health infrastructure, there is no formal requirement for additional mitigation identified in the socio-economic assessment beyond the embedded mitigation outlined within Section 31.3.3. However, the Applicant engaged with NHS Suffolk and North-East Essex ICB around health and safety procedures and measures included within the Outline Code of Construction Practice at the ETG on the 23rd of May 2024 and noted the feedback received.</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) (document reference 3.1.29) and in Section 28.6.1.5 of this chapter.</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5.</p> <p>Cumulative effects with other projects are presented in Section 28.8.3.</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section 3 of the Consultation Report (document reference 4.1).</p>	<p>N</p>
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<p>NFOWFS3_041_008_14 0723</p>	<p>10. In order to facilitate this the ICB and its partners are willing and available to undertake further engagements with the developer to fully assess the current capacity position in the overall local healthcare system, the impact of the influx of temporary workers on the system and the development of appropriate mitigating actions to address any acknowledged impacts.</p>	<p>Human Health</p>		<p>Please see response immediately above.</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) and in Section 28.6.1.5.</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5.</p> <p>Cumulative effects with other projects are presented in Section 28.8.3.</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section 3 of the Consultation Report (document reference 4.1).</p>	<p>N</p>
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<p>NFOWFS3_041_009_14 0723</p>	<p>11. Such an assessment will ensure that the likely demand on local healthcare services is fully understood and appropriate plans are agreed and put in place to address any identified shortfalls ahead of the DCO submission. These measures would also need to be captured as either requirements within the DCO approval process and/or via Section 106 planning obligations linked to attaining planning consent for the project.</p>	<p>Human Health</p>		<p>Please see response immediately above.</p> <p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) and in Section 28.6.1.5.</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5.</p> <p>Cumulative effects with other projects are presented in Section 28.8.3.</p> <p>A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section 3 of the Consultation Report (document reference 4.1).</p>	<p>N</p>
<p>NFOWFS3_041_010_14 0723</p>	<p>B) Major accidents or disasters 1. It is noted that in Chapter 5 of the PEIR there is reference to the potential impact on various aspects as a result of a major accident or disaster, in particular once the development has been completed. 2. However the information in this chapter does not make reference to the potential impact on healthcare services from a major accident or disaster occurring during the various phases of construction, both offshore and onshore.</p>	<p>Human Health</p>		<p>Likely significant effects upon local healthcare services are assessed in Chapter 28 Human Health (Volume I), with details regarding the impacts upon people suffering health inequalities are detailed in Chapter 30 Socio-economics (Volume I).</p> <p>Chapter 34 (Major Accidents and Disasters) provides further detail regarding the effects upon the Project of major accidents and disasters.</p>	<p>N</p>

<p>NFOWFS3_041_011_14 0723</p>	<p>3. Whilst the PEIR recognises the availability of local A&E and blue-light services it hasn't assessed the impact on these services from such an event occurring during both construction phases, something that is statistically more likely to occur during construction than once the project has been finished and the wind farm is operating. For greater detail on some of the impacts a major accident or disaster could have please review the specific section in the response provided by EEAST (appendix 2). 4. In addition the PEIR hasn't suggested any healthcare specific mitigating actions that could be put in place. 5. Hence the ICB and its partners request that this specific aspect is fully assessed and mitigations developed in collaboration with relevant local healthcare organisations, with consideration being given to securing the mitigating actions via a Section 106 planning obligation, ahead of the ES being produced.</p>	<p>Human Health</p>		<p>Note that as discussed in Section 34.5.2.7 of ES Chapter 34 (Major Accidents and Disasters) offshore wind has a good (and improving) health and safety record. Given the number of workers involved in construction (a peak of 471 (see Chapter 31 Socio-Economics, Volume I)) and safety record there is minimal risk of workplace accidents and reliance on local services (see also Table 28-5 in Chapter 28 Human Health, Volume I)</p>	<p>N</p>
<p>NFOWFS3_041_012_14 0723</p>	<p>C) Traffic issues and emergency services response times including cumulative effects 1. It is clear from the PEIR that both the offshore and onshore construction works will result in road closures, diversions and substantial HGV traffic, all of which could severely impact on the ability of EEAST, and other blue-light services, to respond to emergency or category 1 calls</p>	<p>Traffic and transport</p>		<p>Noted. Please also note that effects upon human health are considered within Chapter 28 Human Health (Volume I).</p>	<p>N</p>
<p>NFOWFS3_041_013_14 0723</p>	<p>. Such situations could have a detrimental effect on patient health. 2. A full assessment, including mitigation measures, of the potential impact to EEAST is</p>	<p>Human Health</p>			

	absent from the PEIR. Hence the ICB and EEAST are requesting that this be undertaken and included, in collaboration with appropriate representatives, as part of the ES and/or it forms a distinct part of the assessment on healthcare services referred to elsewhere in this response.				
NFOWFS3_041_014_14 0723	<p>D) Socio-economics – education and training</p> <p>1. The ICB notes the developer's proposal to prepare and implement an Outline Skills and Employment Plan as part of the DCO application, which will be secured through a DCO requirement. It requests that the ICB is involved in the development of this plan and there is the opportunity to assess the final plan prior to the submission of the DCO application.</p> <p>In support of SNEE ICB's response I also attach, as appendices, formal responses from East Suffolk & North Essex NHS Foundation Trust (appendix 1) and East of England Ambulance Service for your consideration (appendix 2).</p> <p>We hope you find our collective feedback helpful and constructive and we look forward to continuing to work collaboratively with North Falls Offshore Wind Farm Ltd as the scheme progresses. The main contact at SNEE ICB for doing this is Jon Haworth (planning.apps@snee.nhs.uk).</p>	Socio-economics		Noted.	N

<p>NFOWFS3_042_001_230 523</p>	<p>Dear Thomas,</p> <p>Thanks for sight of this email and for the opportunity to respond to the Statutory consultation.</p> <p>I have now had an opportunity to look at the shipping and navigation chapters of the PEIR and the PEIR addresses those point the RYA sets out in it position on offshore wind energy. The two main issues for the Rya are operational safety zones and depth over chart datum as the cable come ashore.</p>	<p>Shipping and Navigation</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_042_002_230 523</p>	<p>In this context. The RYA is content to note that there are no plans to apply for operational safety zones other than those for construction, major maintenance and decommissioning and that at this stage the Applicant will also be MGN 654 compliant including in terms of underkeel clearance provisions i.e., depth will not be reduced by more than 5% unless otherwise agreed with the MCA. Consultation has been undertaken (and is ongoing) with HHA and PLA including via the Sunk User Group in relation to the offshore cable corridor including in relation to underkeel clearance.</p> <p>Please use me as the RYA point of contact for this project.</p> <p>Regards</p> <p>Stuart</p>	<p>Shipping and Navigation</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_043_001_120 923</p>	<p>Dear Sir/Madam, Re: North Falls Offshore Wind Farm – Section 42 of the Planning Act 2008 - Statutory Consultation on Preliminary Environmental Information Report (PEIR) Thank you for consulting the Ministry of Defence (MOD) in advance of an application for the construction and operation of the North Falls Offshore wind farm. Consultation correspondence was received by this office on 16th May 2023. The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the Ministry of Defence (MOD) as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, air weapon ranges, and technical sites or training resources such as the Military Low Flying System. The MOD previously responded to a consultation on a Scoping Opinion for the North Falls Offshore Wind Farm through a letter dated 16th August 2021. I write to provide the MOD safeguarding position on information provided in the Preliminary Environmental Information Report (PEIR) Statement. It is acknowledged that the final design of this project has not yet been determined and that an indicative design envelope has been provided. Chapter 5 of the PEIR provides a description of the project, stating that the project could be made of up to 72 turbines, 379m to tip height. The development is split into two array</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
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	areas: the southern and northern array boundaries.				
NFOWFS3_043_002_120 923	<p>Air Traffic Control Section 17.5.3 of Chapter 17 Aviation and Radar covers Military Aviation. Paragraphs 60 – 62 references the MOD's Air Traffic Control (ATC) Radars. These paragraphs identify the closest military aerodromes and identifies that the turbines will be detectable to the Primary Surveillance Radar (PSR) at Wattisham Station. Paragraph 62 also identifies that the turbines will not be detectable to the PSR at RAF Honington.</p> <p>The MOD has undertaken an assessment based on 72 wind turbines at 397m to tip height using the Rochdale Envelope boundary co-ordinates. This assessment identified that part of the northern array area will be detectable to the PSR at RAF Honington and turbines within both the northern and southern array areas will be detectable to the Wattisham Station PSR. An operational assessment</p>	Aviation and Radar		<p>The northern array area has been removed from the Project, therefore WTGs would no longer be detectable by Honington PSR.</p> <p>Modelling in Appendix 17.1 (Volume III) confirms that WTGs within the remaining array area would be in RLoS and detected by Wattisham radar.</p> <p>The MoD operational assessment showing no impact on operations at Wattisham Station is acknowledged and noted in Section 17.6.2.1.2.</p>	Y

	<p>has also been carried out by the MOD which has confirmed that turbines within both the northern and southern array areas will not affect either RAF Honigton's or Wattisham Stations operations. The development will therefore have no impact on Air Traffic Control radars deployed at these military aerodromes. This is based on the information available at this stage. Any variations to the number or height of the turbines proposed may change this position.</p>				
NFOWFS3_043_003_120 923	<p>Air Defence Radar Section 17.5.3 of Chapter 17 Aviation and Radar covers Military Aviation. Paragraphs 63 – 67 references the MOD's Air Defence (AD) Radars. Wind turbines have been shown to have detrimental effects on the operation of AD radar. These include the desensitisation of the radar in the vicinity of wind turbines, and the creation of "false" aircraft returns. The probability of the radar detecting aircraft flying over or in the locality of the turbines would be reduced, hence turbine proliferation within a specific locality can result in unacceptable degradation of the radar's operational integrity. This would reduce the RAF's ability to detect and manage aircraft in United Kingdom sovereign airspace, thereby preventing it from effectively performing its primary function of Air Defence of the United Kingdom. Within paragraphs 63 - 67 of section 17.5.3, it is claimed that only turbines within the northern</p>	Aviation and Radar		<p>The northern array area has been removed from the Project.</p> <p>The relocation of the AD radar from Trimingham to Neatishead is acknowledged and noted in Section 17.5.3.</p>	Y

	array area would be visible and detected by the AD radars at RRH Trimmingham and RRH Neatishead. Due to the relocation of the AD radar based at RRH Trimmingham to RRH Neatishead, there is no requirement for the RRH Trimmingham AD radar to be taken into account or mitigation provided.				
NFOWFS3_043_004_120 923	<p>The MOD has undertaken an assessment based on 72 wind turbines at 397m to tip height using the Rochdale Envelope boundary co-ordinates. Turbines within both the southern and northern array areas will be detectable to the AD Radar at RRH Neatishead. The impact of the turbines on the AD radar at RRH Neatishead will therefore need to be addressed through a suitable technical mitigation solution. It is the applicant's responsibility to provide a suitable technical mitigation solution to the MOD.</p> <p>Mitigation to address the impact of the development on the two AD Radars is considered at 17.6.2.1.5. It is stated that engagement with the MOD will continue throughout the application process, this is welcomed.</p>	Aviation and Radar		<p>Modelling in Appendix 17.1 (Volume III) shows that WTGs within the array area would not be in RLoS of Neatishead.</p> <p>MoD modelling was based on WTGs with a higher tip height, therefore the reduction in WTG size may alter their conclusion. Consultation with MoD is ongoing to confirm radar detection.</p> <p>The impact of WTGs on radars is discussed in Section 17.6.2.1 together with possible mitigations.</p>	Y
NFOWFS3_043_005_120 923	<p>Danger Areas</p> <p>Sections 68 – 71 of 17.5.3 of Chapter 17 Aviation and Radar identifies nearby danger areas and airspace, and states that the North Falls Wind Farm is well away from</p>	Aviation and Radar		Noted.	N

	these, the MOD agrees with this conclusion.				
NFOWFS3_043_006_120 923	<p>Military Low Flying</p> <p>The potential for the development to create physical obstructions to military low flying activities is acknowledged within Section 17.6.2.2 of Chapter 17 Aviation and Radar and the requirement for military aviation charts to be updated is recognised at paragraph 22 of Section 17.3.3.1. The MOD will request that a Requirement is added to any Development Consent Order that might be issued requiring the submission of information such as commencement dates, maximum turbine heights and the longitude and latitude of each wind turbine. This information is required to allow accurate charting of the development.</p>	Aviation and Radar		Noted.	N
NFOWFS3_043_007_120 923	<p>Paragraph 28 of Section 17.3.3.2 includes the MOD's lighting requirements for the development. It is welcomed that the turbines will be fitted with infra-red lighting in combination with the ANO's lighting requirement. The MOD will request that the aviation warning lighting requirements is added as a Requirement to any Development Consent Order that might be issued.</p>	Aviation and Radar		Noted.	N
NFOWFS3_043_008_120 923	<p>Practice and Exercise Areas (PEXA)</p> <p>Practice and Exercise Areas also known as PEXA, are designated areas of the sea where military exercises can be undertaken. Section 18.5.6 of Chapter 18 Infrastructure and Other Activities,</p>	Site selection	Infrastructure and other users	Noted.	N

	lists the relevant PEXA which either overlap with the development area or are nearby. It is stated within Section 18.6.1.5 that the development will have no impact on MOD activities. The MOD agrees with this statement in relation to PEXA.				
NFOWFS3_043_009_120 923	Unexploded Ordnance (UXO) The potential for unexploded ordnance (UXO) to be present within the development area and the necessity for clearance is acknowledged within Chapter 5 Project Description at Section 5.6.4.1.2. The potential presence of UXO and disposal sites should be a consideration during the installation and decommissioning of turbines, cables, and any other infrastructure, or where other intrusive works are necessary. In addition to UXO, the presence of a designated explosives dumping ground within the eastern part of the Gunfleet PEXA (X5118), should also be taken account of.	Site selection	Infrastructure and other users	The disused UXO dumping ground in the eastern part of Gunfleet PEXA X5118 has been avoided through the route selection of the offshore cable corridor.	Y
NFOWFS3_043_010_120 923	Highly Surveyed Routes The MOD has highly surveyed routes within the locality of the development area which maybe relevant to the installation of wind turbines, export cables & associated infrastructure. These routes are retained by the MOD to support national defence requirements and are not defined in the public domain. Highly surveyed routes must not be obstructed or impeded by offshore developments such as wind turbines. At this time, we are unable to advise if the development will impede any highly surveyed routes in the area. An assessment to determine any impact has been requested and we will share the results with you	Infrastructure and other users		Noted.	N

	as soon as we are able to. I trust this is clear however should you have any questions please do not hesitate to contact me.				
NFOWFS3_044_001_030 723	North Falls Offshore Windfarm: Stage 2 Consultation – Representations on behalf of East Suffolk and North Essex NHS Foundation Trust (ESNEFT) 1. On behalf of our client, East Suffolk and North Essex NHS Foundation Trust (ESNEFT), we write to provide our response to the North Falls Offshore Windfarm Project's Stage 2 Consultation. This letter comprises a review of, and comments on, the Preliminary Environmental Impact Report (May 2023) in respect of potential impacts arising from the proposed development on ESNEFT'S acute healthcare facilities and services.	Introduction		Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) and in Section 28.6.1.5. Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5. A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm. Meetings have been held with EEAST (26 March 2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground. These meetings are addressed in Section3 of the Consultation Report (document refernece 4.1)	N
NFOWFS3_044_002_030 723	2. Please note that the representations contained in this letter form part of an overall response from the Suffolk and North East Essex Integrated Care Board (ICB), which draws together comments from other healthcare providers on the likely impacts on their respective facilities and services arising from the proposed windfarm development.	Introduction			
NFOWFS3_044_003_030 723	Background 3. ESNEFT was formed on 1st July 2018 and is the largest NHS Trust in the Region. It provides acute and community healthcare services for Colchester, Ipswich and wider rural local areas. Services are provided from Colchester and Ipswich General Hospitals, Aldeburgh, Clacton, Halstead, Harwich and Felixstowe	Introduction		Noted.	N

	Community Hospitals and Bluebird Lodge near Ipswich. Colchester and Ipswich Hospitals both have their own dedicated major accident and emergency (A&E) departments.				
NFOWFS3_044_004_030 723	4. Colchester Hospital occupies an area of approximately 19.3 hectares (47 acres) and is located to the west of Turner Road, east of the A134 Northern Approach Road, and north of Colchester town centre. The site provides acute, in and outpatient, and other healthcare facilities for Colchester and North Essex, including Colchester City and Tendring District, covering a catchment population of approximately 350,000 people. There are approximately 4,500 staff based at the Hospital, which operates on a 24 hours a day/ 7 days a week basis.	Introduction		Noted.	N
NFOWFS3_044_005_030 723	5. Ipswich Hospital occupies an area of approximately 19 hectares (47 acres) and is located to the west of Heath Road, east of Lattice Avenue, within east Ipswich. There are in excess of 3,000 staff employed at the hospital, which also operates on a 24 hours a day/ 7 days a week basis, providing a range of in and outpatient facilities to the East Suffolk area.	Introduction		Noted.	N
NFOWFS3_044_006_030 723	6. ESNEFT works with other health and community care partnership organisations and is part of the Integrated Care System (ICB), which is committed to working together to integrate care and deliver better outcomes for patients.	Introduction		Noted.	N

NFOWFS3_044_007_030 723	Model of Care 7. Health and care services and the way they are organised, both from a commissioner and provider perspective are in the process of change. The way they are organised is also changing, with a view to improving the health and wellbeing of the population and reduce health inequalities. Hospital services are to be reconfigured and transformed with new models of care, meaning more care will be provided as close to people's homes as possible.	Human Health		Noted.	N
NFOWFS3_044_008_030 723	This focus on bringing care provision into the community may see the creation of healthcare 'hubs' / networks and greater integration of services and shared assets. In addition, there may be a need to increase estate or investment in buildings and infrastructure to make them fit for purpose.	Human Health		Noted.	N
NFOWFS3_044_009_030 723	8. As an NHS Trust, ESNEFT has no routing eligibility to capital allocations from either the Department of Health and Social Care (DHSC) or local commissioners to provide new capital capacity to meet additional healthcare demands. This is particularly relevant when considering the impacts of new significant development, such as the proposed windfarm scheme, coming forward outside of ONS population projections and planned growth included within Local Plans for the area.	Socio-economics		Noted.	N
NFOWFS3_044_010_030 723	Therefore, S106 and Community Infrastructure Levy (CIL) contributions are needed to mitigate additional impacts of development on acute services provision, which will be an important component of ESNEFT's	Socio-economics	Introduction	Noted.	N

	overall funding and delivery capabilities.				
NFOWFS3_044_011_030 723	9. ESNEFT has prepared masterplans for the Colchester and Ipswich Hospital sites, informed by its 2022 updated healthcare investment programme. These masterplans are updated (as necessary) to reflect the Trust's evolving healthcare requirements, having regard to forecasted increased activity rates at the hospitals resulting from planned growth within the catchment area.	Socio-economics		Noted.	N
NFOWFS3_044_012_030 723	However, as mentioned above, 'windfall' development projects such as the North Falls Offshore Windfarm are not included in these forecasts and, therefore, mitigation of the impacts on healthcare services and facilities arising from these development would need to be secured as part of the associated consenting process.	Socio-economics	Project Description	Noted.	N
NFOWFS3_044_013_030 723	Representations 10. In response to the Stage 1 consultation, we note that Public Health England (PHE) identified a need to ensure that the Environmental Statement provides further detail to the acknowledgement of the potential demand on healthcare services including Primary and Secondary Care (including mental health).	Project Description		Noted. Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) and in Section 28.6.1.5. Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5.	N
NFOWFS3_044_014_030 723	In addition, we note that the North East Essex Clinical Commissioning Group (CCG) requested that a review of ambulance emergency and non-emergency patient transport services is undertaken, with particular regard to the influx of additional temporary residents.	Project Description		A consultation meeting was held in September 2023 with the NHS Suffolk and North East Essex ICB jointly with the Five Estuaries Offshore Wind Farm. Meetings have been held with EEAST (26 March	

NFOWFS3_044_015_030 723	11. ESNEFT has reviewed the Preliminary Environmental Impact Report (PEIR) published as part of the Stage 2 Consultation on the North Falls Offshore Windfarm Project and wishes to build on the previous consultation process and make the following comments.	Project Description		<p>2024 and 28 May 2024) and NHS Suffolk and North East Essex Integrated Care Board (ICB) (23 May 2024). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.</p> <p>These meetings are addressed in Section3 of the Consultation Report (document refernece 4.1)</p>
NFOWFS3_044_016_030 723	12. Chapter 28 of the PEIR (Human Health) acknowledges the impact of the proposed windfarm on the health of the existing population in relation to noise, amenity, air quality and contamination.	Project Description		
NFOWFS3_044_017_030 723	The applicant's intention is to undertake further consultation with stakeholders to prevent or minimise the health impacts on local communities, which is welcomed. ESNEFT, together with other members of the ICB, would be pleased to liaise further with the applicant on these matters.	Project Description		
NFOWFS3_044_018_030 723	13. Chapter 31 of the PEIR (Socio-Economics) refers to an increased demand for healthcare services that may arise as a result of workers involved in the project occupying temporary accommodation within the wider study area for a period of time during the construction and decommissioning phases. It is stated that there would be a requirement for up to 480 non-local workers during the construction of the development that could also potentially see additional family members relocate temporarily.	Socio-economics		
NFOWFS3_044_019_030 723	14. Therefore, a large number of construction workers and additional family members may require basic health services or public ambulance and hospital services at some point whilst being	Human Health	Project Description	

	temporarily relocated. It is noted that a review of health provision has been undertaken in relation to the Suffolk and North East Essex ICB area.				
NFOWFS3_044_020_030 723	This identifies that there are significant capacity constraint issues in North East Essex and Suffolk and on that basis, the sensitivity of the health care receptor is assessed as high. This recognition is welcomed, but we consider that it would be useful to specify whether this relates to acute and secondary healthcare facilities as well as primary care services.	Socio-economics	Human Health		
NFOWFS3_044_021_030 723	15. It is acknowledged that the applicant's assessment of healthcare impacts arising from the proposals is the subject of ongoing work and will be fully addressed in the forthcoming Environmental Statement that will accompany the Development Consent Order application.	Project Description			
NFOWFS3_044_022_030 723	16. The Trust welcomes this recognition that its services and facilities are likely to be affected by the project proposals and concurs that further work is required to ascertain the scope and scale of demand and the mitigation required to address the impacts.	Project Description			
NFOWFS3_044_023_030 723	Accordingly, it is requested that a Healthcare Impact Assessment (HIA) should be prepared by the applicant, in liaison with ESNEFT and the ICB. The HIA should be prepared in accordance with the advice and best practice published by Public Health England, the Essex Planning Officer's Association HIA Guidance Note, and the Suffolk County Council	Project Description	Socio-economics		

	<p>Guide to Infrastructure Contributions to establish the current capacity position of ESNEFT's facilities and services, the likely level of demand for those services and facilities arising from the development project, and the means by which that demand could be addressed.</p>				
NFOWFS3_044_024_030 723	<p>It is considered that the following information would be required to prepare the HIA:</p> <ul style="list-style-type: none"> v The number of workers from outside the wider study area to be temporarily housed within ESNEFT's catchment area (temporary population); v The location of accommodation for the temporary population; v The ESNEFT healthcare facilities and services likely to be accessed by the temporary population and their current capacity position; and v The number of A&E attendances likely to arise over the construction and decommissioning phases. 	Project Description	Socio-economics		
NFOWFS3_044_025_030 723	<p>18. Alternatively, ESNEFT and the other ICB members would look to commission their own HIA of the proposed project and would submit this for review as part of the consultation process.</p>	Project Description			
NFOWFS3_044_026_030 723	<p>19. With regard to impacts from major accidents and disasters, it is noted that there are no specific references to major accidents or disasters in relation to their likely impact on healthcare and services, in particular within Chapter 31 (Socio-Economics) of the PEIR.</p>	Human Health		<p>Note that as discussed in Section 34.5.2.7 of ES Chpater 34 (Major Accidents and Disasters) offshore wind has a good (and improving) health and safety record. Given the number of workers involved in construction (a peak of 471 (see Chapter 31 Socio-Economics, Volume I)) and safety record there is minimal risk of workplace accidents and reliance on local services (see also Table 28-5 in Chapter 28 Human Health, Volume I)</p>	N
NFOWFS3_044_027_030 723	<p>Given that people affected by a major accident or disaster associated with the project are likely to be transferred to either Colchester or Ipswich Hospital, the impacts of such an event(s) on</p>	Human Health	Project Description		

	<p>these facilities should be fully addressed. Therefore, it is requested that the PEIR is updated accordingly, and that major accidents and disasters are included in the HIA.</p>				
NFOWFS3_044_028_030 723	<p>20. Any mitigation measures identified by the HIA as necessary to address the impacts arising from the proposed development would also need to be discussed and agreed with ESNEFT, and secured as planning obligations linked to the grant of any consent for the project.</p>	Human Health	Project Description	Noted.	N
NFOWFS3_044_029_030 723	<p>Summary 21. In summary, ESNEFT welcomes the applicant's recognition that the North Falls Offshore Windfarm project is likely to affect healthcare facilities and services during the construction and decommissioning phases.</p>	Project Description		Noted.	N
NFOWFS3_044_030_030 723	<p>22. In addition, the Trust supports the applicant's intention to engage with relevant stakeholders as part of the assessment work to be undertaken to establish the existing capacity position, the scope, scale and nature of the healthcare impacts arising, and the level of mitigation required to address the identified impacts, which would need to be secured via a planning obligation agreement linked to any consent prior to development commencing.</p>	Project Description		Noted.	N
NFOWFS3_044_031_030 723	<p>23. In order to assist with a timely and resource-efficient planning process, it is suggested that the extent of the healthcare impacts and related mitigation measures are fully assessed and agreed with the ICB prior to the DCO application submission.</p>	Project Description	Human Health	Noted.	N

NFOWFS3_044_032_030 723	24. We trust the above representations will be taken into account as the project progresses into the DCO application process, and we would be grateful if you could acknowledge receipt of this submission.	Project Description		Noted.	N
NFOWFS3_044_033_030 723	25. On behalf of ESNEFT, we look forward to liaising with you on this project and would be pleased to address any comments or queries you may have.	N/A		Noted.	N
NFOWFS3_045_001_070 723	NORTH FALLS OFFSHORE WINDFARM PROJECT STATUTORY CONSULTATION - REF EN010119 The Planning Act 2008 & The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017: Proposed Extension to the Greater Gabbard Offshore Windfarm - Interested Party Response by the East of England Ambulance Service NHS Trust We write in response to the SSE Renewables and RWE Renewables (SSERWE) consultation on proposals to extend the existing Greater Gabbard 504 MW Offshore Windfarm located in the Southern North Sea.	Introduction		Noted.	N
NFOWFS3_045_002_070 723	The North Falls Offshore Windfarm Project (NFOWP) is a Nationally Significant Infrastructure Project (NSIP) and SSERWE intend to apply to the Secretary of State for Business, Energy and Industrial Strategy for a Development Consent Order (DCO) under Section 37 of the Planning Act 2008, to authorise its construction. NFOWP is currently at the Stage 2 (Statutory) consultation stage closing on 14th July 2023, and as an INTERESTED PARTY The East of England Ambulance	Introduction		Noted.	N

	<p>Service NHS Trust (EEAST) welcome the opportunity to engage with SSERWE in this process.</p> <p>EEAST's response forms an 'appendix' to the overarching submission made by the NHS Suffolk & North East Essex Integrated Care Board (ICB), with whom it operates in close association with.</p>				
NFOWFS3_045_003_070 723	<p>This letter and Annexes provide the necessary 'project context' to assist the review of EEAST's specific concerns, and should be read in conjunction with correspondence from its health and blue light partner organisations - incorporating Essex CC, Integrated Care Boards, Essex Police and Essex Fire & Rescue Service.</p> <p>EEAST previously responded to the NFOWP (Non-Statutory) Stage 1 consultation on 9th December 2022 as part of the ICB response, and is pleased to update its position following review of the Preliminary Environmental Information Report (PEIR).</p>	Project Description		Noted.	N
NFOWFS3_045_004_070 723	<p>NFOWP would be located within two array areas to the west of the Galloper and Greater Gabbard Offshore Windfarms, approximately 22km off the East Anglian Coastline, occupying a seabed area of 150km². Offshore and onshore cables would export power generated via off/on shore substations to the National Grid.</p>	Project Description		Noted.	N
NFOWFS3_045_005_070 723	<p>EEAST has reviewed the documentation on the NFOWP consultation portal and consider that the Project is likely to have a significant impact on its operations, service capacity and resources (i.e. staff, vehicle fleet and estate assets) requiring</p>	Project Description		Noted.	N

	appropriate mitigation and management measures to be identified at an early stage, and secured and implemented either as DCO Requirements and/ or via a Planning Obligation or Deed of Covenant.				
NFOWFS3_045_006_070 723	<p>EEAST and its health and blue light partners therefore look forward to working with SSERWE, in order to;</p> <ul style="list-style-type: none"> • Determine the baseline service capacity position(s) • Scope the likely type & extent of scheme impacts (effects) • Identify an appropriate type(s) level & duration of mitigation & management measures, including communication & liaison procedures. <p>This is necessary to ensure that EEAST can continue to meet its targets and deliver on its priorities as a key healthcare and emergency services provider. The relevant considerations from EEAST's perspective are summarised below.</p>	Human Health		Noted.	N
NFOWFS3_045_007_070 723	<p>East of England Ambulance Service NHS Trust EEAST is commissioned by Suffolk and North East Essex ICS on behalf of all ICSs to provide emergency and urgent care services throughout Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk. EEAST transports patients to 17 acute hospitals amongst other healthcare settings, including within Tendring DC, the local authority area affected by NFOWP's likely 'onshore' Order Limits. EEAST covers an area of approximately 7,500 sq miles with a resident population of over six million people and employs</p>	Introduction		Noted.	N

	approximately 4,000 staff operating from 130 sites.				
NFOWFS3_045_008_070 723	<p>The 999 service is free for the public to call and is available 24 hours a day, 7 days a week, 365 days a year, to respond to the population with a personalised contact service when patients.</p> <ul style="list-style-type: none"> • Require rapid transportation with life threatening illness/injury or emergencies - category 1 and 2 • Present with lower acuity urgent and less urgent conditions - category 3 and 4 requiring clinical interventions • Patients may be passed to 999 via other NHS health care systems, including NHS 111 • EEAST receives over 1 million emergency (999) calls per year and 800,000 calls for patients booking non-emergency transport. EEAST also provides urgent and emergency responses to Healthcare Professionals requiring ambulance assistance, and inter-facility transfers between hospitals and other healthcare settings, where patients require treatment at alternative sites to their current setting. 	Introduction		Noted.	N

<p>NFOWFS3_045_009_070 723</p>	<p>Non-Emergency Patient Transport Services (NEPTS) is a commissioned service providing an essential lifeline for people unable to use public or other transport due to their medical condition. Currently this service is provided by EEAST for the ICB areas within Essex likely to be affected by the NFOWP. These much-needed journeys support patients who are:</p> <ul style="list-style-type: none"> • Attending hospital outpatient clinics • Being admitted to or discharged from hospital wards • Needing life-saving treatments such as radiotherapy, chemotherapy, renal dialysis or DVT treatment. <p>Details of EEAST's service remit, priorities, staff, vehicle fleet and estate assets, service targets, co-working relationship with other healthcare and blue light partners, along with its operational standards and thresholds, are set out for information at Annex 1 & Annex 2.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_010_070 723</p>	<p>North Falls Proposals – Project Overview Scheme Components Summary</p> <p>It is evident from SSERWE's consultation documents, and specifically, the Preliminary Environmental Information Report (PEIR) Chapter 5: Project Description, that NFOWP is an extension to the Greater Gabbard Offshore Wind Farm in the Outer Thames Estuary (Southern North Sea).</p> <p>At its closest point, the northern array boundary would be located 22.5km off the East Anglian Coastline occupying an area of 20.9km², and the southern array boundary would be located 37.6km from shore with an area of</p>	<p>Project Description</p>		<p>Noted.</p>	<p>N</p>

	128.6km2, with landfall envisaged on the Essex Coast between Frinton-on-Sea and Clacton. It would generate no less than 504MW of clean, low carbon, renewable electricity, with a design life of approximately 30 years.				
NFOWFS3_045_011_070 723	<p>The design envelope and 'worst case parameters' for the key offshore components considered by the PEIR are summarised below:</p> <p>Offshore</p> <ul style="list-style-type: none"> • Up to 72 x wind turbines, with each turbine spaced a minimum of 820 m apart (164m rotor diameter) & 1,685m apart (337m rotor diameter) • Maximum rotor diameter of 337m with a maximum blade tip height above mean high water of 397m • Each turbine to sit on top of a foundation comprising either mono-piles, mono-suction buckets, gravity-based systems/ structures or jackets on pin piles/ suction buckets/ gravity ballast legs • Offshore electrical infrastructure consisting of up to 228 km of high voltage array/ interconnector cables to transmit power between the turbines & the 2 x offshore substations, an interconnector between the array sections and export cables bringing the power to shore. 	Project Description		Noted.	N

<p>NFOWFS3_045_012_070 723</p>	<p>Onshore</p> <ul style="list-style-type: none"> • Landfall (where 55 km of offshore export cables come to shore underground) would be on the coast between Clacton-on-Sea and Frinton-on-Sea, with the finalised location yet to be determined • Up to 4 x Transition Joint Bays (1 per export cable) – underground units where the offshore cable is jointed to the onshore cable • Onshore (underground) cables to transmit power to a new 400kV onshore substation (up to 8 ha in area with 15m high GIS building & 18 m high lightning masts) located within Tendring, Essex, followed by further transportation to a National Grid substation & then on to the national grid 	<p>Project Description</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_013_070 723</p>	<ul style="list-style-type: none"> • Cable corridor (1.8m deep) to run approximately 22 km inland from Great Holland on a north-west alignment towards Little Bromley via Landermere, Tendring Green & Horsley Cross, crossing the Tendring & Holland Brooks, the A120 Trunk Road, B1035 (Frinton Road) along with other minor routes - cables to be laid in up to 16 x trenches within a working width of 60 – 110m • Ancillary activities to facilitate the construction & operational phase of the Project, incorporating land for the construction areas & works, construction plant, machinery & equipment, site offices, welfare, storage, new accesses & access tracks – all project infrastructure to be installed within the Order Limits which would be defined for assessment in the forthcoming Environmental Statement (ES). <p>For the purposes of the assessment, the operational lifetime of the project is assumed</p>	<p>Project Description</p>		<p>Noted.</p>	<p>N</p>

	to be up to 30 years, and a decommissioning plan would be submitted at the appropriate time for approval by the regulatory regime in force at the time.				
NFOWFS3_045_014_070 723	<p>A summary of the 'construction phase' activities is provided below.</p> <p>Construction Phase Summary</p> <p>The PEIR (Chapter 5 – Project Description) envisages up to a 5-year construction phase (including 1 year of pre-construction works), commencing in 2026 with completion in 2031 at which point the wind farm is expected to be operational.</p> <p>The implementation of NFOWP would involve major construction processes, incorporating complex and specialised activities and equipment working at offshore and onshore locations, including under floodlights during the hours of darkness and during periods of low lighting level within a range of weather conditions.</p>	Project Description		Noted.	N
NFOWFS3_045_015_070 723	<p>Offshore Construction Phase Summary</p> <p>Following the site survey stages the 'offshore work' would (in summary) incorporate seabed preparation, dredging, pile driving, pile drilling, rock installation for scour protection, erection of the main turbine, platform and substation structures, cable trenching and laying, cable crossings, materials and bulk</p>	Project Description	Ground Conditions and Contamination	Noted.	N

	flammable liquids handling and transportation on land and sea.				
NFOWFS3_045_016_070 723	<p>A significant level (58,874,625 m3) of sandwave levelling to be undertaken with dredged material disposal to be undertaken at offshore locations.</p> <p>A range of construction vessels would be required, including jack-up barge vessels with excavators for excavations and cable laying, crane, rock bulk, foundation installation, scour, commissioning and accommodation vessels, tugs and feeders.</p> <p>A total of 101 vessels would generate 3,090 'movements' between the port and offshore site locations to implement the offshore construction works, with up to 35 x vessels in operation (and on site) simultaneously during the peak construction period.</p> <p>Helicopter access to the wind turbines (via a heli-hoist platform on top of each nacelle) may be required for construction purposes, and up to 100 'round trips' are envisaged.</p>	Project Description	Ground Conditions and Contamination	Noted.	N
NFOWFS3_045_017_070 723	<p>Onshore Construction Phase Summary</p> <p>At the landfall location (between Clacton-On-Sea and Frinton-on-Sea) a series of construction activities would be required, including (in summary) the installation of cables in beach and inter-tidal locations by non-displacement plough and drilling rigs.</p> <p>The principal activity associated with the onshore work concerns</p>	Project Description		Noted.	N

	the construction of the 24km cable route, which would be 60m in width extending to 122m in width (243m wide where woodland/watercourse/road/utility constraints are present) where trenchless techniques are used, incorporating 10m wide access/haul roads.				
NFOWFS3_045_018_070 723	<p>The principal activities undertaken within each of the 4 - 5 x cable route sections are summarised below:</p> <ul style="list-style-type: none"> • Site enabling works including - temporary fencing, upgrading/ installing new access points to the public highway (16 x access points) utility diversions, temporary drainage, vegetation clearance, establishment of up to 7 x site compounds, incorporating offices, welfare facilities, security, wheel wash, lighting & signage • Implementation works including – topsoil removal, haul road installation (22 x public highway/haul road crossings) trenchless duct installation beneath complex obstacles (major roads/railways/rivers), trench excavation/ backfilling, jointing pit installation, cable installation 	Project Description		Noted.	N
NFOWFS3_045_019_070 723	<ul style="list-style-type: none"> • Significant quantities of materials (such as MOT Type 1, asphalt, stone, concrete, sand & pipework etc) & waste (topsoil, native soil, drill fluid & perforated pipe etc) would arise as set out in table format within the PEIR. <p>In addition, a 400kV onshore substation would be required, located within a zone east of Ardleigh & west of Little Bromley, comprising buildings, plant and equipment.</p>	Project Description	Ground Conditions and Contamination	Noted.	N

NFOWFS3_045_020_070 723	The types of construction plant and equipment envisaged at this stage comprise – vibrating compactors, tarmac rollers, concrete mixers, cable pulling winches, angle grinders, pneumatic breakers, tarmac production plants, dump trucks, tracked excavators & lorries.	Project Description		Noted.	N
NFOWFS3_045_021_070 723	Core working hours for the 'onshore' construction phase would be 07:00 – 19:00 Monday to Saturday, with no activities undertaken where noise is audible beyond the project boundary on Sundays, bank/ public holidays, unless the following circumstances apply: <ul style="list-style-type: none"> • Where continuous periods of construction are required such as concrete pouring or directional drilling • For the delivery of abnormal loads which may cause congestion on the local road network, where the Highway Authority has been notified 72 hours in advance • Where works are being carried out in the marine environment & may be tidally restricted • As otherwise agreed with the Relevant Authorities. 	Project Description		Noted.	N
NFOWFS3_045_022_070 723	As is usually the case for offshore activities (seaward of mean low water) 24 hours/day and 7 days/week working patters are envisaged. 2,030 peak annual UK on/ offshore jobs and 250 peak annual Essex/Suffolk on/offshore jobs are forecasted to arise during the construction phase, with an annual average of 730/ 80 jobs respectively (PEIR Chapter 31: Socio - economics, Table 31.34).	Project Description	Socio-economics	Noted.	N

<p>NFOWFS3_045_023_070 723</p>	<p>Traffic Impacts & Highway Network Delay The PEIR (Chapter 27 Traffic & Transport, Table 27.29) indicates that 8 x highway links are expected to incur highway network (driver) delay as a result of construction phase road closures for up to 6 weeks as follows;</p> <ul style="list-style-type: none"> • Little Clacton Road –12-minute delay via alternative route • Ardleigh Road – 6-minute delay via alternative route • Swan Road – 5-minute delay via alternative route • Damant’s Farm Lane – 3-minute delay via alternative route • Golden Lane – 3-minute delay via alternative route • Spratts Lane – 3-minute delay via alternative route • Barlon Road – 2-minute delay via alternative route • Wolves Hall Lane – 1-minute delay via alternative route. 	<p>Project Description</p>	<p>Traffic and Transport</p>	<p>The Applicant have made significant commitments to the use of trenchless technology to ensure that the main roads remain open. Section 27.4.3.2.1 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that a total of 21 roads will be crossed by the Projects onshore cables and that of these roads, four minor roads could require a road closure with the remaining roads remaining open. Section 27.6.1.5 of the ES (Chapter 27 Traffic and Transport (Volume I)) identifies that delays from road closures would be no greater than three minutes and this is assessed as negligible.</p> <p>The matter has further been discussed with EEAST at an ETG meeting on the 26 March 2024 and consequently the OCTMP (Application ref: 7.16) also includes a commitment engaging with the emergency services and providing advanced notification of closures and diversion routes.</p>	<p>N</p>
<p>NFOWFS3_045_024_070 723</p>	<p>The methodology adopted by the PEIR indicates that the ‘significance effect’ of the delay on Little Clacton Road would be ‘moderate adverse’ with all other delays assessed as ‘negligible’. Whilst this approach is designed to convey the severity of impact from an EIA perspective as assessed against the highway/ trip baseline, it would not be applicable to the effect upon EEAST’s operations.</p>	<p>Project Description</p>	<p>Traffic and Transport</p>		
<p>NFOWFS3_045_025_070 723</p>	<p>From EEAST’s perspective, any form of network delay which leads to a Category 1 (life threatening) call mean arrival time of >7 minutes, could have a significant adverse impact on a patient health event outcome. It would also constitute a failure to achieve mandated National Quality Requirements leading to EEAST being issued with a Contract</p>	<p>Traffic and Transport</p>	<p>Human Health</p>		

	Performance Notice which could ultimately lead to a financial penalty being applied.				
NFOWFS3_045_026_070 723	Any road closure/ delay associated with the Project also increases the probability of any additional unforeseen delay (encountered on the network) triggering a cumulative 7-minute delay overall. Both these EEAST outcomes would be akin to a 'Major Adverse' effect in EIA terms, requiring avoidance and/or mitigation, as detailed below.	Traffic and Transport	Human Health		
NFOWFS3_045_027_070 723	Similarly, the forecasted trip generation for construction phase impacts on the local road network in the vicinity of the NFOWP Project, is considered to be appreciable (and significant) from EEAST's perspective. 17 x links exceed the Guidelines for Environmental Assessment of Traffic (GEART) screening thresholds, with the following increases of particular note identified: • Link 4: Bentley Road from A120 to Little Bromley – 432 (1,457%) increase in HGV's per day • Link 17: Colchester Road south of the A120 – 62 (293%) increase in HGV's per day • Link 35: B1035 north of B1033 to Whitehall Lane – 62 (284%) increase in HGV's per day • Link 37: B1035 north of Whitehall Lane to Swan Road – 62 (284%) increase in HGV's per day.	Project Description		The Traffic Management Act 2004 places a Network Management Duty on the highway authority to "...manage their road network' in a way that secures 'the expeditious movement of traffic..." Section 27.4.3 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines an agreement with National Highways and Essex County Council in their role as Network Managers to ensure that the arrival and departure profile of North Falls traffic is managed, thereby ensuring the expeditious movement of all traffic (including emergency services). The matter has further been discussed with EEAST at an ETG meeting on the 26 March 2024 and consequently the Outline Code of Construction Practice (Application ref: 7.13) also includes a commitment to establishing a line of communication with EEAST and providing updates and detail on the Project (as required) to allow them to plan and manage their activities.	N
NFOWFS3_045_028_070 723	Whilst the EIA methodology assigns a 'negligible' (insignificant) effect to Links 4,17,35 and 37, the reduced network capacity (particularly if combined with a Project HGV breakdown or other incident) could contribute to a >7minute Category 1 Call mean	Traffic and Transport	Human Health		

	arrival time - giving rise to a significant impact on EEAST's operations warranting mitigation.				
NFOWFS3_045_029_070 723	<p>Construction Access & Haul Road Crossings</p> <p>The PEIR indicates that there would be 16 x construction accesses, along with 7 x Temporary Construction Compound locations requiring access to the road network. A banks person may be deployed to direct construction vehicles in and out of construction access points in association with other traffic management measures, as required.</p>	Project Description			
NFOWFS3_045_030_070 723	<p>22 x haul road crossings with entry/ exit points are also identified which would require safety measures to be employed such as:</p> <ul style="list-style-type: none"> • Additional temporary signage to warn road users of heavy plant crossing the highway • Additional temporary traffic calming measures for highway users at the crossing point • Pedestrian arrangements at the crossing points • Road sweeping operations in the vicinity of the crossing points. 	Project Description			
NFOWFS3_045_031_070 723	<p>The 16 x proposed construction access points and 22 x haul road crossings with the associated traffic management measures are likely to lead to highway network delays.</p> <p>EEAST's operational standards & thresholds, which include Contract Performance Notice penalties in association with specified delays, are set out for information in Annex 2.</p>	Traffic and Transport			

<p>NFOWFS3_045_032_070 723</p>	<p>Artificial Indivisible Loads (AIL) It is noted that the construction of the onshore substation would require transportation of components via Articulated Indivisible Loads (AIL's) which are likely to lead to highway network delays, including the use of police escort facilities as necessary.</p>	<p>Traffic and Transport</p>		<p>Section 27.4.3.1 of the ES (Chapter 27 Traffic and Transport (Volume I)) includes details of the approach to the consideration of abnormal loads.</p> <p>The matter has further been discussed with EEAST at an ETG meeting on the 26 March 2024 and consequently the Outline Code of Construction Practice (document reference 7.13) also includes a commitment to notifying EEAST of the timing and routing of any abnormal load movements.</p>	<p>N</p>
<p>NFOWFS3_045_033_070 723</p>	<p>The PEIR for the 5 Estuaries Windfarm Project forecasted 2-4 transformers on 20-24 axle frame trailers and 8-12 items of plant (such as shunt reactors) to be delivered by AIL's. Review of the NFOWP Traffic & Transport Chapter and Transport Assessment within the PEIR does not, however, seem to identify AIL movements, and this area therefore ought to be assessed in the forthcoming Environmental Statement.</p>	<p>Traffic and Transport</p>			
<p>NFOWFS3_045_034_070 723</p>	<p>Major Accidents & Disasters The PEIR (Chapter 5 – Project Description) incorporates a section dealing with the NFOWP response to potential major accidents and disasters. It states that offshore wind developments have an intrinsically low risk of causing a major accident, and wind turbines, blades, rotors, towers & foundations have an excellent safety record, with a low failure rate, and are positioned offshore away from populated areas and the public. Hazards associated with unexploded ordnance (UXO) would be managed by undertaking a UXO survey prior to construction, to allow any identified UXO to be avoided or cleared using controlled explosion techniques.</p>	<p>Human Health</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_045_035_070 723</p>	<p>Buried cables onshore and offshore pose little risk to the public as the system is designed to detect faults and 'trip out' circuits automatically in the event of failure being detected.</p> <p>Whilst the risk of substation fires is historically low, the highest appropriate levels of fire protection and resilience would be specified to minimise fire risk.</p> <p>Lubricants, fuel and cleaning equipment would be stored in suitable facilities designed to meet the relevant regulations and policy guidance.</p> <p>NFOWP would enact minimum health, safety and environmental requirements on all suppliers, contractors and subcontractors, and ensure that all employees undergo necessary health and safety training.</p>	<p>Human Health</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_036_070 723</p>	<p>Reference is also made to this area being covered within the PEIR as follows:</p> <ul style="list-style-type: none"> • Chapter 15 – Shipping & Navigation which assesses risks to navigational safety as being tolerable & broadly acceptable • Chapter 21 – Water Resources which assesses flood risk impacts as negligible to minor adverse. 	<p>Project Description</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_037_070 723</p>	<p>Whilst the above assessment concerning potential major accidents and disasters is noted, EEAST recommends that procedures to effectively manage construction phase accidents and incidents, both onshore and offshore, in liaison with EEAST and its health and blue light partners are implemented, as outlined in further detail in the 'Principal Areas of Concern' section below.</p>	<p>Human Health</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_045_038_070 723</p>	<p>Human Health The PEIR (Chapter 28 – Human Health) provides a summary of consultation responses received in relation to human health to date, and signposts to specific topic areas within the PEIR which are also relevant to the determinants of human health incorporating the following chapters;</p> <ul style="list-style-type: none"> • Chapter 9 – Marine Water & Sediment Quality • Chapter 19 – Ground Conditions & Contamination • Chapter 20 – Onshore Air Quality • Chapter 21 – Water Resources & Flood Risk • Chapter 26 – Noise & Vibration • Chapter 27 – Traffic & Transport • Chapter 31 – Socio-economics • Chapter 32 – Tourism & Recreation • Chapter 33 – Climate Change 	<p>Project Description</p>		<p>Traffic and transport effects of the Project (including driver delay to all vehicle users (including emergency services)) have been considered in Chapter 27 Traffic and Transport (Volume I) and in Section 28.6.1.5 of Chapter 28 (Human Health).</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Human Health (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28.</p>	<p>N</p>
<p>NFOWFS3_045_039_070 723</p>	<p>Table 28.26 within Chapter 28 summarises the potential likely significant effects on human health, and considers these by phase as follows;</p> <ul style="list-style-type: none"> • Construction phase - 'minor adverse' in terms of noise, air quality, physical activity & journey times/ reduced access, 'negligible' for ground/ water contamination effects & 'moderate beneficial' for employment 	<p>Human Health</p>			
<p>NFOWFS3_045_040_070 723</p>	<ul style="list-style-type: none"> • Operational phase – 'minor adverse' in terms of noise, 'no effect' from Electric & Magnetic Field (EMF) sources, & 'moderate beneficial' for employment & wider societal benefits 	<p>Noise and Vibration</p>			
<p>NFOWFS3_045_041_070 723</p>	<ul style="list-style-type: none"> • Decommissioning phase – not yet finalised & expected to be no greater than the construction phase effects 	<p>Human Health</p>			

NFOWFS3_045_042_070 723	<ul style="list-style-type: none"> • No reference is made to EEAST's role as a health & blue light partner, or the baseline position and potential impacts arising on accident and emergency services and nonemergency patient transport services within the Project area. 	Human Health		<p>EEAST's role as a health & blue light partner is acknowledged: baseline data on EEAST activity is in Section 28.5.6 of Chapter 28 (Human Health) and the effects of the construction workforce are assessed in Section 28.6.1.5 of Chapter 28.</p> <p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024).</p> <p>Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.</p>	N
NFOWFS3_045_043_070 723	The PEIR findings have been reviewed, however these documents would not (at this stage) provide for effective mitigation and management measures to address the impacts on EEAST summarised above, and below in the 'Principal Areas of Concern' section.	Human Health		Noted, and this ES chapter has been updated since PEIR to include further detail regarding assessment and mitigation measures identified since PEIR.	N
NFOWFS3_045_044_070 723	Potential Impacts on EEAST Service Areas & Capacity Project Environmental & Social Effects Review of the NFOWP Preliminary Environmental Information Report and related documentation, indicates that the Project's potential impacts (effects) on EEAST's operational capacity, efficiency and resources (staff, vehicle fleet and estate assets) have not been baselined, sufficiently assessed or mitigated to date.	Socio-economic		EEAST's role as a health & blue light partner is acknowledged: baseline data on EEAST activity is in Section 28.5.6 of Chapter 28 (Human Health) and the effects of the construction workforce are assessed in Section 28.6.1.5 of Chapter 28.	N
NFOWFS3_045_045_070 723	EEAST is therefore keen to work with SSERWE to ensure this omission is addressed by further information being prepared to inform - either a topic in the Environmental Statement or in accompanying technical documentation, to provide the basis for a robust DCO Application for Examination.	Project Description		<p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024). This is discussed further in Section 3 of the Consultation Report (document reference 4.1).</p> <p>Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.</p>	N

NFOWFS3_045_046_070 723	In particular, EAST wishes to agree and secure suitable mitigation and management measures as part of the DCO Requirements and/ or via a Section 106 planning obligation (or Deed of Obligation) and have this position reflected within documentation to be submitted as part of the forthcoming DCO Application, and thereafter pursuant to a Statement of Common Ground in advance of the Examination.	Project Description		Meetings have been held with EEAST (26 March 2024 and 28 May 2024). This is discussed further in Section 3 of the Consultation Report (document reference 4.1). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.	N
NFOWFS3_045_047_070 723	EEAST's principal areas of interest and concern are summarised below. Information for Inclusion Within Scope of the Environmental Statement or Accompanying Documentation & Related Mitigation & Management Measures The principal areas of Project interest and concern which are likely to significantly impact on EEAST's operational capacity, efficiency and resources - requiring necessary and appropriate mitigation and management measures are outlined below, in light of the information and assumptions presented in the PEIR at this Stage 2 Consultation.	Socio-economic		Noted.	N
NFOWFS3_045_048_070 723	Highways, Traffic, Transport & Articulated Indivisible Loads (AIL's) It is evident that a major level of onshore construction works incorporating cable corridors, trenchless crossings, new highway access points, works compounds, heavy construction plant road crossings and haul roads, requiring road closures, route diversions and related traffic management measures - along	Traffic and Transport		Section 27.11 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that with the application of mitigation measures (as required) residual traffic and transport impacts upon all road users would not be significant. These mitigation measures are captured within the OCTMP (document reference 7.16) which is secured by DCO Requirement. The Applicant therefore considers that a Section 106 planning obligation or Deed of Obligation is not required.	N

	with significant HGV (and an unspecified number of additional AIL) traffic movements are envisaged.				
NFOWFS3_045_049_070 723	This would take place as part of the extensive 4-5 year construction phase program, required to implement the North Falls Offshore Windfarm Project. Information to determine the effects arising from the construction phase of the Project and likely impact on EEAST's operational capacity, efficiency and resources (including the likely highway disruption and delay) is currently absent from the PEIR documentation and its proposed mitigation and management measures.	Socio-economic			
NFOWFS3_045_050_070 723	This information therefore needs to be presented and assessed, either as part of the Environmental Statement or in accompanying documentation, with any necessary mitigation and management measures secured and implemented through DCO Requirements, and/ or via a Section 106 planning obligation or Deed of Obligation, as part of any Development Consent Order approval.	Project Description			

<p>NFOWFS3_045_051_070 723</p>	<p>Major Accidents & Disasters It is evident that a significant level and duration of construction phase work reliant on the use of sea-based construction vessels, helicopters, heavy lift plant and specialist marine based working platforms/ machinery/ equipment, producing noise, heat, vibration and dust (with work carried out on a 24 hour/ 7 day a week basis during potentially adverse weather conditions) is likely to present construction site hazards and dangers both at sea and on land.</p>	<p>Human Health</p>	<p>Noise and Vibration</p>	<p>For EIA purposes, a disaster is typically defined as a natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident.</p> <p>The site selection process implemented by the Project avoided significant interactions with existing infrastructure through a combination of consultation, desk-based research, and surveys. In addition, the site selection and project design process have ensured that project infrastructure and construction methodologies avoid potential hazards or will be designed around them (for example coastal erosion, surface water flooding etc, see Table 34.3 in ES Chapter 34, Major Accidents and Disasters).</p> <p>In relation to workplace accidents and incidents described, as discussed in Section 34.5.2.7 of ES Chapter 34 Major Accidents and Disasters offshore wind has a good (and improving) health and safety record. Given the number of workers involved in construction (a peak of 471 (see Chapter 31 Socio-economics, Volume I)) and safety record there is minimal risk of workplace accidents and reliance on local services (see also Table 28-5 in Chapter 28 Human Health, Volume I). As set out in the Outline Project Environmental Management Plan (OPEMP) (document reference 7.6), an offshore Emergency Response Co-Operation Plan (ERCOP) will be developed following discussions with relevant stakeholders. These will include risk assessments and designated evacuation plans for workers in the event of an incident.</p> <p>NFOW will ensure through its procurement process that all contractors will comply with the supplier Code of Conduct that will be put in place, as well as them being required to comply with all health and safety legislation. Further details of Contractor requirements are set out in the OPEMP (document reference 7.6) and the Outline Code of Construction Practice (OCoCP) (document reference 7.13).</p> <p>The OCoCP includes a section on Local Community Liaison stating that a Stakeholder Communications Plan will be developed which will</p>	<p>N</p>
<p>NFOWFS3_045_052_070 723</p>	<p>Working on sea platforms, coastal, cliff edge and uneven ground, with moving machinery lifting and transporting materials, and working at depth, including the potential for trench collapse, underlines the risks associated with the construction related activities – requiring both urgent and other medical interventions</p>	<p>Human Health</p>		<p>The OCoCP includes a section on Local Community Liaison stating that a Stakeholder Communications Plan will be developed which will</p>	

	and transport conveyance (including specialised airborne tasking/ conveyance) to be appropriately planned for and provided.			set out how effective and open communication with local residents, businesses, the local community and the emergency services that may be affected by the construction works will take place.	
NFOWFS3_045_053_070 723	Indeed, the Health & Safety Executive (HSE's) construction publications for Great Britain, indicate that work related incidents involving serious injury and fatalities, are statistically significantly higher for the construction industry as compared to the 'all industry' rate.	Human Health		ES Chapter 24 Traffic and Transport, Volume I includes consideration of severance, amenity and pedestrians delay impacts, road safety impacts, driver delay (capacity), driver delay (highway constraints), driver delay (road closures) and abnormal loads (special order vehicles), all of which have the potential to impact EEAST operations. Mitigation measures presented within the Outline Construction Traffic Management Plan (OCTMP) are deemed adequate and appropriate to mitigate likely significant effects on EEAST operations and is secured via the draft DCO.	
NFOWFS3_045_054_070 723	Information to determine the effect of the construction phase and its impact on EEAST's operational capacity, efficiency and resources is currently absent from the PEIR documentation, and its related mitigation and management measures, however. In the event of a construction phase accident, appropriate procedures would need to be put in place for emergency access, on-site triage, medical assessment and patient identification, stabilisation and transfer to an appropriate healthcare setting.	Project Description		Provisions set out in the Outline Construction Traffic Management Plan, the Outline Code of Construction Practice and (document reference 7.13) are adequately and appropriately secured via DCO requirement / DML condition and there is no need for a Section 106 planning obligation (or Deed of Obligation).	
NFOWFS3_045_055_070 723	The processes and procedures developed by SSERWE, and any outsourced construction organisations, should refer to legislation and technical guidance which places a duty on SSERWE to have its own response and medical mitigation to take the patient to a place of 'normal access' and handover to EEAST crews. EEAST would expect any trench collapse to fall under the confined space regulations and SSERWE, the construction company and/or contractor(s) should have access to a confined space trained team	Human Health			

	that could extricate a casualty safely.				
NFOWFS3_045_056_070 723	Plans and contingencies for facilitating emergency access, on-site triage, medical assessment, patient identification, stabilisation, clinical information, safe and efficient handover to EEAST responders, whilst sustaining operationally optimal attendance times (noting the likely delay factors above) which in urgent cases may require Helicopter Emergency Medical Services (HEMS) and/or Air-Sea Rescue access, is therefore considered to be necessary.	Human Health			
NFOWFS3_045_057_070 723	The incidence and impact of major accidents (and disasters) on EEAST and its HEMS partner operational capacity, efficiency and resources, including EEAST hazardous area response teams (HART - which may also require co-ordination and joint tasking with the Maritime & Coastguard Agency) needs to be presented and assessed, with any necessary mitigation and management measures secured and implemented through DCO Requirements, and/ or via a Section 106 planning obligation or Deed of Obligation, as part of any Development Consent Order approval.	Human Health	Project Description		

<p>NFOWFS3_045_058_070 723</p>	<p>Population Increase, Health & Wellbeing It is evident that during the anticipated 4-5 year construction period, a significant number of construction workers are required to implement the onshore and offshore components of the Scheme. Information to determine the nature of the construction workforce, their home origin, health status, clinical dependencies, location of any temporary accommodation, which are factors likely to directly impact on both EEAST and its health partners (ICB) operational capacity, efficiency and resources, including its co-ordinated response with health and blue light partners, is currently insufficiently dealt with in the PEIR documentation.</p>	<p>Project Description</p>		<p>Chapter 31 Socio-economics (Volume I) states that the peak construction demand is for 471 workers, of whom 429 (91%) will be non-resident.</p> <p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Human Health (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28.</p> <p>Section 27.11 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that with the application of mitigation measures (as required) residual traffic and transport impacts upon all road users would not be significant. These mitigation measures are captured within the OCTMP (document reference 7.16). The Applicant therefore considers that a Section 106 planning obligation or Deed of Obligation is not required.</p>	<p>N</p>
<p>NFOWFS3_045_059_070 723</p>	<p>This information therefore needs to be presented and assessed as part of the Environmental Statement or accompanying documentation, with any necessary mitigation and management measures secured and implemented through DCO Requirements, and/ or via a Section 106 planning obligation or Deed of Obligation, as part of any Development Consent Order approval.</p>	<p>Project Description</p>			
<p>NFOWFS3_045_060_070 723</p>	<p>Joint Working With EEAST, Health & Blue Light Partners Transport, Community Safety, Health & Wellbeing Working Group In the light of the above, EEAST recommend that appropriate Terms of Reference, Membership and a Communications Strategy for a Transport, Community Safety, Health and Wellbeing Working Group is established, as soon as</p>	<p>Project Description</p>		<p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024). This is discussed further in Section 3 of the Consultation Report (document reference 4.1).</p> <p>Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.</p> <p>Section 27.11 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that with the</p>	<p>N</p>

	practicable, and in advance of the Examination.			application of mitigation measures (as required) residual traffic and transport impacts upon all road users would not be significant. These mitigation measures are captured within the OCTMP (document reference 7.16). The Applicant therefore considers that a Section 106 planning obligation or Deed of Obligation is not required.	
NFOWFS3_045_061_070 723	This would help to inform and assist the management of relevant aspects of the Project requiring a coordinated response from 'health and blue light partners', incorporating representatives from EEAST, NHS Suffolk & North East Essex ICB, East Suffolk North Essex Foundation Trust, Essex Partnership University Trust, Essex Police, Essex Fire & Rescue Service, Essex & Herts Air Ambulance and HM Coastguard.	Project Description			
NFOWFS3_045_062_070 723	Concluding Points EEAST is an INTERESTED PARTY in this planning process, operating in close association with the Integrated Care Boards across the East of England, along with blue light partner organisations, such as Essex CC and Essex Police and Essex Fire & Rescue. EEAST welcomes the opportunity to respond to the Stage 2 (statutory) consultation for the North Falls Windfarm Project, and following review of the PEIR documentation raises Points of Concern, due to its omission to address EEAST's principal areas of interest and concern outlined above.	Introduction		Noted. Section 27.11 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that with the application of mitigation measures (as required) residual traffic and transport impacts upon all road users would not be significant. These mitigation measures are captured within the OCTMP (document reference 7.16). The Applicant therefore considers that a Section 106 planning obligation or Deed of Obligation is not required.	N

<p>NFOWFS3_045_063_070 723</p>	<p>EEAST considers that the Project is likely to have a significant impact on its operational capacity, efficiency and resources (incorporating its staff, vehicle fleet and estate assets) which have not been baselined or sufficiently assessed in the PEIR and associated documentation to date.</p>	<p>Project Description</p>	<p>Socio-economics</p>	<p>Meetings have been held with EEAST (26 March 2024 and 28 May 2024). This is discussed further in Section 3 of the Consultation Report (document reference 4.1).</p> <p>Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.</p> <p>Section 27.11 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that with the application of mitigation measures (as required) residual traffic and transport impacts upon all road users would not be significant. These mitigation measures are captured within the OCTMP (document reference 7.16). The Applicant therefore considers that a Section 106 planning obligation or Deed of Obligation is not required.</p>	<p>N</p>
<p>NFOWFS3_045_064_070 723</p>	<p>The Project is therefore considered to adversely affect EEAST's ability to meet and deliver its targets and priorities (statutory duties) as a key healthcare and emergency services provider.</p>	<p>Project Description</p>		<p>This has been raised at meetings with EEAST (26 March 2024 and 28 May 2024).</p> <p>Discussions are ongoing with with the intention of reaching a jointly agreed Statement of Common Ground.</p> <p>Section 27.11 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that with the application of mitigation measures (as required) residual traffic and transport impacts upon all road users would not be significant. These mitigation measures are captured within the OCTMP (document reference 7.16). The Applicant therefore considers that a Section 106 planning obligation or Deed of Obligation is not required. the intention of reaching a jointly agreed Statement of Common Ground.</p>	<p>N</p>
<p>NFOWFS3_045_065_070 723</p>	<p>Information including identified impacts arising from the development should therefore be presented and assessed, either as part of the Environmental Statement or in accompanying documentation, with necessary mitigation and management measures secured and implemented through DCO</p>	<p>Project Description</p>		<p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Human Health (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28.</p> <p>Section 27.11 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that with the application of mitigation measures (as required) residual traffic and transport impacts upon all road users would not be significant. These mitigation</p>	<p>N</p>

				measures are captured within the OCTMP (document reference 7.16). The Applicant therefore considers that a Section 106 planning obligation or Deed of Obligation is not required.	
NFOWFS3_045_066_070 723	Requirements, and/ or via a Section 106 planning obligation or Deed of Obligation, as part of any Development Consent Order approval.	Project Description		NFOW has indicated to EEAST that provisions set out in the Outline Construction Traffic Management Plan, the Outline Code of Construction Practice and [document reference X] are adequately and appropriately secured via DCO requirement / DML condition so there is no need for a Section 106 planning obligation (or Deed of Obligation).	N
NFOWFS3_045_067_070 723	It is recommended that an agreed approach is then reflected in a future Statement of Common Ground, to clarify the position reached and inform the Examination process.			Meetings have been held with EEAST on 26 March 2024 and 28 May 2024. This is discussed further in Section 3 of the Consultation Report (document reference 4.1). Discussions are ongoing with the intention of reaching a jointly agreed Statement of Common Ground.	N
NFOWFS3_045_068_070 723	The measures ought to include a process to assist EEAST and its health and blue light partners to plan for and implement co-ordinated responses to construction phase (and any operational and decommissioning phase) Scheme impacts and incidents arising, to optimise patient outcomes.	Project Description		It is agreed with EEAST that NFOW will take steps to minimise the number of incidents generated by the Project through commitments to safe working practices set out with the CoCP. Draft text outlining the measures set out within the Outline CoCP are appropriate for minimising incidents generated by the Project as far as possible.	N

NFOWFS3_045_069_070 723	Early information exchange and liaison is therefore important to ensure an effective scheme design is developed, and robust EIA and related technical assessments are carried out, in order to inform the basis for mitigating and managing the impacts arising on EEAST and its health and blue light partners.	Project Description		Noted.	N
NFOWFS3_045_070_070 723	We trust this is of assistance and look forward to working with SSERWE in order to address the points raised.	Project Description		Thank you for this response.	N
NFOWFS3_045_071_070 723	<p>ANNEX 1 EEAST KEY FACTS & SERVICE INFORMATION</p> <p>This section summarises EEAST's service remit, priorities, staff, vehicle fleet & estate assets, & co-working relationship with other healthcare & blue light partners & service targets Service Remit and Priorities</p> <p>The East of England Ambulance Service NHS Trust provide accident and emergency patient transport services across the East of England.</p> <p>The Trust Headquarters is in Melbourn, Cambridgeshire and there are Ambulance Operations Centres (AOC) at each of the three locality offices in Bedford, Chelmsford and Norwich who receive over 1 million emergency calls from across the region each year, as well as 800,000+ calls for patients booking non-emergency transport.</p>	Introduction		Noted.	N
NFOWFS3_045_072_070 723	<p>The 999 service is part of the wider NHS system providing integrated patient care. Provision of 999 services is aligned closely with national and regional initiatives driven by:</p> <ul style="list-style-type: none"> • Sustainability and Transformational Partnerships • Integrated Care System 	Introduction		Noted.	N

	<ul style="list-style-type: none"> • Integrated Urgent Care systems, i.e. NHS 111, Clinical Assessment Services, Urgent Treatment Centres, GP Out of Hours Services. 				
NFOWFS3_045_073_070 723	<p>Additionally, regional Ambulance Trusts may collaborate closely with other ambulance services, the wider emergency services or wider system providers to deliver appropriate patient care.</p> <p>To support the service transformation agenda, the key requirements are:</p> <ul style="list-style-type: none"> • To deliver the core response and clinical outcome standards as defined by the Ambulance Response Programme • To fulfil statutory duties relating to emergency preparedness, resilience and response (EPRR) • Optimisation of call handling and appropriate responses through virtual alignment of NHS 111/999 and call/CAD transfer between ambulance services • Increase the percentage of lower acuity calls managed through “hear and treat” and “see and treat” options • Utilise a virtual delivery model to support wider workforce integration for paramedics, call handlers and specialist staff with local urgent care delivery models • Facilitate cross boundary working and the flexible use of ambulance service resources to support the development of regional Sustainability and Transformational Plans and Integrated Care Systems. 	Introduction		Noted.	N

<p>NFOWFS3_045_074_070 723</p>	<p>The 999 service is free for the public to call and is available 24 hours a day, 7 days a week, 365 days a year, to respond to the population with a personalised contact service when patients:</p> <ul style="list-style-type: none"> • Require rapid transportation with life threatening illness/injury or emergencies - category 1 and 2 • Present with lower acuity urgent and less urgent conditions - category 3 and 4 requiring clinical interventions • Patients may be passed to 999 via other NHS health care systems, including NHS 111 • EEAST receives over 1 million emergency (999) calls per year and 800,000 calls for patients booking non-emergency transport. 	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_075_070 723</p>	<p>EEAST also provides urgent and emergency responses to Healthcare Professionals requiring ambulance assistance, and inter-facility transfers between hospitals and other healthcare settings, where patients require treatment at alternative sites to their current setting.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_076_070 723</p>	<p>Non-Emergency Patient Transport Services (NEPTS) provide an essential lifeline for people unable to use public or other transport due to their medical condition. These much-needed journeys support patients who are:</p> <ul style="list-style-type: none"> • Attending hospital outpatient clinics or other healthcare locations • Being admitted to or discharged from hospital wards • Needing life-saving treatments such as radiotherapy, chemotherapy, renal dialysis or DVT treatment. 	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_045_077_070 723</p>	<p>Service Assets EEAST clinicians: <ul style="list-style-type: none"> • Emergency Care Support Workers • Emergency Medical Technicians • Paramedics • Specialist Paramedics • Critical Care Paramedics. Types and models of response: <ul style="list-style-type: none"> • Community First Responder (CFR) (volunteers) • Patient Transport Service (PTS) • Clinical See and Treat • Clinical Hear and Treat (telephone triage) • Early Intervention Team (EIT) • Rapid Response Vehicle (RRV) • Double Staff Ambulance (DSA) • Hazardous Area Response Team (HART) • Specialist Operations Response Team (SORT) • Helicopter Emergency Medical Service (HEMS) EEAST utilise 3 x HEMS aircrafts within the region. Ambulance Operations Centre (AOC) staff: <ul style="list-style-type: none"> • 999 Call Handlers • Emergency Medical Dispatchers • Tactical Operations Staff. EEAST support services staff cover all other corporate and administrative functions across the region.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_078_070 723</p>	<p>Estates The Trust is rolling out a Hub and Spoke network with up to 18 hubs to provide regional premises for delivery of operational responses to calls, flow of ambulance preparation via the Make Ready function (cleaning and restocking of ambulances) and dispatch of ambulances to local spokes (reporting posts/response posts/standby locations). Support services such as workshop facilities, clinical engineering (medical equipment store and</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>

	workshop), consumable product stores and support office accommodation are also provided from Hubs.				
NFOWFS3_045_079_070 723	<ul style="list-style-type: none"> • Ambulance Station Central Reporting Post - A 24/7 - Permanent reporting base for staff and primary response location for one or more vehicles. Provision of staff facilities. • Ambulance Station Response Post - A primary response location, which includes staff facilities but is not a reporting base for staff. • Standby Location - Strategic locations where crews are placed to reach patients quickly. Facilities used by staff are provided on an informal basis only by agreement with the relevant landowner. 	Introduction		Noted.	N
NFOWFS3_045_080_070 723	Ambulance Stations in Essex are currently located at: Basildon Clacton Harlow South Woodham Ferrers Billericay Colchester Harwich, Dovercourt Southend-On-Sea Braintree Greenstead, Colchester Loughton Stansted Great Notley, Braintree	Introduction		Noted.	N

<p>NFOWFS3_045_081_070 723</p>	<p>Corringham Maldon Thurrock Grays Brentwood Dunmow Ongar Waltham Abbey Burnham on Crouch Epping Rayleigh Weeley Canvey Frinton Saffron Walden Wickford Chelmsford Halstead Shoeburyness Witham</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_082_070 723</p>	<p>Vehicle Fleet • 387 front line ambulances • 178 rapid response vehicles • 175 non-emergency ambulances (PTS and HCRTs vehicles) • 46 HART/major incident/resilience vehicles located at 2 x Hazardous Area Response Team (HART) bases with a number of specialist vehicle resources.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_083_070 723</p>	<p>Workforce & Equipment Approximately 4,000 staff and 800+ volunteers across 120 sites. Each resource has equipment specific to the operational function of the vehicle and skill level of the staff.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_045_084_070 723</p>	<p>Specialisms EEAST works collaboratively across our blue light partners and have joint working groups with Police and Fire Services across the region, working in partnership managing responses to incidents and undertaking joint exercises with our dedicated resources to prepare for specialist rescue, major incidents and mass casualty incidents.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_085_070 723</p>	<p>EEAST is a Category 1 Responder under the Civil Contingencies Act, 2004, playing a key role in developing multi-agency plans against the county and national risk registers. EEAST also works closely with the Military, US Air Force, Royal Protection Service and the Port of Felixstowe Police, Fire and Ambulance services.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_086_070 723</p>	<p>EEAST's Emergency Preparedness Resilience Response (EPRR) team lead on the Joint Emergency Services Interoperability Principles (JESIP) working in close partnership with all blue light agencies, the Coastguard and Local Authorities. Specialist resources work with the Police in counter terrorism and developing response plans in the event of a major incident. EEAST are an integral part of the locality's resilience response sitting on a number of safety advisory groups, east coast flood working groups and hospital emergency planning groups.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>

<p>NFOWFS3_045_087_070 723</p>	<p>Co-working Relationship with other Blue-Light & Healthcare Partners EEAST is an integral part of the wider healthcare system working closely with the North Essex Integrated Care System (ICS) to deliver emergency and urgent care and are key stakeholders in supporting wider healthcare initiatives. Within Essex, EEAST work with the ICSs in delivering additional care pathways focusing on hospital admission avoidance, this is a partnership with the local acute providers and local authorities. EEAST operate Early Intervention Response vehicles and a Rapid Intervention Vehicle. These resources work collaboratively within the system to offer holistic care to patients whilst reducing pressure on Emergency Departments.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_088_070 723</p>	<p>This is EEAST's response to the requirements of the NHS Long Term Plan, with the clear narrative that in order to bring the NHS into financial balance all NHS providers must find mechanisms to treat patients in the community and out of the most expensive care setting, which are acute hospitals. This not only saves the NHS critical funding, but it also improves patient outcomes.</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_045_089_070 723</p>	<p>EPRR and Specialist Operations teams routinely train with other blue light agencies in preparedness for major incidents such as terrorist attacks and major incidents with statutory training obligations to respond to local and national incidents. In continuing to respond to the COVID-19 Pandemic, EEAST is working collaboratively with Private Ambulance providers, the Military,</p>	<p>Introduction</p>		<p>Noted.</p>	<p>N</p>

	volunteer Ambulance Services (such as St John Ambulance and British Red Cross) and local Fire and Rescue Services, to increase its capacity and maintain service delivery to meet the additional demand.				
NFOWFS3_045_090_070 723	EEAST Service Targets All NHS organisations are required to report against a set of Core Quality Indicators (CQIs) relevant to their type of organisation. For ambulance trusts, both performance and clinical indicators are set as well as indicators relating to patient safety and experience. NHS organisations are also required to demonstrate their performance against these indicators to both their commissioners and Regulators (NHS England/Improvement).	Introduction		Noted.	N
NFOWFS3_045_091_070 723	It is important to note that EEAST is also measured on how quickly a patient is transported to an appropriate location for definitive care, often in time critical circumstances. Failure to deliver against these indicators will result in a Contract Performance Notice and could result in payment being withheld, as prescribed in NHS Standard Contract 20/21 General Conditions (Full Length) GC9 9.15	Introduction		Noted.	N

<p>NFOWFS3_045_092_070 723</p>	<p>ANNEX 2 EEAST National Quality Requirements 2023-24 Ambulance Service Response and Handover Times Ambulance Service Response Times National Quality Requirement Threshold Category 1 (life-threatening) calls – proportion of calls resulting in a response arriving within 15 minutes Operating standard that 90th centile is no greater than 15 minutes Category 1 (life-threatening) calls – mean time taken for a response to arrive Mean is no greater than 7 minutes Category 2 (emergency) calls – proportion of calls resulting in an appropriate response arriving within 40 minutes Operating standard that 90th centile is no greater than 40 minutes Category 2 (emergency) calls – mean time taken for an appropriate response to arrive Mean is no greater than 30 minutes Category 3 (urgent) calls – proportion of calls resulting in an appropriate response arriving within 120 minutes Operating standard that 90th centile is no greater than 120 minutes Category 4 (less non-urgent “assess, treat, transport” calls only) – proportion of calls resulting in an appropriate response arriving within 180 minutes Operating standard that 90th centile is no greater than 180 minutes</p>	<p>Human Health</p>		<p>Noted.</p>	<p>N</p>
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NFOWFS3_045_093_070 723	For All Ambulance Service Response Times Indicators: Method of Measurement: See AQI System Indicator Specification at: https://www.england.nhs.uk/statistics/statistical-workareas/ambulance-quality-indicators/ Timing of Application of Consequence Quarterly for all indicators	Introduction		Noted.	N
NFOWFS3_045_094_070 723	Ambulance Service Handover Times National Quality Requirement Threshold Following handover between ambulance and A+E, ambulance crew should be ready to accept new calls within 15 minutes and no longer than 30 minutes >0 Guidance definition: See Contract Technical Guidance Appendix 2 at https://www.england.nhs.uk/nhsstandard-contract/ Timing of Application of Consequence Ongoing	Introduction		Noted.	N
NFOWFS3_046_001_290 623	Hi Sue I'm at a bit off a loss as i thought we would be engaging through the CFWG?	N/A		Consultation was undertaken with the Harwich Harbour Fishermans Association (HHFA). The HHFA provided an overview of members fishing grounds (see Figure 14.12 HHFA Fishing Grounds from Consultation, document reference 3.2.10). Engagement has also been undertaken via the CFWG that has been established by the Project. The consultation undertaken has been summarised in Table 14.2 in Chapter 14 of the ES (Commercial Fisheries).	N
NFOWFS3_046_002_290 623	Can you send me the link for Harwich Harbour Fishermans Association to formally object on the proposal asap and well before the indicated timescale. Our main initial concern is failure to engage with the local fishing community on a regular basis and instead of consultation, negotiation, working together RWE decided to threaten some fishers legally, this is outside what we have experienced with other developers within our working areas, NF is sadly the first!	Commercial Fisheries			


<p>NFOWFS3_046_003_290 623</p>	<p>RWE North Fall have a lot to learn from other developers and I suggest they make contact with the fishing community including HHFA asap to try and establish a reasonable and constructive approach to your proposed development.</p>	<p>Commercial Fisheries</p>			
<p>NFOWFS3_046_004_290 623</p>	<p>My dealings with your representatives and FLO has fallen well below an acceptable level and doesn't look good for the future, the expected co existence has failed to date and may indicates it will be RWE approach for the future, not good! I am always available to discuss the way forward but that will not be through an appointed FLO but directly with RWE representatives as others developers have. i await your response. Regards Thervor</p>	<p>N/A</p>			
<p>NFOWFS3_047_001_020 723</p>	<p>Hi Thanks for response however my comments are still current based on historic conduct of your team up to date. Was it not you that threatened fishers with a legal injunction, which was a first, which caused so much stress when all they wanted to do was go about their legal activities? Hopefully that will change in the future but only time will tell! Regards Trevor Secretary HHFA</p>	<p>Commercial Fisheries</p>			

<p>NFOWFS3_048_001_230 523</p>	<p>Dear Thomas,</p> <p>Thanks for sight of this email and for the opportunity to respond to the Statutory consultation.</p> <p>I have now had an opportunity to look at the shipping and navigation chapters of the PEIR and the PEIR addresses those point the RYA sets out in it position on offshore wind energy. The two main issues for the Rya are operational safety zones and depth over chart datum as the cable come ashore.</p> <p>In this context. The RYA is content to note that there are no plans to apply for operational safety zones other than those for construction, major maintenance and decommissioning and that at this stage the Applicant will also be MGN 654 compliant including in terms of underkeel clearance provisions i.e., depth will not be reduced by more than 5% unless otherwise agreed with the MCA. Consultation has been undertaken (and is ongoing) with HHA and PLA including via the Sunk User Group in relation to the offshore cable corridor including in relation to underkeel clearance.</p> <p>Please use me as the RYA point of contact for this project.</p> <p>Regards</p> <p>Stuart</p>	<p>Shipping and Navigation</p>		<p>The Applicant will be fully compliant with MGN 654 as per Section 15.3.3 of ES Chapter 15 (Shipping and Navigation). This will include the provisions on underkeel clearance i.e., depth will not be reduced by more than 5% unless otherwise agreed with the MCA. An assessment of underkeel clearance has been provided in Section 15.6.2.7 of Chapter 15.</p>	<p>N</p>
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Consultee reference	Summary of comments	Code / theme	Code / theme	Applicant's response	Project change (Y/N)
NFOWFS3_049_001_040723	<p>Dear Tom, Statutory Consultation under Section 42 of the Planning Act 2008 and Regulation 13 of Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Thank you for your consultation dated 15 May 2023 requesting our advice on the Preliminary Environmental Information Report (PEIR) submitted in support of the North Falls Offshore Wind Farm Project. Natural England are content to provide comments on the PEIR, however this is without prejudice to any comments we may wish to make in light of further submissions or on the presentation of additional information. The following PEIR chapters and other reports have been reviewed:</p> <ul style="list-style-type: none"> • Chapter 1 Introduction • Chapter 4 Site Selection and Assessment of Alternatives • Chapter 5 Project Description • Chapter 6 EIA Methodology • Chapter 8 Marine Geology, Oceanography and Physical Processes • Chapter 10 Benthic and Intertidal Ecology • Chapter 11 Fish and Shellfish Ecology • Chapter 12 Marine Mammals • Chapter 13 Offshore Ornithology • Chapter 23 Onshore Ecology • Chapter 24 Onshore Ornithology • Chapter 29 Seascape, Landscape and Visual Impact Assessment (SLVIA) • Chapter 30 Landscape and Visual Impact Assessment (LVIA) • Habitats Regulations Assessment • Marine Conservation Zone Assessment • Section 48 Notice 	Introduction		Noted	N
NFOWFS3_049_002_040723	<p>Overview Comments Natural England's Remit Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development. Natural England's remit extends out to 12nm. Pursuant to an authorisation made on the 9th December 2013 by the JNCC under paragraph 17(c) of Schedule 4 to the NERC Act 2006, Natural England is also authorised to exercise the JNCC's functions as a statutory</p>	Introduction		Noted	N

	<p>consultee in respect of applications for offshore renewable energy installations in offshore waters (12-200nm) adjacent to England.</p>				
NFOWFS3_049_003_040723	<p>Evidence Plan Process (EPP) The development consent process for Nationally Significant Infrastructure Projects (NSIPs) is intended to be a frontloaded process, in which proposals are fully scoped, and refined prior to application submission. We consider the PEIR consultation to be a significant milestone in the NSIP process. At this stage, we would expect to be in a position to agree with the supporting evidence, the methodologies used to assess and determine significance of potential impacts, and to have identified the key issues. Going forwards, this would enable discussion and consideration of those key issues, identification of additional data requirements, and identification and scoping out of potential avoidance/mitigation measures and where required outline compensation measures and/or Measures of Equivalent Environmental Benefit (MEEB) during the remainder of the Evidence Plan Process (EPP). Ultimately, we recognise the importance of the pre-application phase of the consenting regime and welcome the opportunity to engage as much as possible at this stage. As such we seek to make this process as effective as possible.</p> <p>Our advice on the North Falls EPP (30 April 2021), was that the EPP can help reduce risk in the application, avoid delays, and reduce effort needed during the highly time-pressured Examination process. We also highlighted recent decisions by PINS and BEIS to extend Examinations and/or the Determination phase due to insufficient issue resolution. Whilst we acknowledge that some survey data are to be presented in the Environmental Statement (ES), we are concerned that there may not be sufficient time for these results to be fully considered and assessed prior to the anticipated application submission. We would, therefore, encourage the Project to use the EPP via post-PEIR ETGs to discuss outstanding issues, additional data requirements, and the assessment of impacts and levels of significance, prior to submission. Natural England considers that a critical next step within the EPP is for a steering group meeting to be convened to discuss, and agree, with all interested parties, the</p>	Policy and Legislative Context		Noted	N

	<p>subsequent next steps and processes required to resolve outstanding issues in order to successfully enter the application phase We also recommend that a Statement of Common Ground (SoCG) is started by the Project early within the EPP, in order to accurately catalogue all areas of agreement for the project and highlight any areas of disagreement. The ETG meeting minutes and Agreement/Disagreement log have been successfully used by other projects as the foundation for the SoCG.</p>				
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NFOWFS3_049_004_040723	<p>Best Practice Advice for Offshore Wind</p> <p>Natural England has produced a series of documents to provide Environmental Assessments: Best Practice Advice for Evidence and Data Standards for offshore wind farm development in English inshore and offshore waters. The advice is provided in a series of documents which range from baseline characterisation surveys and pre-application engagement, through to expectations at application and post-consent monitoring.</p> <p>The project is divided into four phases:</p> <ul style="list-style-type: none"> • Baseline characterisation surveys • Pre-application engagement and the evidence plan process • Data and evidence expectations at examination • Post-consent monitoring and other environmental requirements. <p>The above link also provides access the Nature Conservation Considerations and Environmental Best Practice for Subsea Cables for English Inshore and UK Offshore Waters. This project provides NaturalEngland and JNCCs joint environmental best practice advice for subsea cable projects in English inshore and UK offshore waters. It is the expectation that developers follow our Best Practice through the application and consenting process. As such our advice and recommendations to the PEIR are framed around this advice.</p> <p>If you have any issues using SharePoint Online, please contact the site owners or contact: </p> <p>Natural England has also produced terrestrial guidance 'Developers: get environmental advice on your planning proposals' which is also relevant to the onshore transmission assets for offshore windfarms please follow the links to our standard advice.</p>	Policy and Ledsislative Context	Technical Consultation	Noted	N
NFOWFS3_049_005_040723	<p>Natural England's Structure/Framework for Attributing Risk</p> <p>The comments provided within this letter and its Annexes have been colour coded using the structure/framework as specified in the risk table in Appendix I of this letter. In this letter, the coloured headings are coded based on the highest risk associated with the topic in question. Natural England would like to highlight that at this stage all comments highlighted as yellow, amber, or red need to be addressed, with the potential for these issues to become more significant if not resolved at application</p>	Introduction		Noted	N

	(Appendix 1 provides detailed explanations of the coloured risk ratings).				
NFOWFS3_049_006_040723	<p>Impacts on the Natural Environment – Natural England’s Key Concerns</p> <p>Impacts on Outer Thames Estuary SPA Red Throated Diver</p> <p>Natural England’s position is that an Adverse Effect on Integrity (AEoI) is arising on the Outer Thames Estuary Special Protection Area (OTE SPA) red throated diver (RTD) due to displacement impacts from existing and consented Offshore Wind Farm (OWF). Any further displacement would, therefore, be considered additional to the in-combination AEoI. The evidence base strongly suggests that the Project alone will exert a displacement effect on RTD in the OTE SPA. We advise that the western boundary of the North Falls southern array would need to be moved at least 10km from the SPA to avoid either a project alone or in-combination AEoI for RTD. We would recommend you review the application and decision documentation for the East Anglia One North and Two OWFs, as the decisions by the Secretary of State (SoS) on these proposals are particularly relevant.</p>	Onshore Ornithology	Site Selection and Assessment of Alternatives	Red throated diver from the Outer Thames Estuary area assessed in the Report to Inform Appropriate Assessment Part 4 Offshore Ornithology (Document Reference: 7.1.4). A without prejudice derogation case is provided for this species (Habitats Regulations Derogation Provision of Evidence (Document Reference: 7.2), including without prejudice compensatory measures which are described in Appendix 3 Red Throated Diver Compensation Document (7.2.3).	N
NFOWFS3_049_007_040723	<p>Benthic & Intertidal Ecology/Measures of Equivalent Environmental Benefit</p> <p>Natural England advises that every effort should be made to adopt the Mitigation Hierarchy before consideration of Measures of Equivalent Environmental Benefit (MEEB). Currently, we cannot find any justification in the PEIR documentation for the placement of North Falls infrastructure within the south array within the boundary of Kentish Knock East Marine Conservation Zone (MCZ). Consequently, we strongly encourage the Project to avoid the placement of infrastructure in this MCZ. We are also unable to agree with the conclusions of the MCZ Assessment (MCZA) and related documents without the necessary evidence to support the conclusions drawn. We believe that further benthic mitigation measures should be fully explored within the Application. Without the adoption of additional mitigation measures for MCZ impacts, Natural England advises that MEEB are required. Our advice remains unchanged since we provided feedback to the MEEB Expert Topic Group (ETG).</p>	Benthic and Intertidal Ecology	Site Selection and Assessment of Alternatives	The array area has been reduced in size and no longer overlaps the Kentish Knock East MCZ. Therefore, there will be no infrastructure placed on the seabed within the MCZ. This has been discussed with the Seabed ETG and agreed that provided there is no infrastructure in the MCZ, the conservation objectives will not be hindered and MEEB will not require further consideration.	Y

NFOWFS3_049_008_040723	<p>Marine Processes</p> <p>We are concerned that the baseline is currently insufficient to inform the impact assessment. The reliance on old hydrodynamic, wave and sediment transport data from the existing adjacent operational Greater Gabbard and Galloper Offshore Wind Farms (OWFs) to characterise prevailing conditions at North Falls, needs to be further justified in order to demonstrate applicability to North Falls. The physical environment across the North Falls south array, in particular, differs markedly from those across the Greater Gabbard array areas and Galloper north array area. Moreover, Galloper and Greater Gabbard now form part of the baseline for North Falls. Therefore, given the importance of establishing a robust baseline to inform the impact assessment, not only for the project alone, but also in combination, we advise carrying out an additional assessment to verify the suitability of the existing datasets as analogues, and calibrate them, for the prevailing conditions at North Falls.</p>	Marine Geology Oceanography and Physical Processes		Updated baseline information on tidal currents, waves and sediments that are bespoke to the Project is provided in Section 8.5 of Chapter 8 Marine Geology, Oceanography and Physical Processes.	N
NFOWFS3_049_009_040723	<p>Marine Mammals</p> <p>We would like to see further justification and rationale for the worst-case scenario (WCS) for use of Acoustic Deterrent Devices. We also note that the Marine Mammal Mitigation Protocol (MMMP) has not yet been drafted, therefore, we would wish to be consulted on this prior to it being included in the Environmental Statement (ES). In the submitted ES, we also advise that consideration should be given to the total number of days of piling for all offshore wind farm projects, not just the number of days piling for North Falls alone.</p>	Marine Mammals		<p>The ES and HRA has been updated to include the required ADD duration to cover PTS (cumulative) ranges, based on current underwater noise modelling results. Further information on ADD durations is provided within the Outline MMMP (document reference 7.7).</p> <p>Natural England have been consulted on the The Outline MMMP, which is submitted as part of the DCO Application (document reference 7.7).</p> <p>The in-combination assessment for the Southern North Sea SAC have been updated to take account of the total days of activity with the relevant season, rather than just the days that overlap with North Falls (RIAA Section 6.2.3.4.1, document reference 7.1.1).</p>	N

NFOWFS3_049_010_040723	<p>Fish & Shellfish Ecology</p> <p>We advise that it is important to establish a sound baseline, using the best available evidence for herring and sand eel, upon which to base the assessment of impacts. This includes an assessment of impacts on prey availability for red throated diver. Furthermore, it is essential that limitations and uncertainties regarding the datasets used should be clearly laid out. We also concur with Cefas, that a multi-layered mapping approach to sand eel and herring, and a heat map of the International Herring Larvae Surveys would be beneficial in the ES. Natural England's comments on fish and shellfish ecology should be considered alongside those of Cefas, where they are not features of designated sites or a prey species associated with the feature of a designated site.</p>	Fish and Shellfish Ecology		Noted.	N
NFOWFS3_049_011_040723	<p>Seascape and Landscape Visual Impact Assessment</p> <p>We advise that the North Falls OWF has the potential to cause significant adverse impacts on the special qualities of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (SCHAONB) and Suffolk Heritage Coast (SHC). We advise that these are significant for the purposes of EIA and, as a result of these significant adverse impacts, further harm may occur to the natural beauty of the SCHAONB and special character of the SHC. We also have outstanding concerns regarding the evidence used to assess (a) potential harm to the SCHAONB and SHC due to the presence of North Falls OWF (particularly the North Array) area, and (b) the worst-case maximum turbine height scenario. Both of which introduce uncertainty to the assessment of impacts to SCHAONB and SHC. We also disagree that the Project will not have significant cumulative impacts on the SCHAONB and SHC.</p> <p>Therefore, to help achieve good design, Natural England advises that to move the design towards a more acceptable project in terms of SLVIA impacts, the Applicant should consider principles to exclude development in the northern array area and commit to using the smaller 310m turbines in the southern array.</p>	Seascape and Landscape Visual Impact Assessment		<p>The array area for the DCO application has taken on board design comments received in response to PEIR, through the removal of the northern array of turbines, the refinement of the former southern array, and the reduction in turbine tip height. A number of turbine options are under consideration, with maximum tip heights between 280.39m and 381.39m above Lowest Astronomical Tide (LAT).</p> <p>Further information on changes in the array area between PEIR and DCO application is provided in Section 29.3.1 and ES Chapter 4 Site Selection and Assessment of Alternatives (Volume I).</p> <p>An assessment of cumulative effects is provided in Section 29.6 and 29.7 of ES Chapter 29 Seascape, Landscape and Visual Impact Assessment</p>	Y

NFOWFS3_049_012_040723	<p>Onshore Ecology</p> <p>We advise that a complete set of ecological surveys should be carried out, according to our standing advice and industry standard guidance. For Hamford Water SPA, we would wish to see 24 months of ornithology data collected for functionally linked land (FLL). Survey results should be provided within the ES. Furthermore, potential impacts identified following the ecological surveys, will need to be fully assessed and suitable mitigation provided, where necessary. We also advise that, depending on the survey results, the requirement to submit a draft protected species licence application may be required. Natural England's Wildlife Licensing team should be consulted on this matter.</p> <p>We also advise that Horizontal Directional Drilling (HDD) exit pits and associated operations should not be located within, or immediately adjacent to, Holland Haven Marshes Site of Special Scientific Interest (SSSI). Survey data should be used to inform the siting of the onshore works compound, minimising environmental damage and disturbance to flora and fauna as much as possible within the SSSI. Appropriate mitigation measures should be identified to avoid/minimise disturbance arising from impacts due to noise, vibration, lighting, hydrological effects, and drill fluid contamination.</p>	Onshore Ecology		<p>Impacts relating to ornithology are set out in Chapter 24 Onshore Ornithology.</p> <p>Potential impacts identified during the ecology surveys as well as additional mitigation are assessed in Section 23.6 of Chapter 23, Onshore Ecology.</p> <p>Further mitigation measures are set out in the OLEMS (document reference 7.14).</p> <p>Embedded mitigation is summarised in Section 23.3.3 of Chapter 23.</p>	Y
NFOWFS3_049_013_040723	<p>Landscape and Visual Impact Assessment (LVIA)</p> <p>We have concluded that, at this stage, the risk of significant adverse impacts occurring within both the Dedham Vale AONB and SCHAONB from the North Falls OWF substation delivered in isolation (of other projects), is low. However, we are conscious that there is the potential for co-location of the North Falls onshore substation with those of Five Estuaries OWF and the National Grid East Anglia Green project. Whilst there is a lack of information at present to enable us to carry out a fully informed assessment of potential cumulative landscape and visual impacts; we advise that as more details become available regarding these other projects, this should be reflected in the impact assessment presented in the ES. Furthermore, as advised above, opportunities should be sought to work collaboratively with these (and any other relevant) plans/projects, to minimise impacts and to futureproof the Application through Examination.</p>	Landscape and Visual Impact Assessment	Site Selection and Assessment of Alternatives	Noted.	N

NFOWFS3_049_014_040723	<p>Approach to EIA Methodology</p> <p>Natural England notes that the approach to the EIA assessment is proposed to align with other OWF Nationally Significant Infrastructure Projects (NSIPs). This matrix approach has been used throughout Environmental Statements (ESs) to date to support the assessment of the magnitude and significance of impacts. Natural England notes numerous instances where significance has been presented as a range (i.e., slight, moderate, or large) and it is nearly always the lower value that has been taken forward. In the absence of evidence to support the use of the lower value in a range, Natural England's view is that the higher value should always be assessed in order to ensure that impacts on features haven't been incorrectly screened out of further assessment. This is in line with the principles of the Rochdale envelope approach.</p>	EIA Methodology		Noted.	N
NFOWFS3_049_015_040723	<p>Cumulative Effects</p> <p>We note that the preliminary Environmental Impact Assessment (EIA) presented in this PEIR is based on Option 1 (onshore grid connection within Tendring Peninsula for the project alone), because this is considered the worst-case scenario (WCS) for construction. The effects of Option 2 (onshore grid connection, sharing an onshore cable route with another project), are considered the same as those assessed for Option 1. Whilst impacts due to Option 3 (offshore connection supplied by a third party), would potentially be reduced as they primarily relate to the offshore arrays. However, currently the information available is insufficient to allow full consideration and assessment of the relative environmental impacts of these grid connection options, or cumulative impacts with other planned projects. Moreover, it is important that the maximum design scenario (MDS) for shared and separate onshore and offshore infrastructure, including cable corridors, arrays, landfall, and substations, are provided and their associated impacts on sensitive receptors and designated sites, assessed.</p>	EIA Methodology	Site Selection and Assessment of Alternatives	Noted.	N

<p>NFOWFS3_049_016_040723</p>	<p>Taking into consideration the outcomes of the Offshore Transmission Network Review (OTNR) Natural England’s preference would be for a shared onshore corridor between North Falls and Five Estuaries OWF projects. This would minimise impacts at the landfall and along the onshore cable route and reduce disruption to protected sites and species. The potential for the first project to install the ducts for the second project should be considered within the application and draft Development Consent Order, to minimise impacts and disturbance. We also note within the Dogger Bank South PEIR that there is a proposal for the DBS East and West cables to be bundled together, irrespective of the build out scenario and project developer. This is something we would also anticipate the Application considering as part of embedded project design mitigation options.</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Onshore Ecology</p>	<p>The grid connection options considered in the ES are outlined below:</p> <p>Option 1: Onshore electrical connection at a national grid connection point within the Tendring peninsula of Essex, with a project alone onshore cable route and onshore substation infrastructure.</p> <p>Option 2: Onshore electrical connection at a national grid connection point within the Tendring peninsula of Essex, sharing an onshore cable route but with separate onshore export cables, one project (either North Falls or Five Estuaries) installing cable ducting for the second project and project alone onshore substation infrastructure.</p> <p>Option 3: Offshore electrical connection, supplied by a third party.</p> <p>Option 2 has been selected for assessment within this chapter (as a worst case scenario). It is worth noting that the location of the onshore cable route for North Falls has been designed in collaboration with Five Estuaries, regardless of whether or not the first project installs the ducts for the second project (as set out in Option 2 above).</p> <p>Realistic worst case scenario parameters (for Option 2) for the construction of the onshore cable route are considered in Table 22.2 of Chapter 22 (Land Use and Agriculture).</p> <p>Embedded mitigation is set out</p>	<p>N</p>
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				<p>in Section 22.3.3 of Chapter 22.</p> <p>The potential effects of the first project installing the ducts for the second project are considered in Section 22.6 of Chapter 22.</p>	
NFOWFS3_049_017_040723	<p>Natural England note that the area where the North Falls project is proposed is busy and constantly evolving with many new proposals and Applications in development. We therefore advise that the project keeps the list of relevant in-combination projects regularly updated as it progresses to the submitted ES stage, and seeks to gain information on upcoming projects from other industries, including the aggregates industry.</p> <p>For detailed advice please refer to Annexes 1-8 provided with this letter. If you have any queries relating to the content of this letter, please contact me using the details provided below. Yours sincerely,</p>	Technical Consultation		Noted.	N

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Appendix 1
The following Framework has been used in Natural England's advice to attribute risk to the project:

Structure / Framework	Risk
<p>Purple Note for the developer.</p> <p>Red Natural England considers that unless these issues are resolved it will have to advise that (in relation to any one of them, and as appropriate) it is not possible to ascertain beyond reasonable scientific doubt that the project will not affect the integrity of an SAC/SPA/Ramsar and/or significantly hinder the conservation objectives of an MCGZ and/or damage or destroy the interest features of a SSSI and/or comply fully with the Environmental Impact Assessment requirements. Addressing these concerns <u>may</u> require the following:</p> <ol style="list-style-type: none"> 1. new baseline or survey data; and/or 2. significant revisions to baseline characterisation and/or impact modelling and/or 3. significant design changes; and/or 4. significant mitigation <p>Natural England feels that issues given Red status are so complex, or require the provision of so much outstanding information, that they are unlikely to be resolved during the Examination, and respectfully suggests that they be addressed beforehand.</p>	
<p>Amber Natural England does not agree with the developer's position or approach and consider that this could make a material difference to the outcome of the decision-making process for this project. Natural England considers that these matters <u>may</u> be resolved through:</p> <ul style="list-style-type: none"> • provision of additional evidence or justification to support conclusions; and/or • revisions to impact assessment methodology and/or assessment conclusions; and/or • minor to moderate revisions to impact modelling; and/or • well-designed mitigation measures that are adequately secured through the draft DCO/dML and/or • amendments to draft plans <p>If these issues remain at the time of the application and are not addressed or resolved by the end of the Examination, then they may become a Red risk as set out above.</p>	
<p>Yellow Natural England doesn't agree with the developer's position or approach. We would ideally like this to be addressed but are satisfied that for this particular project it is unlikely to make a material difference to our advice or the outcome of the decision-making process. However, we reserve the right to revise our opinion should further evidence be presented.</p> <p>It should be noted by interested parties that just because these issues/comments are not raised as significant concerns in this instance, it should not be understood or inferred that Natural England would be of the same view in other cases or circumstances.</p>	
<p>Green Natural England is in broad agreement with the developer's approach and has no significant outstanding concerns. As above, we reserve the right to revise our opinion should new evidence be presented.</p>	

Technical Consultation

Noted.

N

<p>NFOWFS3_049_019_040723</p>	<p>Annex 1 Marine Geology, Oceanography and Physical Processes In formulating these comments, the following documents have been considered:</p> <ul style="list-style-type: none"> • Chapter 1 Introduction • Chapter 2 Need for the Project • Chapter 4 Site Selection and Assessment of Alternatives • Chapter 5 Project Description • Chapter 6 EIA Methodology • Chapter 7 Technical Consultation • Chapter 8 Marine Geology Oceanography and Physical Processes • Chapter 18 Infrastructure and Other Users • Schedule of Mitigation <p>1. Natural England's Advice and Recommendations A summary of Natural England's advice in relation to Marine Geology, Oceanography and Physical Processes is set out in Table 1. Our key concerns along with recommendations are presented in further detail in Table 2.</p>	<p>Marine Geology Oceanography and Physical Processes</p>		<p>Noted.</p>	<p>N</p>												
<p>NFOWFS3_049_020_040723</p>	<p>Table 1 Summary of Key Issues - Marine Geology, Oceanography and Physical Processes</p> <table border="1"> <thead> <tr> <th>NE Ref</th> <th>Summary of Key Concerns</th> <th>Natural England's Recommendations to Resolve Issues</th> <th>Risk</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Robustness of approach taken to assessing impacts</td> <td>Provide further justification and rationale for the applicability of Gallopers OVF model data to North Falls and further evidence to support the largely qualitative conceptual evidence-based assessment.</td> <td></td> </tr> <tr> <td>2</td> <td>Adequacy of baseline characterisation</td> <td>Use site-specific data to characterise the wind, wave, tide and sediment transport regimes across the North Falls study area and/or calibrate data from Greater Gallopers OVF</td> <td></td> </tr> </tbody> </table>	NE Ref	Summary of Key Concerns	Natural England's Recommendations to Resolve Issues	Risk	1	Robustness of approach taken to assessing impacts	Provide further justification and rationale for the applicability of Gallopers OVF model data to North Falls and further evidence to support the largely qualitative conceptual evidence-based assessment.		2	Adequacy of baseline characterisation	Use site-specific data to characterise the wind, wave, tide and sediment transport regimes across the North Falls study area and/or calibrate data from Greater Gallopers OVF		<p>Marine Geology Oceanography and Physical Processes</p>		<p>1 - Numerical modelling of waves has now been completed for potential operational impacts due to the presence of the foundation structures. The assessment of tidal currents and suspended sediment concentration (SSC) remain conceptual, supported by an improved baseline presented in Section 8.5. This is because the use of numerical modelling for hydrodynamics and sediment dispersion is disproportionate to the potential effect that would occur. The assessment of impacts to the tidal regime and wave regime are presented in Section 8.6.3.1 and Section 8.6.3.2 of Chapter 8 (Marine Geology, Oceanography and Physical Processes), respectively.</p> <p>2 - Updated baseline information</p>	<p>N</p>
NE Ref	Summary of Key Concerns	Natural England's Recommendations to Resolve Issues	Risk														
1	Robustness of approach taken to assessing impacts	Provide further justification and rationale for the applicability of Gallopers OVF model data to North Falls and further evidence to support the largely qualitative conceptual evidence-based assessment.															
2	Adequacy of baseline characterisation	Use site-specific data to characterise the wind, wave, tide and sediment transport regimes across the North Falls study area and/or calibrate data from Greater Gallopers OVF															

				on tidal currents, waves and sediments that are bespoke to the Project is provided in Section 8.5 of Chapter 8.	
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Table 2 Natural England's Key Advice and Recommendations – Marine Geology, Oceanography and Physical Processes

Natural England's Key Distinctions		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAI)
Project Parameters: Document(s) Used: Chapter 5 Project Description; Chapter 6 EIA Methodology; Chapter 8 Marine Geology, Oceanography and Physical Processes					
Project Description	3	General Comment	The project parameters are clearly defined.		
	4	General Comment	The project design is clearly defined, however, details still to be refined following PEIR.	The final Environmental Statement (ES) should reflect the refined project design.	
Natural England's Position on Worst Case Scenario	5	General Comment	We are content with the Worst-Case Scenario (WCS) prepared for project design, but not the assessment of impacts.	See further comments below for required actions.	
	6	Table 6.2	UXO clearance, pre-lay grapnel run, and boulder clearance maximum design scenario (MDS) parameters have not been included in the table of realistic WCS.	We advise a realistic WCS for seabed preparation activities will need to consider UXO clearance, pre-lay grapnel run and boulder clearance, including areas of impact (sources and receiving locations for boulders), and any assumptions regarding methods.	
	7	Section 5.6.4 1.8 & Table 5.19	The WCS for sandwave levelling is based on the entire length of the offshore export cable corridor and all array and interconnector cables (array areas). This equates to a total sandwave clearance volume of c. 50 million m ³ , which is a significant volume. We would advise that this is not a realistic WCS, given that there appear to be large areas across the project area that seem unlikely to require sandwave levelling, for example, where there is exposed bedrock.	We advise further analysis of project specific acoustic data and ground conditions to assess the realistic requirements for sandwave levelling. It would also be useful to include Table 6.15 in Chapter 8 (Marine Geology, Oceanography and Physical Processes) as this provides the anticipated sandwave levelling volumes for the offshore export cable corridor, array areas (including array-interconnector cables, Wind Turbine Generator (WTG) and Offshore Substation Platform (OSP) foundation and installation). The total sandwave levelling should also be	

Marine Geology Oceanography and Physical Processes

6 - UXO clearance, pre-lay grapnel run, and boulder clearance have been added to the realistic worst case scenario in Table 8.2 of Chapter 8 (Marine Geology, Oceanography and Physical Processes).

7 - The potential sandwave levelling requirements along the export cable and offshore array cables are estimated to be 1.5Mm³ and 29Mm³, respectively. These realistic worst case scenarios are described in Table 8.2 of Chapter 8.

Y

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
				included for all the above areas i.e. whole project area.	
Baseline Characterisation - Document (3) Used: Chapter 8 Marine Geology, Oceanography and Physical Processes					
Survey Data Acquisition	8	Table 8.5.5 & 8.4.2.2	The site-specific geophysical surveys and benthic survey are of sufficient quality and quantify the physical environment. However, site-specific metocean (wind, wave, water level and current) and sediment transport regime data have not been collected. Instead, the baseline characterisation relies heavily upon measured and modelled data from the nearby operational Greater Gabbard Offshore Wind Farm (GGOW) wind farm in 2005 and 2011, respectively.	We advise that best practice is for site-specific wind, wave, tide and sediment transport regime data to be used. If a different approach is to be taken, then strong justification and robust evidence will need to support the proposed approach.	
Data Gaps	9	8.4.6.1 & 8.5.4	Modelled tidal current data from GGOW (2005) and measured tidal current data for GGOW (November 2004 to March 2005) have been used to define the tidal current baseline for North Falls. Tidal currents closer to the coast have been obtained from the East Anglia Coastal Group (2010). We note (Section 8.4.6.1) it is anticipated that, given the similar water depths (apart from local variations caused by interactions with the sand banks) the current conditions across North Falls are similar. However, we cannot agree with the assumption owing to the: <ul style="list-style-type: none"> • age of the GGOW data 	We advise validating the GGOW data with measurements of tidal behaviour at North Falls to support the assumption that they are representative of the North Falls tidal regime.	

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8 - Updated baseline information on metocean (tidal currents, waves) and sediments that are bespoke to the Project is provided in Section 8.5 of Chapter 8 (Marine Geology, Oceanography and Physical Processes).

Wind data is not required for the EIA and will be collected for the engineering detailed design as required.

9 - Updated baseline information on tidal currents that are bespoke to the Project is provided in Section 8.5.4 of Chapter 8.

Marine Fragments Key Considerations	NE		PEIR		Comment	Recommendation	Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	Ref	Ref	Ref	Ref			
					<ul style="list-style-type: none"> depth distribution and seabed topography differences between GGOW & North Falls. uncertainty regarding the tidal regime adjacent both GGOW and Gallop Offshore Wind Farm (OWF). planned Five Tidalways (WT) OWF. <p>We advise it is best practice to characterise the tidal regime at North Falls and the wider study area for the planned operational period of the development, as well as taking into account how the tidal regime might respond to the cumulative effects of a cluster of nearby OWFs (GGOW, OWF, and WT), climate change, and sea level rise over the same period.</p>		Red
	10	8.5.7			This regional bedrock sediment transport pathway information is based on very old studies: Kenyon and Cooper (2005) and Reynaud and Dalrymple (2012).	If available, use more up to date data.	Yellow
Data Analysis, Modeling and Reporting	11	8.5.4.1			The Zone of Potential Influence has been informed by an understanding of the varying tidal ellipses across the study area. However, there is no map to illustrate how these vary across the study area.	Please provide a map showing the extent and orientation of varying tidal ellipses across the project study area.	Yellow
	11	8.4.3(a) at 26			We note that a conceptual evidence-based assessment has been adopted on the basis that numerical modelling of marine geology, oceanography and physical processes effects of North Falls would be disproportionate. However, the conceptual approach taken is a largely qualitative.	We would like to see further evidence provided to calibrate and validate the existing data from other OWF's and provide confidence in the results.	Red

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10 - The regional sediment transport map of Kenyon and Cooper (2005) and the data of Reynaud and Dalrymple (2012) remain the best overview of regional sediment transport available.

11 - Figure 8.16 (document reference 3.2.4) has been updated to show the tidal ellipses that support definition of the Zone of Potential Influence.

12 - Numerical modelling of waves has now been completed for potential operational impacts due to the presence of the foundation structures. The assessment of tidal currents and SSC remain conceptual, supported by an improved baseline (calibration/validation) presented in Section 8.5 and the justification in Section 8.4.6 in Chapter 8 (Marine Geology, Oceanography and Physical Processes).

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			<p>assessment of impacts, whilst the Greater Galbarid and Galopier Offshore Wind Farms (GWFF) data relate to the prevailing conditions at the time of their assessments, i.e. 2005 and 2011, respectively. The only site-specific information that has been collected via geophysical and benthic survey data. Furthermore, the project design offer considerably between the modelled design of GGOW/GWF and that of North Falls.</p> <p>Following on from Part 42 discussed above, it is stated that water depths at GGOW and GWF are comparable to those at North Falls. We agree that the <u>range</u> of water depths across the North Falls array are similar to those across the GGOW and GWF arrays, but not their distribution. This is because the topography of the seabed across the North Falls arrays and interconnector corridor is generally quite different to those across the GGOW arrays and GWF northern array. The seabed in the west of the North Falls array and along the interconnector cable corridor are in water depths of c. 50m (LAT). Furthermore, the seabed across the west of the North Falls array is flat, featureless, and in deep water, whilst the GGOW arrays and the north GWF array which are situated in shallower water and are dominated by the presence of lower (three 8. Outer Galbarid and The Galopier) seabeds.</p>		
	13	8.4.6P and 43		<p>A more detailed comparison of the North Falls array & interconnector bathymetry and seabed topography with those of GWF and GGOW, should be included in the final assessment.</p>	

Marine Geology Oceanography and Physical Processes

13 - An updated comparison of the bathymetries of North Falls, GGOW and GWF has now been included in Section 8.4.6 in Chapter 8 (Marine Geology, Oceanography and Physical Processes).

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	14	Section 8.4.0.10; and 4.4; Figure 8.1	It is anticipated that given the similar water depths (apart from local variations caused by interactions with the sand banks), the current conditions across North Falls are similar. However, Figure 8.1 shows that there are notable differences in bathymetry and seabed topography between the North Falls and GGOW/GGW arrays, which will influence characterisation of the wave and tide behaviour within and to the vicinity of the North Falls array.	We advise that it should be demonstrated that the 2005 GGOW tidal data are representative of the prevailing current conditions at the North Falls array areas (ideally at the time the project is implemented).	Red
	15	Section 8.4.0.10; PE 45	The GGOW wave data form the basis for the characterisation. To adequately assess the impacts of the North Falls project requires an understanding of the baseline conditions prior to, and at the time of, the project proceeding. Given that the GGOW wave data were collected between November 2004 and March 2005, it is possible that the present day baseline differs from that established for GGOW and GWF. Furthermore, GGOW and GWF now form part of the baseline, along with other nearby operational windfarms, which may have altered the baseline.	We advise that it should be demonstrated that the 2004-2005 GGOW wave data are representative of the prevailing wave conditions at the North Falls project (ideally at the time the project is implemented). The wave climate baseline characterisation needs to consider a range of wave conditions across the study area, ideally over a sufficiently long timescale, to establish baseline variability.	
	16	8.4.0.2	The modelling for GGOW and GWF assessed 140 WTGs each with a diameter of 36m and 36m, respectively for GBS. Whilst the North Falls MDS comprises up to 72 GBS WTGs with a diameter of 65m. It is suggested that the larger number of WTGs assessed in the modelling of the GGOW and	We advise that, in line with best practice, the WCS North Falls array foundations, indicative layout, and number of structures should be used to inform the physical processes impact assessment.	

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14 - Updated baseline information on tidal currents that are bespoke to the Project is provided in Section 8.5.4 of Chapter 8 (Marine Geology, Oceanography and Physical Processes) demonstrating the similarity of the recent data with that modelled at GWF.

15 - Numerical modelling of waves has now been completed for potential operational impacts due to the presence of the foundation structures. This replaces the conceptual assessment completed in the PEIR.

Updated baseline information on waves that are bespoke to the Project is provided in Section 8.5.5 of Chapter 8.

16 - A larger number of narrower-spaced foundations is considered to have a larger effect on physical processes than a smaller number of wider-spaced foundations. On an individual basis, a larger turbine will have a greater effect on tidal currents and waves than a smaller turbine, but the combined effect with the rest of the array foundations will be less for wider-spaced larger foundations than for narrower-spaced smaller foundations. Hence, the layouts of GGOW and GWF are conservative proxies for North Falls. However, wave modelling has now been undertaken for the North Falls array (document reference 3.3.3). This is based on the refined worst case scenario of up to 57 gravity base system (GBS) wind turbine foundations.

Y

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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			GWf provide a conservative proxy for the North Falls assessment. However, we would advise that the larger MDG WTG and OSP foundations of the North Falls arrays could potentially have a more pronounced and/or extensive effect on waves and tides, and a greater cumulative effect (depending on the final array spacing and foundation design) than that modelled for GDDW and LWf.		
Environmental Impact Assessment - Document Used: Chapter 5, Chapter 6 & Chapter 8					
Identified impacts	17	Section 5.7.1, Section 8.6.2 and Table 8.2	We welcome the project's commitment to avoid direct disturbance in the intertidal zone by using Horizontal Directional Drilling (HDD) techniques to install the export cable at the landfall. It is noted that up to 5 HDDs will be installed, with the drill exit location in the subtidal zone below mean high water springs (MHS) (up to 5m depth). However, there is no further information on the Maximum Design Scenarios (MDS) parameters for the HDD exit pits, requirements for beach access, installation of coverboards, the use and anticipated amount of cable protection over ducts or cable ends, jack-up rig/barges and/or vessels with anchoring.	More detailed information will need to be provided in the ES regarding the anticipated HDD activities, including access routes from the intertidal until the exit pits. Potential impacts arising from HDD activities will also need to be considered and assessed in the ES.	
	18	8.5.3.2 & 8.5.3.3	It is stated that the northern and southern arrays experience a macrotidal regime. However, the mean spring tidal ranges for the northern array and southern array, are 2.9m and 3.3.5m, respectively. These	We advise this should be clarified.	

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17 - The potential impact of offshore elements, including the HDD exit point, on coastal processes during both construction and operation have been assessed in Section 8.6.2 and Section 8.6.3 of Chapter 8 (Marine Geology, Oceanography and Physical Processes).

Horizontal Directional Drilling (HDD) will be used as the preferred construction method at the landfall, reducing the potential for disturbance of surface features of the Holland Haven Marshes SSSI.

Installation by HDD would require a fenced landfall construction compound. A maximum 150 x 75m temporary landfall construction compound for up to two transition joint bays may be required.

An Outline HDD Method and Draft 'Break-out' Contingency Plan is submitted with the DCO application (document reference 7.15).

More information on Horizontal Directional Drilling (HDD) is provided in Chapter 5 Project Description.

18 - Correct – this has been clarified.

Y

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Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAQ)
			suggest a mesotidal regime (2-4m tide range)		
	19	8.6.0	We understand that the landfill area will be refined following PEIR. Hence, at present there is no specific detailed information on the potential impacts of the proposed development to physical processes or the physical environment at landfill.	Following refinement of the landfill area, we advise that potential impacts to physical processes and the physical environment, including the nearshore zone, should be considered and assessed separately in the EIS. Potential impacts to Holland Haven Marshes SSSI should also be considered as it lies adjacent to the seawall at landfill.	
	20	8.6.10 A, 8.6.11, 8.6.100	The potential zone at landfill is relatively narrow and despite the presence of the seawall, the beach level will lower over the lifetime of the project. How will general beach lowering, and bulked asset integrity be addressed over the long term? Will a minimum beach level be defined in order to establish whether remedial intervention will be needed?	We advise consideration is given to how the sand at landfill will settle throughout the lifetime of the project.	
	21	8.6.2.12 & 8.6.2.13	In Section 8.6.2.12 it states that due to the nature of the pressure (increases in suspended sediment concentrations (SSCs) due to seabed preparation for foundation installation), there is no pathway for impact to all identified receptors as therefore they are not sensitive to this pressure. However, we note that Kentish Knock East Marine Conservation Zone (KKE M CZ) overlaps with the south array area has been identified in Table 8.13 as a receptor. Therefore, we consider that there is a pathway for impact to	The sensitivity and significance of effect should be assessed on the basis that there is a pathway for impact to an identified receptor <ul style="list-style-type: none"> KKE M CZ 	

Marine Geology Oceanography and Physical Processes

19 - The Applicant has committed to Horizontal Direction Drilling (HDD) at landfill and the onshore drilling location will be set back, approximately 400m from the coast. The depth profile of the HDD below ground would be designed to ensure there would be no impact on the coast. Therefore, there is no potential pathway for impact between any onshore elements and the coast.

The potential impact of offshore elements, including the HDD exit point, on coastal processes during both construction and operation have been assessed in Section 8.6.2 and Section 8.6.3 of Chapter 8 (Marine Geology, Oceanography and Physical Processes).

20 - The depth profile of the HDD below the beach would be designed to ensure there would be no exposure of the cable over the long-term, with fluctuations in beach level.

21 - The refined boundary of the array means that it does not overlap Kentish Knock East Marine Conservation Zone. Hence, the original assessment continues to apply as described in Section 8.6.2.1 of Chapter 8.

Y

National England's Key Commitments		National England's Advice		Comment	Recommendation:	Risk (RAG)
NE Ref	NEIR Ref	NE Ref	NEIR Ref			
Section 42 Preliminary Environmental Information Report (PEIR)						
				KKE MCZ which should be acknowledged in the impact assessment. (Although we appreciate that KKE MCZ is considered and assessed in the Marine Conservation Zone Assessment (MCZA))		
		22	8.6.2.2 & 8.6.2.3	It is stated that due to the nature of the pressure (increase in SSCs due to drill discharge for installation of piled foundations) there is no pathway for effect to any identified receptor so therefore they are not sensitive to this pressure. Similarly, it is stated that the increase in SSCs do not directly affect the identified receptor groups. However, as stated above, we advise that KKE MCZ overlaps with the south array, and has been identified as a receptor. Therefore, we advise that there is a pathway for impact to an identified receptor.	We advise this should be reflected in the impact assessment for increases to SSCs due to drill discharge, in terms of sensitivity and significance should be revised accordingly.	
		23	8.6.2.2- Pile 125-137	It is stated that sediment settlement due to preparation for foundation installation could form a mound likely to be tens of centimetres to a few metres high, local to the release area. What is the anticipated realistic mound height? With regards to the sediment masses, it is also suggested that overall changes in elevation of the seabed are small compared to the absolute depth of water (up to 50m below LAT). However, water depths in the north array range from 12.0-59.4m below LAT and in the south array range from 3.3-55.6m below LAT. Therefore, if a surge	in the CS should provide predicted thickness of sediment following deposition for the dominant sediment types across the north and south arrays. It would also be useful to provide maps showing sediment settlement thickness and footprint for a sediment release point in the north array and the south array (in the overlap with KKE MCZ).	

Marine Geology Oceanography and Physical Processes

22 - The new boundary of the array means that it does not overlap Kentish Knock East Marine Conservation Zone. Also, the impacts on SSCs do not directly affect the KKE Kentish Knock East MCZ because in terms of its physical processes, this receptor is dominated by processes that are active along the seabed and not affected by suspended sediment in the water column. Hence, the original assessment continues to apply as described in Section 8.6.2.2 of Chapter 8 (Marine Geology, Oceanography and Physical Processes). The effects on flora and fauna associated with the MCZ are assessed in Chapter 10 Benthic and Intertidal Ecology.

23 - The precise dimensions of the resulting mound are unknown and will depend on release volumes, location of release points, and how long the release takes place for. It is anticipated that the mound will not exceed a few metres. Maps of predicted thickness and footprints of mounds is disproportionate to the potential effect given that most of the sediment will be redistributed (and the mound will change shape) by physical processes over the short- to medium-term.

It is accepted that a mound of several metres in shallow water would be a significant change in the bed elevation. However, the mounds will be mobile and driven by the physical processes, rather than the physical processes being driven by them. This means that over

				<p>time the sediment comprising the mound will gradually be re-distributed by the prevailing waves and tidal currents. This reworking will be more pronounced in shallow water depths where waves will impinge on the bed and reduce the height of the mound more rapidly. Also, shallow water depths are restricted to small areas at the periphery of the array, and so the number of mounds in these depths would be limited.</p>	
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Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			sediment mound a few metres high' is deposited on the seabed in 3.3m water depth. It could affect the hydrodynamic and sediment transport regime.		
	24	8.6.2.3 Point 138	It states that over time the sediment comprising the mounds will gradually be re-distributed by the prevailing waves and tidal currents. Is there any evidence from the adjacent operational OWFs to support this conclusion?	Provide supporting evidence/reference.	
	25	8.6.2.4 Point 154 & Table 8.15	We note that no specific assessments have been undertaken to understand the likely time taken for the mounds to fully erode. We understand impacts to KKE MCZ are assessed in the MCZA, however, because it could be affected by changes to the wider physical environment and physical processes, it is also a marine processes receptor and impacts to it should be assessed as precisely as possible since there are a number of habitats/species sensitive to smothering. It is stated that over time the mound will be winnowed by tidal currents and the mound would lower through erosion. Can this be quantified/verified?	Can site-specific data be used to estimate the timescale for the mound to be winnowed/eroded away? Or are there any data available on mound residence time for drill arising mounds from GGOW and GWP? We advise that monitoring requirements need to be evaluated for drill arising mounds if these will be present in KKE MCZ. However, please note that we advise that infrastructure and associated implications are avoided within the KKE MCZ and that mitigation measures would need to be adopted.	
	26	8.6.2.5 Point 160	Related to our comment on WCS for sandwave clearance, we note that sandwave levelling (pre-sweeping) may be required along the offshore cable corridor (OCC) prior to installation (i.e. the entire route). This is not a realistic WCS. Figure 8.12 presents the seabed morphology across the OCC which	We advise using project-specific geophysical survey data to refine down this WCS to make it more realistic. It would also be helpful if areas of designated seabeds overlapping or adjacent to the OCC could be identified on Figure 8.12.	

Marine Geology Oceanography and Physical Processes

24 - There is no evidence from the adjacent wind farms, however using expert judgement based on sediment particle size and the prevailing physical conditions, the re-distribution would take place. When an unconsolidated mound is placed on the seabed that has a similar particle size to the surrounding seabed, it will be mobilised by the prevailing physical drivers, and gradually lowered to be in equilibrium with those drivers. For more information, see ES Chapter 8 Marine Geology, Oceanography and Physical Processes.

25 - Due to the post-PEIR refinement to the array area, there will be no mounds within the Kentish Knock East MCZ.

An assessment of mounds within the remaining array area is provided in Section 8.6.2.4, however it is not possible to quantify erosion of the mounds. It is unlikely that the mounds will fully erode given their composition, but gradual winnowing would take place over time. The mounds are likely to be present on the seabed over the long-term. The winnowing of the mud clasts will be almost imperceptible as a process, with individual mud particles stripped off the clasts by tidal currents. There would be no increase in SSCs and no smothering of habitats because the winnowing process is on a particle-by-particle basis.

26 - The potential sandwave levelling requirement along the offshore cable corridor is

				<p>estimated to be 1.5Mm3. This realistic worst case scenario is described in Table 8.2 in Chapter 8 (Marine Geology, Oceanography and Physical Processes). The position of receptors relative to the offshore cable corridor is shown on Figure 8.15 (document reference 3.2.4).</p>	
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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			shows sandwaves to be present across >20% of the OOD and megaripples >50% (risk) of the OOD.		
	27	8.6.2.5.2 (Point 162)	Anticipated HDD exit pit locations and MUD parameters have not been provided.	in the ES, more specific details will be needed on the HDD Exit Pit MUDs e.g., excavated sediment volumes, water depth, number of pits, maximum depth, likely duration pit will remain open at any given time, and the fate of removed sediment	
	28	8.6.2.5.3 (Point 162)	It is stated that export cable installation has the potential to disturb the seabed down to 1.2m with a width of up to 24m. This is confusing. In Table 8.2, export cable trench dimensions are 1m width x 1.2m depth, whereas cable sandwave leveling has a disturbance width of 24m x 1m depth.	This should be clarified.	
	29	8.6.2.5.4 (Point 164)	It is anticipated that changes in SSC due to export cable installation would be less than those for foundation installation activities. This is not a useful analogy because these two activities do not take place in the same location and the methods used are likely different and hence the changes to physical processes.	The advice that this should not be used as an analogy.	
	30	8.6.2.6.2 (Point 173)	No sensitivity has been assessed. Yet there is the potential for impacts to designated areas along the coast adjacent to proposed landfall, M3, SAC, and Annex I sandbanks.	Include sensitivity assessment for all receptors within the Zone of Influence (Zoi).	
	31	8.6.2.6.3	It has been concluded that the effects on SSCs due to export cable installation would have to change upon the identified	We advise further evidence is provided to support this conclusion. Can maps be provided to show potential increase in SSC due to cable bending and sandwave leveling, for different	

Marine Geology Oceanography and Physical Processes

27 - The volumes of sediment associated with the HDD exit pits and the disposal of this sediment is included within the values provided for the offshore cable corridor. The water depth at the HDD exit pit locations will be 1 to 8m below MHWS. There will be up to three exit pits, for two offshore export cables and one for contingency. The parameters used for the marine geology, oceanography and physical processes assessment are provided in Table 8.2 and further information on the landfall construction works is provided in ES Chapter 5 Project Description (Document Reference: 3.1.17). Sediment arising from the landfall HDD will be disposed of on land.

28 - 24m changed to 1m in the main text to be consistent with the correct numbers in Table 8.2 of Chapter 8 (Marine Geology Oceanography and Physical Processes).

29 - Noted, this analogy has been removed.

30 - The impacts on SSCs due to export cable installation do not directly affect the identified receptor groups for marine geology, oceanography and physical processes. This is because the receptors are dominated by processes that are active along the seabed and not affected by suspended sediment in the water column. Hence, there is no pathway for effect and sensitivity is not required (consistent with other assessments of SSC in the chapter). The effects on benthic

				<p>receptors are assessed in ES Chapter 10 Benthic and Intertidal Ecology (Volume I).</p> <p>31 - The impacts on SSCs due to export cable installation do not directly affect the identified receptor groups for marine geology, oceanography and physical processes. This is because the receptors are dominated by processes that are active along the seabed and not affected by suspended sediment in the water column. However, there may be impacts arising from subsequent deposition of the suspended sediment on the seabed and these are discussed under Construction Impact 4 (Section 8.6.2.6 of Chapter 8 (Marine Geology Oceanography and Physical Processes)).</p> <p>The impact on SSCs does have the potential to affect other receptors and the assessment of effect significance is addressed within the relevant chapters of this ES (Section 8.10).</p>	
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Nautilus Engstrand's Key Considerations		Nautilus Engstrand's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			receptors. Can further evidence be provided to support this conclusion?	sediment fractions and total boron levels at different locations along the OCC (e.g. inshore, next to MCS SAC, Annex I sandbank?)	
	32	B.6.7.2/Point 185	Sandwave levelling may be required for the array/interconnector cable prior to installation. Table 8.2 includes sandwave levelling for all array cables and the entire interconnector cable corridor. As we advised earlier for the OCC, this is not a realistic WCS.	We advise using project-specific geophysical survey data to refine down the WCS to make it more realistic. The total area of impact (both direct and indirect) should be assessed. The area of KKE MCZ, Annex I sandbanks, and those sandbanks whose ecological structure and functionality warrant protection affected should be provided in the ES, including extent and location along with the extent of impact on each affected feature.	
	33	B.6.2.7/Point 189	No sensitivity has been assessed. Yet there is the potential for impacts to the KKE MCZ and Annex I sandbanks.	Include sensitivity assessment for all receptors within the ZOI.	
	34	B.6.2.7.3	It is stated that the effects on SSCs due to array and interconnector cable installation will have no change upon the identified receptors groups. However, this conclusion is based on conceptual evidence-based assessment which indicates that the SSC changes due to array and interconnector cable installation would be similar to those due to transportation of near surface sediments during foundation and export cable installation.	Provide further justification for the conclusion made and assess the WCS for sediment plume extent, concentration, and persistence with particular regard to KKE MCZ and Annex I sandbanks.	
	35	B.6.2.8/Point 197	The overall effect significance of array and interconnector cable installation under a WCS on seabed level changes for Annex I sandbanks, KKE MCZ and Orford Inshore.	Please assess the WCS, and provide maps, for sediment settlement thickness and footprint with particular regard to the Annex I sandbanks and KKE MCZ.	

Marine Geology Oceanography and Physical Processes

32 - The potential sandwave levelling requirement along the offshore array cables is estimated to be 29Mm3. This has been refined based on analysis of the geophysical data. This realistic worst case scenario is described in Table 8.2 of Chapter 8 (Marine Geology, Oceanography and Physical Processes).

The potential direct and indirect effects are assessed in Section 8.6.2.9 of Chapter 8 (Marine Geology, Oceanography and Physical Processes), where the assessment of the offshore array and export.

33 - The impacts on SSCs due to offshore array cable installation do not directly affect the KKE MCZ and Annex I sandbanks receptors for marine geology, oceanography and physical processes. This is because the receptors are dominated by processes that are active along the seabed and not affected by suspended sediment in the water column. However, there may be impacts arising from subsequent deposition of the suspended sediment on the seabed and these are discussed under Construction Impact 6 (Section 8.6.2.8 of Chapter 8 (Marine Geology, Oceanography and Physical Processes)).

The impact on SSCs does have the potential to affect other receptors and the assessment of effect significance is addressed within the relevant chapters of this ES (Section 8.10 of Chapter 8 (Marine Geology, Oceanography and Physical Processes)).

				<p>Processes)).</p> <p>34 - Section 8.6.2.7 assesses changes to SSC which do not directly affect the KKE MCZ and Annex I sandbanks receptors. This is because these receptors are not driven by processes that occur in the water column (i.e. suspended sediment), but rather by processes that are active on the seabed (i.e. bedload sediment). Hence, there may be potential effects if the suspended sediment is deposited on the bed from the plume. These potential effects are covered in Section 8.6.2.8 of Chapter 8 (Marine Geology, Oceanography and Physical Processes).</p> <p>35 - The conceptual evidence-based assessment of deposition from the plume generated from offshore array cable installation indicates that the changes in seabed elevation would be effectively immeasurable within the accuracy of any numerical model or bathymetric survey. This is because, after this initial deposition, the deposited sediment will be continually re-suspended to reduce the thickness to a point where it will be effectively zero. This will be the longer-term outcome once the sediment supply from cable installation has ceased. This means that given these very small magnitude changes in seabed level arising from cable installation, the effects on the Annex I sandbanks and KKE MCZ would not be significant.</p> <p>More information on how the Project no longer overlaps with designated areas can be found</p>	
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				in the Marine Conservation Zone Assessment Report (Document Reference 7.3).	
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Natural England's Key Considerations		Natural England's Advice			Risk (RAQ)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			MCZ is considered to be negligible adverse (no significant effect). However, the WGS for sediment settlement thickness and deposition footprint have not been provided, which makes it difficult to assess impacts to sensitive receptors.		
		ii	<p>8.6.2.20 Point 204 & 8.6.2.2 & Section 8.6.10 (Chapter 8)</p> <p>It is stated that any excavated sediment due to sandreave levelling would be disposed of within the North Falls offshore project area. The extent and disposal locations would be determined post consent. It is also stated that given the relatively low volumes of sand likely to be affected, the overall changes to the seabed would be minimal.</p> <p>Natural England is concerned that the whole offshore project area could be used for spoil disposal, particularly designated sites. We seek clarification on the area of MPA likely to be affected (extent and location), the extent of impact (area, volume, percentage loss etc.)? We also seek clarity on how impacts to other features will be avoided?</p>	<p>Natural England advises that an estimate of the area likely to be affected in relation to Marine Protected Areas (MPA) (e.g. Margate and Long Sands Special Area of Conservation (ML5 SAC), WKE MCZ), and Annex I sandbanks should be provided. This should include the extent and location of the impacted area. We advise consideration is given to how impacts to other features will be avoided. Furthermore, consideration should be given to mitigation in the form of intelligent, directed placement of excavated material (such as through use of a fill pipe).</p>	
		iii	<p>8.6.2.20 Point 205</p> <p>It is suggested that sandreaves subject to levelling for North Falls are likely to recover over a short period of time, based on evidence from Race Bank ODF (Inner Dowsing Race Bank and North Ridge SAC) and Haisborough Hammond and Winterton SAC (HHW SAC). We do not agree that the examples of sandreave recovery provided are useful.</p>	<p>We advise the Project considers alternative approaches to establishing likelihood of sandreave recovery, influence on sediment transport patterns and morphology, including adjacent sandbank systems.</p>	

Marine Geology Oceanography and Physical Processes

36 - The offshore project area no longer overlaps any designated sites and therefore there will be no sediment disposal in a designated site.

37 - The Inner Dowsing Race Bank and North Ridge SAC and Haisborough Hammond and Winterton SAC represent highly conservative examples of impacts and recovery, as previous impacts in these areas were associated with works within the SACs, whereas for North Falls there is no direct overlap with a designated site.

More information on how the Project no longer overlaps with designated areas can be found in the Marine Conservation Zone Assessment Report (Document Reference 7.3).

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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			<p>In Natural England's Relevant Representations (2018) for Norfolk Vanguard on sandwave levelling in HNW SAC, we advised that Natural England continues to have residual concerns in relation to the overall impacts to the form and function of the Aroses 1 sandbank sandwave fields and their potential recoverability.</p> <p>We would draw the Project's attention to Natural England's Benthic Ecology Relevant Representations (2019) for Norfolk Bressay DWT, in which we advised that "there is currently no evidence for timescales for recovery of sandwaves from sandwave clearance, or that the [HNW SAC] sandbank system will remain undisturbed. Initial monitoring from Race Bank showed that some dredged areas showed some signs of recovery within a few months of dredging and other areas did not. Whilst we agree that theoretically larger morphological processes should enable the sandbank to recover, the impact is none the less significant and timescales for recovery are unclear."</p> <p>Furthermore, in 2021, Natural England provided a response to the SoS regarding sandwave levelling within HNW SAC for Norfolk Bressay. In this we highlighted that there was insufficient evidence to demonstrate that full recovery of the</p>		

Marine Geology Oceanography and Physical Processes

38 - The Inner Dowsing Race Bank and North Ridge SAC and Haisborough Hammond and Winterton SAC represent highly conservative examples of impacts and recovery, as previous impacts in these areas were associated with works within the SACs, whereas for North Falls there is no direct overlap with a designated site.

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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			Sandbank system is achievable and within the affected Annex I Sandbank systems.		
	36	8.6.2.1.1 to 8.6.2.1.3	Following our comments above regarding uncertainty in relation to sediment recovery we would advise that this uncertainty should also be reflected in the assessments of magnitude, sensitivity and overall effect significance for the Essex coast, MLS SAC, Annex I sandbanks, and those sandbanks whose ecological structure and functionality warrant protection.	We advise consideration is given to revising the magnitude, sensitivity and effect significance for the Essex coast, MLS SAC, Annex I sandbanks, and those sandbanks whose ecological structure and functionality warrant protection. In respect to bedload sediment transport due to sandwave leveling.	
	38	8.6.3.1.2 / table 8.32	The value of the Suffolk and Essex coasts has been assessed as 'medium'. We would advise that this value is 'high' given that they are significant strategically environmentally important and with minimal potential for substitution. Furthermore, Table 8.32 has not considered the sensitivity of receptors to potential turbulent wakes and scour due to the presence of the WTGs and OSP foundations.	We advise that the Suffolk and Essex coasts are of high value. We also advise that assessment of sensitivity of receptors (in particular KKE MCZ and Annex I sandbanks) should consider sensitivity to potential turbulent wakes and scour developing due to the presence of WTG and OSP foundations.	
	40	8.6.3.1.3 (Point 23)	It is stated that no significant impact on the tidal current regime is anticipated for North Falls and therefore on the Annex I sandbanks and KKE MCZ. However, this assessment has not considered the potential impact on these receptors due to turbulent wakes.	Determination of effect significance should consider potential for turbulent wakes and scour developing due to the presence of WTG and OSP foundations (with particular regard to KKE MCZ and Annex I sandbanks).	
	41	8.6.3.2.3 (Point 242)	It has been concluded that no pathway exists between the source and the Essex coast, Suffolk coast and MLS SAC. However, changes to the wave energy transmission.	We advise consideration of modification to wave energy transmission and nearshore wave climate due to the presence of rock berms, tidal crossings, temporary cofferdams.	

Marine Geology Oceanography and Physical Processes

38 - The Inner Dowsing Race Bank and North Ridge SAC and Haisborough Hammond and Winterton SAC represent highly conservative examples of impacts and recovery, as previous impacts in these areas were associated with works within the SACs, whereas for North Falls there is no direct overlap with a designated site.

39 - Value changed to high. No change to significance of effect.

The potential effect of turbulent wakes has been considered as part of the overall conceptual evidence-based assessment of changes to tidal currents in Section 8.6.3.1 of Chapter 8 (Marine Geology Oceanography and Physical Processes). It is indicated that there is no interaction with wakes from adjacent foundations due to the relatively large separation distances. The potential for seabed scour is covered in Section 8.6.3.3 and Section 8.6.3.5 of Chapter 8 (Marine Geology Oceanography and Physical Processes).

40 - Changes to tidal currents would be both low in magnitude and largely confined to local wake or wave shadow effects attributable to individual wind turbine foundations and, therefore, would be small in geographical extent. Hence, any scour due to wakes would also be local and insignificant and would have no effect on KKE MCZ (as its boundary does not overlap with North Falls) and negligible effect on the Annex I sandbanks.

				<p>41 - A commitment has been made to install the export cable at the landfall using HDD techniques (see Chapter 5, Project Description), thus avoiding direct disturbance in the intertidal and shallow subtidal zones. This means that there is unlikely to be any changes to the wave regime inside the closure depth for this coast because the cable will be buried. The impact of any temporary cofferdams during construction would be short-lived and local. Cable protection, berms and crossings in deeper water will have little effect on waves.</p>	
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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			and the nearshore wave climate due to cable protection, cable crossings and temporary obstructions have not been considered in this impact assessment.	etc. as these could affect seabed and coastal morphology.	Yellow
	42	6.6.3.4.2	We cannot agree with the conclusion that the loss of seabed area due to infrastructure within the arrays will have a negligible adverse effect on sandbanks (and associated sandwaves) and KKE MCZ, because there is insufficient evidence at present regarding the location, area, extent of impacts.	In the ES, we advise the Project to provide more specific evidence regarding the location area, extent of impact due to loss of seabed due to array infrastructure, with particular regard to sensitive receptors, areas of designated seabed etc. We would also advise consideration of conservation objectives and other anthropogenic pressures being exerted on these sites.	Red
	43	6.6.3.6	We note the seaward limit for wave-driven sediment transport, closure depth, is estimated to be approximately 1.5km from the coast, within 5m water depth. (Water VE DWF estimate 1.6km). Will the Project commit to avoiding the placement of cable protection in the shallow nearshore zone?	Consider committing to avoid cable protection placement within the shallow nearshore zone?	Yellow
Methodology	44	6.4.3	Section 6.4.3 discusses the general approach to assessing potential direct and indirect impacts on marine geology, oceanography, and physical processes (based on sensitivity of receptor and magnitude of impact), but details of specific analytical methods have not been provided. Furthermore, it is stated that the impact assessment has considered two spatial scales (direct and indirect), but temporal variability is not discussed. Which best	It would be helpful if the potential impacts/pathway effects considered in the physical processes assessment could be summarised here, also stating whether they relative to a receptor and/or pathway. It should also be shown how temporal variability has been taken into account in the impact assessment. If industry best practice and/or guidance documents have been used to inform the impact assessment, this should be stated.	Yellow

Marine Geology Oceanography and Physical Processes

42 - The worst case footprint on the seabed is associated with the maximum number of 57 GBS wind turbine foundations and scour protection, two GBS OSP/OCP foundations with scour protection, and up to 20% of array cable protection (38km) (Table 8.2 of Chapter 8 (Marine Geology Oceanography and Physical Processes)). This constitutes only 5.7% of the array area, and hence the loss of seabed within the Annex 1 sandbanks will be much less than this (about 0.6% given their extent within the array area – Figure 8.12, document reference 3.2.4). At the scale of the study area this is negligible. There will be no effect on KKE MCZ because there is no overlap with North Falls footprints.

43 - There will be no cable protection at the HDD exit pit which will be located c. 1.5km from the shore.

44 - The methodology for assessment of wave modelling has been revised and cross reference to the wave modelling report (Appendix 8.1, document reference 3.3.3) added in Section 8.4.3 of Chapter 8 (Marine Geology Oceanography and Physical Processes), which provides further information on the methodology. The assessment of marine geology, oceanography and physical processes is based on expert judgement and experience of assessments undertaken on previous wind farms. Conceptual-based assessment does not use any particular analytical technique or modelling

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				<p>technique but utilises all the evidence available in all its forms. Temporal variability is discussed throughout regarding whether the effect is temporary or permanent.</p>	
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Nesher Engineers Key Deliverables		Nesher Engineers Advice		Recommendations	Risk (RAG)
Alt. Ref	PEIR Ref	Alt. Ref	Comment		
			practice and/or guidance documents have been used to inform the assessment?		
45	8.6.3.6		We understand that the ground has been permitted to install the export cable at depths using HDD techniques, that allowing direct disturbance to the sensitive zone, which is extensive. However, given the the landfall location is still to be defined, there is uncertainty regarding the successful use of HDD methods at the proposed time.	We would advise that trenching and associated impacts be considered and quantified in the WDC until the sensitive area has been defined.	
46	Tables 8.7-8.0		Table 8.7-8.0 provide estimates of sensitivity, value, and magnitude for a zoogeographical receptor. How do these definitions relate to pathway effects?	Please clarify how these estimates relate to pathway effects.	
47	8.3.1.10; 8.3.1.11 & 12.5; Table 8.13		The limits of the far field impacts have been established based upon the occurrence of one spring tide surge (approx. 150cm) relative to local seasonal frequencies, prevailing wave conditions, evidence from existing wind farms on the likely spatial extent of changes to wave conditions, and also receptor considerations that should be drawn upon to inform the level of the wider study area. In turn, we advise that there are a number of nationally and internationally designated marine and coastal conservation sites and sensitive habitats along the Essex/Suffolk coasts (i.e. the wider study area) that could be affected by changes to physical processes. These designated should be included in the Essex/Suffolk coastal receptor.	We advise that the anticipated maximum 2nd subtidal, prevailing wave conditions, and evidence from existing wind farms on the likely spatial extent of changes to wave conditions. Designated sites along the adjacent coastline to landfall, that overlap the wider study area, should be included into the impact assessment. At most during the terms of the wider study area, receptors and designated sites within the study area would also be used.	

Marine Geology Oceanography and Physical Processes

45 - A landfall area has been selected, discussed further in Chapter 4 Site selection and assessment of alternatives. The method for cable installation at landfall is described in Chapter 5 Project Description. This will be by HDD and therefore this is the only method that is required to be assessed.

46 - The S-P-R is the conceptual model that determines whether the effect can be potentially significant or not. The matrix quantifies the magnitude of this potential effect on the receptors for marine geology, oceanography and physical processes.

47 - Numerical modelling of waves has now been completed for potential operational impacts due to the presence of the foundation structures. The assessment of impacts to the wave regime including any at the coast are presented in Section 8.6.3.2 of Chapter 8 (Marine Geology Oceanography and Physical Processes).

It is accepted that there are nationally and internationally designated marine and coastal conservation sites and sensitive habitats along the Essex/Suffolk coasts. These sites are integral to the definition of these coasts as sensitive receptors, and it is not necessary to break this down into individually named sites. They are considered in the impact assessment as part of the defined sensitive receptors. A map showing the receptors is provided as Figure 8.15 (document reference 3.2.4),

				which contains all those receptors of significance to marine geology, oceanography and physical processes.	
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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			group and considered in the impact assessment.		
	43	8.6.2.1 (115-121)	<p>Two approaches have been taken to assess the impact of SSC changes due to seabed preparation for foundation installation in the North Falls array. The first is, as stated in Para 116, a more subjective expert based assessment. The second, as based on the GWF Delf3D plume model, is stated that the modelling process for the GWF required a suitable analogue for verifying the conclusions of the more qualitative expert based assessment relating to the similarities in sediment types and distributions across the North Falls and GWF sites, and the similarities in water depths. As discussed earlier, we agree that sediment types and distributions are similar, and the range of water depths, but not the seabed topography and depth variations across the two sites.</p> <p>GWF model simulation was carried out on installation of 45m diameter GBS foundations on the Gallopier sandbank. Conversely, the North Falls MDS GBS foundations are 60m diameter and the western half of the array appear to be located in deeper water where the seabed is also quite flat and featureless.</p> <p>The GWF simulation resulted sediment release volume was 7,200m³ whereas the</p>	Further evidence should be provided to demonstrate the suitability of the qualitative expert based assessment and the applicability of the GWF model for assessing impacts due to seabed preparation related SSC changes at North Falls.	

Marine Geology Oceanography and Physical Processes

48 - An updated comparison of the bathymetries of North Falls, GGOW and GWF has now been included in Section 8.4.6 of Chapter 8 (Marine Geology Oceanography and Physical Processes).

The assessment of sediment dispersion in the water column due to seabed preparation for foundation installation that was completed at Five Estuaries Wind Farm has been added to Section 8.6.2.1 of Chapter 8 (Marine Geology Oceanography and Physical Processes) to add supporting evidence. The total volume of sediment released during seabed preparation was estimated as 1.19Mm³ at Five Estuaries which is conservative compared to the estimated release of 1.14Mm³ at North Falls, and so the results of the Five Estuaries assessment is conservative and a good analogy.

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Natural England's Key Considerations		Natural England's Advice		Risk (NEAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	
			<p>scaled sediment release volume for the North Falls MCS (MS) submission equal to 18.24mm³ (based on a 75m diameter MCS seabed area was dredged to 5m). Therefore the North Falls sediment release volume is 2.8 times greater than that simulated for OWE.</p> <p>Consequently we have concerns about regards to the validity of the qualitative assessment and the appropriateness of the OWE model in the prevailing conditions at North Falls.</p>	
	49	8.6.2.1: Page 120	<p>We have concerns with the use of a largely qualitative assessment coupled with the OWE (2011) sediment plume model data. Non OWE to estimate the impacts of SSC changes due to seabed preparation in the North Falls arrays. The lack of site-specific data leads to uncertainty regarding the prevailing conditions at North Falls and thus the impact assessment to determine how conditions will change relative to this baseline.</p>	
			<p>We advise a further assessment is required the likely nature of sediment plumes (plume concentration, and duration), as a result of the MCS sediment disturbance during seabed preparation in the arrays.</p> <p>Maps of potential change in SSCs would be useful for sediment disturbance due to foundation seabed preparation in the north and south arrays (particularly at the overlap with KKE MCS), including sediment plume footprint, concentration, duration for various tidal scenarios and sediment size fractions.</p> <p>The WCS for SSC changes including distance to sensitive features or species, simultaneous operations, foundation design etc. also need to be considered.</p>	

Marine Geology Oceanography and Physical Processes

49 - The assessment of sediment dispersion in the water column due to seabed preparation for foundation installation that was completed at Five Estuaries Wind Farm has been added to Section 8.6.2.1 of Chapter 8 (Marine Geology Oceanography and Physical Processes) to add supporting evidence. The assessment used spreadsheet numerical models to determine potential impact and provided indications of potential footprints. Hence, the method is semi-quantitative. The total volume of sediment released during seabed preparation was estimated as 1.19Mm³ which is conservative compared to the estimated release of 1.14Mm³ at North Falls, and so the results of the Five Estuaries assessment is conservative and a good analogy.

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)	
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PER Ref	Comment	Recommendation		
		50	8.6.2.2 Part 128	As discussed above, we have concerns with the use of a largely qualitative assessment to assess the impacts of SSC changes due to pile arrangements for installation of piled foundations for WTGs and OSGs. We have concerns with the qualitative assessment of sediment plume impacts due to pile arrangements for installation of piled foundations for WTGs and OSGs. Can the conceptual evidence-based assessment predictions be validated?	Particular consideration should also be given in this assessment as to the likely nature of sediment plumes due to foundation seabed preparation in the KKE MZC, this will also help inform the MZCA. We advise a further assessment to establish the likely nature of sediment plumes (depth, concentration and duration) as a result of the MZC seabed disturbance during drilling for installation of piled foundations for WTGs and OSGs. Please also refer to our recommendation above regarding maps of potential change and particular consideration of KKE MZC.	Red
		51	8.6.2.2 Part 127-128	It is stated that the GWF modelling study provides a suitable analogue for the North Falls assessment of increased SSCs due to export cable installation. Whilst the OCC lengths are similar, the locations are not. The GWF OCC extends from the north GWF array to the coast at Snettisham, Suffolk whereas the North Falls south array to landfall on the Tendring Peninsula, Essex. Anticipated volume of sediment disturbance due to cable trenching also differ: 300,000m ³ for North Falls OCC and 150,000m ³ for GWF. Lastly, in 8.6.6.1 it states that the location of the landfall for North Falls will be the Tendring peninsula. This is offset to the landfall for GOWW and GWF, and so is	Further evidence should be provided to support the use of the GWF numerical model simulations to support predictions of SSC changes due to export cable installation along the North Falls OCC.	

Marine Geology Oceanography and Physical Processes

50 - For SSCs released due to drilling activities, only 10% of the 34 largest wind turbines would require drilling (up to four of the total 57 across the array). Given the small scale of the disturbance compared to seabed preparation activities, a conceptual evidence-based assessment(see Chapter 8 Marine Geology, Oceanography and Physical Processes) is considered proportionate to the potential effect that may occur.

51 - The basis for using the GWF modelling results as an analogy for potential effects along the North Falls offshore cable corridor was based on the similarities in the environment rather than geographical overlap. As described in Section 8.4.6 of Chapter 8 (Marine Geology Oceanography and Physical Processes), there are similarities in water depth, sediment types, metocean conditions and length of the offshore cable corridor for GWF and the proposed North Falls project. This makes the GWF modelling study a suitable analogue for the present assessment.

Natural England's Key Consultations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			Bespoke desk-based assessment of the offshore cable corridor and the seabed search area is provided.		Red
	52	8.6.2.8.3	Please see our comments regarding the use of GWF plume modelling simulations and conceptual evidence-based approach.	Can maps be provided to show potential settled sediment thickness and footprint due to cable trenching and seabed levelling, for different sediment fractions and tidal scenarios at different locations along the OCC (e.g. Inshore, next to MLS SAC, Annex 1 sandbank?)	Yellow
	53	8.6.2.10.3Point 219	Following on from our comments above, we note that the likely effect of installations on the seabed due to installation vessels is considered to be negligible adverse. In turn this is considered not significant in relation to Margate and Long Sands SAC, Annex 1 sandbanks and Kentish Knock East MCZ. However, impacts due to these activities have been considered in isolation here, and the wider picture regarding the form and function of the seabed morphological features is likely to be affected.	We advise the form and function of the seabed morphological features not just impacts due to individual installation activities, is considered.	Yellow
	54	9.6.3.11. Point 224	It is stated that no significant impact on the tidal current regime was predicted for GWF, and the same conclusion is drawn for the North Falls array (based on the similarities between the two GWFs). However, as discussed earlier, there are notable differences in their seabed topography and depth variation. There are also significant differences between the North Falls MGS (which has not been considered in the total	This MGS for North Falls should be presented, including the anticipated minimum turbine spacing. Rationale for the applicability of the GWF tidal current assessment to North Falls should be provided, or a project-specific tidal regime analysis carried out. In the ES, turbulent wakes due to the array foundations will also need to be considered and assessed, with particular regard to impacts to sensitive	Red

Marine Geology Oceanography and Physical Processes

52 - The conceptual evidence-based assessment (see Marine Geology Oceanography and Physical Processes) of deposition from the plume generated from cable installation indicates that the changes in seabed elevation would be effectively immeasurable within the accuracy of any numerical model or bathymetric survey. This is because, after this initial deposition, the deposited sediment will be continually re-suspended to reduce the thickness to a point where it will be effectively zero. Hence, the need to show potential settled sediment thickness and footprint would not add any meaningful information for the impact assessment.

53 - Section 8.6.2.10 of Chapter 8 (Marine Geology Oceanography and Physical Processes) specifically assesses the impact of the footprint of the installation vessels. Consideration of the morphological effects on the seabed of other activities are covered in other sections.

54 - Updated baseline information on tidal currents that are bespoke to the Project is provided in Section 8.5.4 of Chapter 8 (Marine Geology Oceanography and Physical Processes) demonstrating the similarity of the recent data with that modelled at GWF. Hence, the discussion of bathymetry with respect to tidal currents is not relevant, because the calibration is reflected in the tidal current comparison.

				<p>The potential effect of turbulent wakes has been considered as part of the overall conceptual evidence-based assessment of changes to tidal currents in Section 8.6.3.1. It is indicated that there is no interaction with wakes from adjacent foundations due to the relatively large separation distances. The potential for seabed scour is covered in Section 8.6.3.3 and Section 8.6.3.5 of Chapter 8 (Marine Geology Oceanography and Physical Processes).</p> <p>Changes to tidal currents would be both low in magnitude and largely confined to local wake or wave shadow effects attributable to individual wind turbine foundations and, therefore, would be small in geographical extent. Hence, any scour due to wakes would also be local and insignificant and would have no effect on KKE MCZ (as its boundary does not overlap with North Falls) and negligible effect of the Annex I sandbanks.</p>	
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Natural England's Key Competences		Natural England's Advice			Risk (RAQ)
NE Ref	NE Ref	Comment	Recommendation		
		regime (rapid assessment) and full resources for GWR. Consequently, it would be useful to know how applicable the GWR full model predictions are to North Falls? Can they be utilised for the surface features and bathymetry at North Falls?	receptors that overlap or in the vicinity of the North Falls arrays?		Red
	Section 5.5.3.2 (Page 4)	Turbulent wakes caused by foundations interacting with flow could lead to increased turbidity within the wake and close to bed/bottom. Given the proximity of the North Falls arrays to sensitive receptors (e.g. NNE MCC Annex 1 sandbanks and other sandbanks whose ecological structure and functionality warrant protection), this will need to be considered and assessed. It is stated that the minimum separation between wind turbines would be approximately 2 x the rotor diameter (i.e. 80m for the smallest turbines and 100m rotor diameter or 1.05km for the largest turbines with 337m diameter). However, the minimum separation distance has been calculated using minimum rotor diameter for the smallest turbines, but maximum rotor diameter for the largest turbines.	Please can this be clarified?		Yellow
	5.5.3.2	As stated in Point 5.5.2, North Falls has the potential to alter the baseline wave regime particularly in respect of wave heights and direction. This also applies to GOW and GWR which are now built and form part of the baseline for North Falls. The anticipated	Please demonstrate how the GWR wave model and GOW wave data provide a representative estimate of the present-day North Falls baseline wave climate. Consideration also needs to be given to future		Red

Marine Geology Oceanography and Physical Processes

55 - A single rotor diameter for each wind turbine generator size class is now defined and the spacing updated accordingly in Section 5.5.3.2 of Chapter 5 (Project Description).

56 - Numerical modelling of waves has now been completed for potential operational impacts due to the presence of the foundation structures. This replaces the conceptual assessment completed in the PEIR.

Updated baseline information on waves that are bespoke to the Project is provided in Section 8.5.5 of Chapter 8 (Marine Geology Oceanography and Physical Processes).

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Section 4.2 Preliminary Environmental Information Report (PEIR)		Section 4.3 Advice		Recommendation	Risk (RAG)
NE Ref	PEIR Ref	Comment			
		construction date for North Falls is 2024, and the PEIR was submitted in 2024, 2024, which the 2024 advice document was drafted in 2024. Therefore, advice these updates provide useful local background information. It needs to be demonstrated how necessary these updates are to the PEIR in comparison. This is important, because it is this decision against which the Project's business case will be judged.		conforms with the terms of the development	Red
51	8.3.2.41 234	The OREI advice document only considered three return periods (10 in 1 year, 1 in 1 year and 1 in 10 year) when the advice was prepared.		The advice should consider higher return periods e.g. 1 in 50 year and 1 in 100 year	Yellow
58	8.3.2.41 238	It is suggested based on current practice that 10 year under a WCS of the largest diameter OREI are typically used to calculate heights at most locations for each wind turbine. However, with greater distance from each wind turbine, effects are reduced as opposed to direct, extending to a shallow zone typically up to several km of distance from the site along the axis of wave approach, but with less magnitude. What is the WCS more suitable for North Falls?		Advice should be provided showing the WCS used for North Falls. Advice should also be provided on the range of changes to the wave height due to the presence of the turbines and whether these changes could affect morphological processes (e.g. at RRE MCC Advice 1 (see table 8.8)).	Yellow
59	8.6.3.2.3 240	The discussion of significance of what refers to wave field wave conditions at OREI in 2024 and wave forecast data for the north-western European Continental Shelf and the		We advise that the Project team map-up or take and provide specific wave data.	Red

Marine Geology Oceanography and Physical Processes

57 - Numerical modelling of waves (see Wave Assessment, document reference 3.3.3) has now been completed for potential operational impacts due to the presence of the foundation structures. Model runs were completed for waves from the north-north-west, north, east and south-south-west for three return periods (1 in 1 year, 1 in 50 year and 1 in 100 year). Simulations were completed for the effect of North Falls both individually and cumulatively with other wind farm developments (either in the planning phase or constructed).

58 - Figure 8.17 (document reference 3.2.4) presents worst case changes to waves for North Falls, which are described in Section 8.6.3.2 of Chapter 8 (Marine Geology Oceanography and Physical Processes).

59 - Updated baseline information on waves that are bespoke to the Project is provided in Section 8.5.5 of Chapter 8 (Marine Geology Oceanography and Physical Processes).

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Natural England's Key Considerations		Natural England's Advice			Risk (RAI)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
	60	8.6.13	Static data was not recorded in the vicinity of North Falls. The format of these data are old, and the sites not in the vicinity of North Falls. Project-specific data should be used if existing up to date and site specific data are not available. It is stated that the predicted reductions in tidal regimes and ebb regime due to the presence of the WCS OGS foundations would result in a reduction in the sediment transport potential across the sites. The assessment of this impact has, again, been based on the GWF (2011). Therefore, we refer the Project to our earlier comments on the site and ebb impact assessments, in regard to the ADPhear (2011) study to assess the potential impact to regional bedload transport processes caused by changes in flow vectors and bed shear stress due to installation of GWF. Given the concerns with respect to seabed morphology and the form and function of Annex 1 seabed use to the presence of GWF, can the same study be carried out for North Falls? Can seabed profiles across the study area be mapped? Owing to the lack of relevant site-specific data, and uncertainty with regards to the applicability of existing GWF data, we cannot agree with the impact assessment at this stage.	It would be useful to see a similar study carried out for North Falls i.e. a comparison of bed shear stress values before and after construction during times of peak flow within the study area, in order to understand potential changes to seabed morphology, areas of designated seabeds, the form and function of Annex 1 seabed use etc.	
	61	8.6.3.4	The locations where cable protection measures are most likely to be required are	We look forward to seeing refinement of the exact location and OCG and, in turn, cable	

Marine Geology Oceanography and Physical Processes

60 - The significance of changes in tidal flow and wave heights during the operational phase of North Falls are low in the near-field and negligible in the far-field. Hence, changes in sediment transport driven by these two processes would be similarly low in the near-field and negligible in the far-field. These magnitudes of significance are supported by the numerical modelling assessments at GGOW and GWF. Also, new information from Five Estuaries Wind Farm has been added to Section 8.6.3.3.3 of Chapter 8 (Marine Geology Oceanography and Physical Processes) to further support the conclusions of the assessment.

The inclusion of a bespoke study to map bed shear stress against seabed particle size (mobility study) would be disproportionate, given the change in tidal current flow (proxy for bed shear stress) due to the Project is negligible.

61 - A commitment has been made to install the export cable at the landfall using HDD techniques, thus avoiding direct disturbance in the intertidal and shallow subtidal zones. This means that there is unlikely to be any changes to the wave regime and sediment transport inside the closure depth for this coast because the cable will be buried. The impact of any temporary cofferdams during construction would be short-lived and local. Cable protection, berms and cable crossings in deeper water will have little effect on waves or tidal currents.

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			areas of cable crossings and in areas of seabed characterised by exposed bedrock. We welcome the Project's commitment to consider an appropriate similar section and OCC which aims to minimise the requirement for cable protection and in turn sediment transport effects, as far as practically possible. We also welcome the Project's commitment to install the export cables at landfall using HDD techniques and thus, avoid direct disturbance in the intertidal zone.	protection requirements. In the EIS the Project should provide a map showing indicative locations for cable protection and cable crossings. We would also advise consideration and assessment of potential changes in the hydrodynamic regime, sediment transport patterns and morphology due to the location of cable protection measures and/or cable crossings in shallow nearshore areas. In the EIS, the EIA will need to consider the impact of cable protection throughout the lifetime of the project (i.e., construction, maintenance, additional for exposed assets, and left in situ at the time of decommissioning).	
	62	8.6.3.6.1	The magnitude of impact on seabed morphology and sediment transport under the WGS for export cable protection has been assessed as negligible for the local intertidal zone, however, the intertidal zone has not been determined yet and is due to be refined post-PEIR. It is not clear what this assessment has been based on, but we would welcome further information to support this conclusion.	If available, provide supporting information regarding the magnitude of impact on seabed morphology and sediment transport within the intertidal zone at landfall. Furthermore, we advise that the Project will need to consider how the coast at landfall may allow throughout the lifetime of the development, both in terms of vertical change in beach profile and coastal retreat/management.	
	63	8.7	Where it is deemed necessary to carry out levelling or lowering of structures related to a designated feature, the Project should consider monitoring to validate predictions of sandwave recovery.	Monitoring should be considered to validate predictions of sandwave recovery. Also consider monitoring of buried infrastructure/assets in the intertidal zone to ensure asset integrity through the lifetime of the Project.	

Marine Geology Oceanography and Physical Processes

62 - A commitment has been made to install the export cable at the landfall using HDD techniques (see Chapter 5, Project Description), thus avoiding direct disturbance in the intertidal and shallow subtidal zones. This means that there is unlikely to be any changes to the seabed morphology and sediment transport inside the closure depth for this coast because the cable will be buried.

The depth profile of the HDD below the beach would be designed to ensure there would be no exposure of the cable over the long-term, with fluctuations in beach profile and coastal retreat management.

63 - Regular bathymetry surveys of the offshore cables will be undertaken which would provide information on depth of burial and therefore provide an indication of sandwave recovery. This is discussed further in the In Principle Monitoring Plan (document reference 7.10).

Reviewer's Comments		Author's Response		Recommendation	Risk (RAS)
NE Ref	PER Ref	Comment	Response		
		Calibration/verification errors at the individual level should be reported to ensure errors remain below white flag level.			
44	8.8.2	Table 8.47 provides a summary of the projects considered in the Cumulative Effects Assessment (CEA) for marine geology, oceanography, and physical processes. However, there is no acknowledgment that the location of the ports or projects included in Table 8.47.	Please provide a map to show the project locations considered and included in the CEA.		
45	8.8.3.2	There is the potential for construction-related activities to overlap between North Falls and VE, along with OCCs. For example, equipment banks due to simultaneous operations at locations adjacent with respect to the tidal axis. To what extent would sensitive areas of mudflat be disturbed during vessel preparation and cable installation activities, or changed due to increased SSCs and sediment deposition (i.e., MLIS SAC, Annex I sandbanks, protected sites along the coast)?	We advise consideration is given to construction related impacts on sensitive receptors and management sites (e.g., MLIS SAC, Annex I sandbanks, designated sites along adjacent coastline at low/medium tide to anticipate operations (SMOPs) between North Falls and VE. Provide MCS for overlapping plumes, increased SSCs, subsequent sediment deposition, areas of impact etc.		
46	8.8.3.4 Table 8.28	It is stated that it was agreed that no assessment of cumulative effects was required for GWVF with other Renewables sites in the Tyneside strategic area and therefore they are not considered for North Falls. This statement does not consider that significant time has passed since then and it is unclear what the cumulative effects of multiple GWVF projects have now altered the wave, tide and sediment transport regime baseline. We advise that revised source evidence is	We would draw the Project's attention to VE CEMP ESDI Volume 4, Annex 2.2, Physical Processes Model Design and Validation which assesses the potential for cumulative interaction with other wind farms located in the VE study area. We also advise that these revised cumulative effects should be fully reconsidered and assessed.		

Marine Geology Oceanography and Physical Processes

64 - The plans and projects considered in the CEA are now shown in Figure 8.19 (document reference 3.2.4).

65 - This has been considered at Section 8.8.3.2 of Chapter 8 (Marine Geology Oceanography and Physical Processes). With respect to mapping plumes and deposition, the longer-term outcome once the sediment supply from cable installation has ceased, would be cumulative concentrations at background levels and bed thicknesses effectively zero. This means that the effects on the Annex I sandbanks, MLS SAC and the coast would not be significant.

66 - Cumulative operational wave and tidal current impacts with adjacent wind farms are covered in Sections 8.8.3.3 and 8.8.3.4 of Chapter 8 (Marine Geology Oceanography and Physical Processes), respectively.

Nevill Engard's Key Considerations		Nevill Engard's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref.	PEIR Ref.	Comment	Recommendation	
			support the assessment. It should not be assumed to be accurate.		Orange
MCZ Assessment, Document Used: MCZA and Chapter 8					
Screening	67	Chapter 8/ Table 8.13	The relevant site features have been identified. However, we would include Blackwater MCZ in the list of Potential Receptors in Table 8.13 of Chapter 8 Marine Geology, Oceanography and Physical Processes owing to the potential for construction activity-related impacts on landfall for the project alone and in combination.	We would recommend that you update the assessment to include the Blackwater MCZ.	Yellow
Assessment	68		We are concerned that use of the GWF sediment plume model output may not be directly applicable to the site-specific prevailing conditions of North Falls, in particular within and near to KKE MCZ.	We advise calibration of the GWF model output with data specific to the prevailing conditions at KKE MCZ in order to provide confidence in the MCZA methodology and conclusions.	Red
	69	MCZA, Section 8.2.1.2	The conservative-based and GWF model plume results should be calibrated for the prevailing conditions in the area of the south area that overlaps with KKE MCZ and the adjacent washed area. Point 183 suggests that although SSC will be elevated, they are likely to be lower than concentrations that would develop in the water column during storm conditions. Also, once installation is completed, tidal currents are likely to rapidly disperse the suspended sediment (i.e., over a period of a few hours) in the absence of further sediment input.	We advise that the Project should try to quantify the impacts on the protected features of the site to inform the MCZA, as precisely as possible. A map should be provided showing the plume extent, SSC concentration and persistence for WGS construction activities relating to SSC changes, for example, foundation seabed preparation, pile driving, simultaneous operations etc. As stated earlier, we also advise that the conservative-based and GWF model plume	

Marine Geology Oceanography and Physical Processes

67 - The Blackwater MCZ is integral to the definition of the Essex coast as a sensitive receptor, and it is not necessary to break down the coast into individually named sites. They are considered in the impact assessment as part of the defined sensitive receptor and potential impacts are universally applied across all. A map showing the receptors is provided as Figure 8.15 (document reference 3.2.4), which contains all those receptors of significance to marine geology, oceanography and physical processes.

68 - The assessment of sediment dispersion in the water column due to seabed preparation for foundation installation that was completed at Five Estuaries Wind Farm has been added for supporting evidence. The total volume of sediment released during seabed preparation was estimated as 1.19Mm³ which is conservative compared to the estimated release of 1.14Mm³ at North Falls, and so the results of the Five Estuaries assessment is conservative and a good analogy.

69 - The Project does not now overlap with KKE MCZ (for more information see document reference 7.3).

Data on SSCs released at Five Estuaries Wind Farm have been used to support the conclusion that tidal currents are likely to rapidly disperse the suspended sediment (over a period of a few hours) in the absence of further

				<p>sediment input. Five Estuaries concluded that after about 24 to 48 hours following cessation of activities there would be no measurable change from baseline SSC.</p> <p>Hence, the need to map plume extent and persistence would not add any meaningful information for the impact assessment because the longer-term outcome once the sediment supply from cable installation has ceased, would be cumulative concentrations at background levels.</p>																			
<p>NFOWFS3_049_047_040723</p>	<table border="1"> <thead> <tr> <th colspan="2">Natural England's Key Considerations</th> <th colspan="4">Natural England's Advice</th> </tr> <tr> <th>Section 42 Preliminary Environmental Information Report (PEIR)</th> <th>NE Ref</th> <th>PER Ref</th> <th>Comment</th> <th>Recommendation</th> <th>Risk (RAQ)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>Can this be validated using site specific data?</td> <td>results should be calculated for the prevailing conditions at the area of the south array and overlaid with KRE M22 and the adjacent seabed area</td> <td style="background-color: red;"></td> </tr> </tbody> </table>	Natural England's Key Considerations		Natural England's Advice				Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PER Ref	Comment	Recommendation	Risk (RAQ)				Can this be validated using site specific data?	results should be calculated for the prevailing conditions at the area of the south array and overlaid with KRE M22 and the adjacent seabed area		<p>Marine Geology Oceanography and Physical Processes</p>		<p>See above.</p>	<p>N</p>
Natural England's Key Considerations		Natural England's Advice																					
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PER Ref	Comment	Recommendation	Risk (RAQ)																		
			Can this be validated using site specific data?	results should be calculated for the prevailing conditions at the area of the south array and overlaid with KRE M22 and the adjacent seabed area																			

NFOWFS3_049_048_040723	<p>Annex 2 Annex 2. Benthic and Intertidal Ecology In formulating these comments, the following documents have been considered:</p> <ul style="list-style-type: none"> • Chapter 1 Introduction • Chapter 2 Need for the Project • Chapter 4 Site Selection and Assessment of Alternatives • Chapter 5 Project Description • Chapter 6 EIA Methodology • Chapter 10 Benthic and Intertidal Ecology • Schedule of Mitigation • Habitats Regulations Assessment: Draft Report to Inform Appropriate Assessment • Habitats Regulations Assessment: Draft in Principle Compensation Options Review • Report to Inform Appropriate Assessment: Appendix 1 Habitats Regulations Assessment Screening Report. • Marine Conservation Zone Assessment: Preliminary MCZA Stage 1 Assessment • Marine Conservation Zone Assessment: Appendix 1: Screening Report • Marine Conservation Zone Assessment: Appendix 2: Biotope Sensitivity Ranges • Marine Conservation Zone Assessment: Appendix 3: In Principle Measures of Equivalent Environmental Benefit Review. 	Benthic and Intertidal Ecology		Noted.	N
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<p>NFOWFS3_049_049_040723</p>	<p>Natural England's Advice and Recommendations A summary of Natural England's advice in relation to Benthic and Intertidal Ecology is set out in Table 1. Our key concerns along with recommendations are presented below and further detailed in Table 2. Natural England's Key Concerns 1. Consideration of Kentish Knock East Marine Conservation Zone (KKE MCZ) Natural England advises that every effort needs to be taken to reduce the impact of the alone effects of the project and the contribution made to any existing pressures/cumulative impacts, such as benthic trawling and dredging (including scalloping). The subtidal mixed sediment and subtidal course sediment features already have a recover conservation objective and we are concerned that further impacts could take the site further away from meeting its conservation objectives. As a worst-case scenario, it has been assumed that 10% of North Falls infrastructure could be located in the section of the south array that overlaps the Kentish Knock East MCZ. Whilst it is stated that the during operation there would only be a habitat loss of 0.64km² which equates to 0.66% of the total MCZ., we note that in relation to the features of the site this could be between 0.86 and 8.68%, should all the projects infrastructure be placed on one feature. Whilst the spatial extent of the area impacted by the North Falls may be small relative to the MCZ as a whole, when this is considered alongside other pressures at a feature level this has the potential to become more significant. We advise that these pressures should be fully considered in the cumulative impacts assessment. Please see Appendix A to this document in relation to our advice on small scale losses. We also draw your attention to: • Hornsea Project Three's (HP3) during examination commitment to remove all infrastructure from within Markham's Triangle MCZ. We would welcome such a commitment for this project, but if the Applicant considers that this is not a viable mitigation measure then robust justification will need to be included within the Application submission documents as to why. • The recent Secretary of State decision for Hornsea Project 3 where it was concluded that cable projection within 0.0026% of The Wash and North Norfolk Coast SAC was an Adverse Effect on Integrity due to the site having a 'restore' conservation objective. In that case there is a predicted 2.77ha of lasting habitat change/loss. We therefore advise that impacts to KKE MCZ are thoroughly considered as part of the Application and an in-principle</p>	<p>Benthic and Intertidal Ecology</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Noted.</p>	<p>N</p>
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	Measures of Equivalent Environmental Benefit package provided should the Application continue to have infrastructure within the MCZ.				
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<p>NFOWFS3_049_050_040723</p>	<p>2. Turbine foundation scour prevention and array/interconnector cable protection We understand that it is possible that inter array cable protection could be required in KKE MCZ. Therefore, we advise that a cable burial risk assessment and a KKE MCZ Infrastructure Specification, Installation and Monitoring Plan (ISIMP) is provided as part of the Application. Should cable/scour protection be required within the site we advise that the placement of this within benthic MCZ's should be considered a lasting impact over the lifetime of the project which is potentially irreversible. Unless it can be demonstrated otherwise, the scale of impacts is likely to hinder the conservation objectives of maintaining subtidal sand in favourable condition and recovering subtidal coarse sediment and mixed sediment to favourable condition. These features cannot be recovered to favourable condition whilst cable protection is in situ, and potentially beyond due to removal implications. The placement of other hard substrate, such as filter layers to support gravity base foundations, the turbine foundations themselves (including all foundation options) and any other hard substrate placed during turbine installation or maintenance would similarly be considered likely to hinder the conservation objectives. All options should be explored by North Falls to avoid, reduce and mitigate the impacts from the placement of cable/scour protection including (but not exclusively), reducing the area of impact, reducing the number of cables, reducing cable crossings within designated sites, minimising the cable protection requirement along the cable length within the MCZ, modifying cable installation, avoiding placing cable in fisheries byelaw areas, adoption of the reburial hierarchy and using cable protection which has the greatest likelihood of successful removal. However, experience from projects to date is demonstrating that mitigation measures are unlikely to completely remove the need for cable protection over the lifetime of the project. We note that presently, post installation evidence is not sufficient to remove all reasonable scientific doubt that there the conservation objective would not be hindered from the placement cable protection over the lifetime of the project. The Secretary of State decision for Hornsea Project Three, Norfolk Boreas and Norfolk Vanguard supports this position with a requirement to provide compensation measures. As the current proposals include the potential for turbine placement within the MCZ we consider that an assessment of the potential for successfully fully decommissioning (i.e., complete removal of all placed infrastructure) should be provided. This should include all cable protection and scour</p>	<p>Infrastructure and Other Users</p>	<p>Project Description</p>	<p>Noted.</p>	<p>N</p>
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	prevention, any filter layer or other material placed for turbine installation, the foundations themselves and any other material placed during the lifetime of the project.					
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NFOWFS3_049_051_040723	<p>3. Benthic mitigation measures</p> <p>We note that the proposed Measure of Equivalent Environmental Benefit Assessment is incomplete as mitigation measures have not been fully explored. Natural England advises that the impacts on benthic ecology could be avoided, reduced and mitigated by implementing (but not exclusively) the following mitigation measures: -</p> <ul style="list-style-type: none"> • Avoid all infrastructure within the Designated Site (KKE MCZ) – e.g., Hornsea Project Three removed all infrastructure from Markham’s Triangle MCZ, which was also situated within their red-line boundary for their array. • We would encourage North Falls to consider shared infrastructure with Five Estuaries OWF project to minimise environmental impacts, whilst maintaining a route that avoids Margate and Long Sands SAC. • Reduce number of export cables though use of HV/DC system or coordinated approach with other projects – e.g., Norfolk Projects • Reduce the number of cable crossing within a designed site to avoid the requirement for cable protection – e.g., Hornsea Project Three • Reduce the number of turbines/substations and therefore inter array cables and associated protection within the designated site • Reduce the footprint of the turbine structures within the MCZ i.e., consider not using Gravity Base Structures in the MCZ • Cutting and removing sections of disused cables to avoid cable crossings – e.g., Norfolk Projects • Micro siting cables/turbines around reef and other features of ecological importance – All projects post Lincs OWF consent 2008 • Sandwave levelling to reduce risk of free spanning cables and requirement for external cable protection –All projects since 2016 have included an element of this • Adoption of the reburial hierarchy with external cable protection being last resort – all projects • Pre-consent – finalise cable burial risk assessment using Geotechnical data to focus cable protection requirements to areas where cables are likely to be sub-optimally buried e.g., mixed sediment – All projects since Vanguard • Use of guard vessels and/or advance mapping to avoid sub-optimally buried/surface laid cables negating the need for physical cable protection e.g., Lincs cable in the Wash • Requirement to install cable protection with the minimal footprint e.g., pinning – The Wildlife Trust (TWT) cable corridors work • Requirement to install cable protection and scour 	Benthic and Intertidal Ecology	Site Selection and Assessment of Alternatives	Noted.	N
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	<p>prevention with the greatest likely of removal e.g., rock bags. Example Norfolk Projects</p> <ul style="list-style-type: none"> • No use of jack up barges along export cable routes through benthic designated sites – e.g., Norfolk OWF projects • No cable protection in any fisheries byelaw areas to avoid hindering recovery of ecologically sensitive features such as Annex 1 Reef, noting that cable may still go through the outskirts of these areas – e.g., Norfolk Projects • Detonation of Unexploded Ordnance (UXO) outside of designated sites to avoid the creation of a crater – suggested for Sheringham Shoal and Dudgeon Extension Projects (SEP and DEP) 				
NFOWFS3_049_052_040723	<p>4. Determining EIA Impact</p> <p>Natural England notes that the approach to the EIA assessment is proposed to align with other OWF Nationally Significant Infrastructure Projects (NSIPs). This matrix approach has been used throughout Environmental Statements (ESs) to date to support the assessment of the magnitude and significance of impacts. Natural England notes numerous instances where significance has been presented as a range (i.e., slight, or moderate, or large) and it is nearly always the lower value that has been taken</p>	EIA Methodology		Noted.	N

forward. In the absence of evidence to support the use of the lower value in a range, Natural England's view is that the higher value should always be assessed in order to ensure that impacts on features have not been incorrectly screened out of further assessment. This is in line with the principles of the Rochdale envelope approach.

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NE Ref	Summary of Key Concerns	Natural England's Recommendations to Keynote Issues	Risk
1	Natural England agrees that every effort should be made to adopt the Mitigation Hierarchy before consideration of Measures of Environmental Benefit (MEEB). There is currently no justification provided in the MEEB documentation as to why infrastructure within the south array must be placed within the boundary of Kentish Knock East Marine Conservation Zone (KKE MCZ).	Natural England agrees that this needs to be fully addressed within the Environmental Statement (ES). We strongly encourage that placement of infrastructure within KKE MCZ (if any) is avoided.	High
2	We are unable to agree with the conclusions of the MCZ Assessment and associated documents as they cannot and should not be considered as a standalone assessment as they do not include the required evidence to support the conclusions drawn.	Natural England agrees that this should be fully addressed in the ES.	High
3	We note that the proposed MEEB is incomplete as mitigation measures have not been fully explored.	Natural England will provide updated advice once this has been completed and updated documents have been provided for review.	High
4	Natural England's advice on the various MEEB options presented remains unchanged from our previous advice provided in the Expert Topic Group (ETG) meetings and in our associated submissions in May and June 2022.	We advise those comments should be reviewed and taken into consideration.	High
5	Further detail is required on the preferred MEEB options.	We advise that the Applicant reviews and considers the MEEB plans submitted for the Dungeness and Smeetham Extension Projects (DEP and SEP). This can be found here.	Medium
6	It is not clear to Natural England why Suspended Sediment Concentrations (SSC) are considered non-impairing and permanent (5.2.2.37).	We advise clarity is provided on this point in the ES.	Medium
7	There is no mention of subtidal/offshore platforms within the MCZ assessment, so it is assumed that they will not be located within KKE MCZ.	We advise that clarity is provided in the ES regarding this point.	High

Benthic and Intertidal Ecology

1 - The array area has been reduced in size and no longer overlaps the Kentish Knock East MCZ. Therefore, there will be no infrastructure placed on the seabed within the MCZ (document reference 7.3). This has been discussed with the Seabed ETG and agreed that provided there is no infrastructure in the MCZ, the conservation objectives will not be hindered and MEEB will not require further consideration.


2 - The MCZ Assessment (document reference 7.3) has been included as a standalone assessment to ensure it considers the specific requirements of the Marine and Coastal Access Act 2009, and this approach has subsequently been agreed with NE. The array area has been reduced in size and no longer overlaps the Kentish Knock East MCZ.

3, 4, 5 - The array area has been reduced in size and no longer overlaps the Kentish Knock East MCZ. Therefore, there will be no infrastructure placed on the seabed within the MCZ (document reference 7.3). This has been discussed with the Seabed ETG and agreed that provided there is no infrastructure in the MCZ, the

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				<p>conservation objectives will not be hindered and MEEB will not require further consideration.</p> <p>6 - The impact of SSC is considered temporary throughout the relevant chapters of the Environmental Statement. Please see Section 10.6.1.2, Section 10.6.2.3 and Section 10.6.3.2 of Chapter 10 (Benthic and Intertidal Ecology).</p> <p>7 - The array area has been reduced in size and no longer overlaps the Kentish Knock East MCZ. Therefore, there will be no infrastructure placed on the seabed within the MCZ (document reference 7.3). This has been discussed with the Seabed ETG and agreed that provided there is no infrastructure in the MCZ, the conservation objectives will not be hindered and MEEB will not require further consideration.</p>	
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	<p>8 We advise further investigation of the possibility of sharing the offshore export cable infrastructure with Five Estuaries should be undertaken.</p>	<p>We advise that depending on the proposal put forward this could have the potential to reduce the proposed footprint, as well as physical installation and operation disturbance compared with the two projects using separate cable infrastructure. However, Natural England would caution against siting within the Margate and Long Sands Special Area of Conservation (SAC) due to the potential impacts of cable protection within the designated site.</p>	
	<p>9 Overall, further comparison of impacts to localised scale is required, along with the utilisation / comparison / review of impacts and assessments from similar projects would be better for generating a more robust conclusion on the magnitude of impacts.</p>	<p>The generalised comparison to impacts to a larger ecological and geographical scale than needed is not representative of localised impacts and has the potential to downplay results / impact conclusions.</p> <p>Revising pre-existing data and evaluating it with appropriate ground truthing would allow for better comparison to localised areas and give a more accurate representation of the significance of environmental impacts.</p>	

Benthic and Intertidal Ecology

8 - The North Falls offshore cable corridor route remains outside of the Margate and Long Sands SAC.

The potential for sharing offshore infrastructure with other projects is being explored. See Section 10.3.2 of Chapter 10 (Benthic and Intertidal Ecology) for further information on the optionality included in the Application, in relation to the transmission infrastructure.

9 - The impact assessments (Section 10.6 of Chapter 10, Benthic and Intertidal Ecology) have been revised to reflect the localised impacts.

Where appropriate, post-construction survey data from the nearby GWF has been used to supplement the assessment of species and their response within this report.

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Table 2 Natural England's Key Advice and Recommendations - Benthic and Intertidal Ecology

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
Project Parameters: Documents Used: Chapters 1 & 5					
Project Description:	10	PEIR Chapter 1 Introduction 1.3 Co-operation with other projects, Para 20	National Grid Point Connections	We advise that the sharing of existing planned offshore export cables for neighbouring Offshore Wind Farm (OWF) projects is further explored. If there is a potential to share an offshore cable route/infrastructure this has the potential to reduce benthic footprint and therefore impacts. However, Natural England have significant concerns with any co-location which would move the offshore cable route inside the Margate and Long Sands SAC.	
	11	Chapter 5 Project Description 5.6.16 Offshore decommissioning 10	We advise that benthic habitats should be returned to original pre-impact structure and function where reasonably practicable. Leaving artificial structures such as scour protection or eroded cables, has the potential to artificially produce colonisation structures not inclusive of natural localised biotopes. This is of particular concern within designated sites such as the RNE MCZ.	We advise that the removal of all anthropogenic infrastructure should be fully considered and evaluated. It should be determined if removal of structures would allow for natural recovery of the impacted habitat. The assessment should also include a consideration on what potential there is for successful decommissioning of cables post-decommissioning. Within the RNE MCZ this should further consider the potential for success of removal of any hard substrate employed as part of turbine installation or maintenance, as well as cable/corral prevention. If habitat has high recovery potential then this may be possible.	

Benthic and Intertidal Ecology

10 - The North Falls offshore cable corridor route remains outside of the Margate and Long Sands SAC.

The potential for sharing offshore infrastructure with other projects is being explored. See Section 10.3.2 of Chapter 10 (Benthic and Intertidal Ecology) for further information on the optionality included in the Application, in relation to the transmission infrastructure.

11 - The array area has been reduced in size and no longer overlaps the Kentish Knock East MCZ. Therefore, there will be no infrastructure placed on the seabed within the MCZ and the colonisation of substrate within the MCZ is not a concern.

The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and will be agreed with the regulator.

Decommissioning arrangements will be detailed in a Decommissioning Plan, which will be prepared in accordance with the Energy Act 2004. An assessment of the worst case scenario for decommissioning works is provided in Section 10.6.3 of Chapter 10 (Benthic and Intertidal Ecology).

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Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
	12	5.7.2.5	Assessment of significance. The matrix approach used creates a comparatively vague and generalised evaluation of impact/assessment of significance and does not, in some incidences, have the individual robustness needed to truly evaluate a significant effect.	This matrix approach has been used throughout ESa to date to support the assessment of the magnitude and significance of impacts. Natural England notes numerous instances where significance has been presented as a range (i.e. slight, or moderate, or large) and it is nearly always the lower value that has been taken forward. In the absence of evidence to support the use of the lower value in a range, Natural England's view is that the higher value should always be assessed in order to ensure that impacts on features have not been incorrectly screened out of further assessment.	Orange
Baseline Characterisation- Documents) Used: Chapter 10 Benthic and Intertidal Ecology and Figures (Volume II)					
Survey Data Acquisition	13	Para 207. Magnitude of impact	When comparing to the wider North Sea the scale impacts may well be comparatively negligible however as this is a localised project a more localised scale should be applied.	We advise more detail and evaluation should be provided regarding the localised impact.	Orange
	14	Figure 10.1. Sediment Sample Locations at North Falls	Justification as to reduced sampling effort across the north array, along with only one rotabag sampling location across the interconnector Cable Corridor.	More information required as to why a low sampling effort was carried out in these locations. Was appropriate power analysis used when determining sampling effort? We seek clarity on whether appropriate power analysis has been used when determining sampling effort and if so, the needs to be stated as there is a risk of under-sampling. Furthermore, a percentage of effort to area could be utilised allowing	Yellow

Benthic and Intertidal Ecology

12 - The assessment of likely significant effects is based on expert judgement, guidance, the approach outlined in the North Falls Scoping Report, and consultation through Scoping Opinion, Evidence Plan Process and Section 42. A matrix approach has been used to guide the assessment. Further information is provided in Section 10.4 of Chapter 10, Benthic and Intertidal Ecology.

The assessment of effect significance is based on the realistic worst case scenario and is described in Section 10.6 of Chapter 10, Benthic and Intertidal Ecology.

13 - The impact assessments (Section 10.6 of Chapter 10, Benthic and Intertidal Ecology) have been revised to reflect the localised impacts.

14 - This was a site characterisation survey and is not a baseline for monitoring, therefore there is no hypothesis to test with a power analysis. Also following feedback on the PEIR, the northern array and interconnector have been removed, therefore sampling effort in these locations is no longer relevant.

Power analysis will be considered in establishing the post consent monitoring strategy and an in-principle monitoring plan is included in the DCO application (document reference 7.10).

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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PER Ref	Comment	Recommendation	
		15	General Comment In relation to the site specific surveys conducted Natural England have the following comments: <ul style="list-style-type: none">The addition of Drop-Down Vines (DDV) would have been beneficial in understanding benthic characteristics in addition to grab samples.We note there were 30 sample stations. We question whether appropriate power analysis was carried out as 30 sample locations appears to be low.	For comparative sampling effort over the course of different size Aquatic Invertebrate Surveys (AIS) we advise the programme are better aligned with the results from Geographical Survey AIS. Natural England advises: <ul style="list-style-type: none">Utilisation of DDV in addition to Grab samples in future baseline surveys. This is very where grab samples fail.Confirmation as to how the sampling effort was decided upon.	Yellow
Environmental Impact Assessment - Document Used: Chapter 10 Benthic and Intertidal Ecology and Figures (Volume 1)					
Methodology	18	General comment	Definition of temporary needs to be clearly defined as this can be subjective depending on the scale of reference asset. Physical disturbance and cumulative impacts will be assessed during construction and decommissioning phases of this project.	An evaluation on how key species and biotopes will respond to predicted worst case disturbance should be modelled using baseline data, existing knowledge of the benthic biota and ecological processes. This predicted rate of recovery should then be measured and tested regarding the expected worst case time scenario of the aftermath of the various project stages.	Yellow
NIA - Document Used: Draft Report to Inform the Appropriate Assessment					
Screening	17	General Comment	Natural England has no comments to make on the screening.	N/A	Green

Benthic and Intertidal Ecology

15 - DDV was acquired at all stations in the survey.

This was a site characterisation survey and is not a baseline for monitoring, therefore there is no hypothesis to test with a power analysis. The sampling strategy was developed in consultation with Natural England and the MMO.

16 - Further context has been provided to the impacts imposing a temporary effect on the benthic receptors. This is considered throughout Section 10.6 of Chapter 10 (Benthic and Intertidal Ecology).

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
Assessment	18	General Comment	Natural England is concerned about the age of the data used (2012), in particular in relation to assessing impacts on Annex I habitats during construction.	We advise up-to-date data is used to inform the baseline to ensure a robust assessment and to ensure confidence in the conclusions drawn.	Yellow
	19	Para 210	Natural England is content that Adverse Effect on Integrity (AEI) can be excluded for Margate and Long Sand Special Area of Conservation (M.S.SAC) only if the exact cable is routed 100m or more away from the designated site boundary.	We look forward to understanding the final route boundary as the project is refined, and up-to-date data is included. We will provide our final advice once this has been completed. Please also refer to our comments on suspended sediment concentrations in the Advice on Marine Geology, Oceanography and Physical Processes.	Yellow
	30	Section 5.2	Please note that the Conservation Advice package for M.S.SAC is currently under review.	Natural England will inform you of any material changes prior to examination.	Purple
MCZ Assessment, Document Used: Marine Conservation Zone Assessment: Preliminary MCZA Stage 1 Assessment					
Screening	21	Figure 1.1	Natural England notes that avoidance of infrastructure is possible within the FKE MCZ (including a possible buffer).	Natural England advises that the needs to be fully addressed within the Environmental Statement (ES). We strongly encourage that placement of infrastructure within the FKE MCZ is avoided.	Red
	22	Table 3.1	Natural England advises that our TIER 1 data to cover the scope of in-combination/cumulative assessment, as included within our best practice guidance, is followed.	Information on assessing Natural England's best practice guidance can be found in the main text.	Purple
	23	Figure 6.3	We advise that this figure is out of date. For example, CA1N and EA2 are both permitted.	We advise that this is updated to reflect the current situation.	Yellow

Benthic and Intertidal Ecology

The Project's PEIR boundary no longer overlaps with the MCZ. See the Marine Conservation Zone Assessment Report (Document Reference 7.3) for more information.

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (BAG)
	24	Figure 4.1	We note that the zone of potential local current influence overlaps with Kestish Knock East MCZ, Orford Inshore MCZ, Inshore MCZ, South Reach and Dorset Estuaries MCZ. We note that North Falls have not collected any project specific wave/longshore-drift data, nor have they carried out any plume modelling. The project has indeed relied on the results of modelling from previous projects.	Natural England has highlighted concerns regarding the use of out-of-date data from previous projects in our Marine Processes comments. Until this issue is resolved we cannot provide our final advice on the appropriateness of any screen regarding suspended sediment concentrations.	Yellow
Assessment	25	Para 6, Table 2.1	Natural England advises that currently the updated National Policy Statements (NPS) are draft.	We advise that until finalized, the existing NPS should be used in any consideration of the project's potential impacts.	Purple
	26	3.2.1.2	Natural England highlights the major SUDS decision in relation to Hornsea Project 3, Norfolk Vanguard and Boreas that impact from infrastructure and cable protection even if removal has been considered a leading impact.	We advise the Applicant to update their assessment to reflect this leading impact.	Yellow
	27	Table 4.1	We draw your attention to the list of further mitigation measures in the text at the start of this Annex. We advise that all these mitigation measures are fully explored within the Kestish Knock East (KKE) MCZ.	We advise the developer seeks further collaboration with Natural England on this important aspect of the application.	Red
	28	Para 46	Natural England notes that UKD clearance has not been included in site preservation acts.	Natural England recommends that the assessment is updated to include this.	Yellow
	29	Para 47	Natural England strongly advises that should it be demonstrated that avoidance of the KKE MCZ is not possible then the	Natural England advises that the developer should clearly demonstrate how they have followed the mitigation hierarchy. This	Red

Benthic and Intertidal Ecology

Noted.

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			Mitigation Hierarchy is adopted to minimise the benthic impacts.	includes removal of Gravity Base Structures (GBS) from the Rootzone Envelope.	Red
	30	Para 40	Natural England advises that as with the most recent OVF applications, a cable burial risk (CBR) assessment is provided as part of the application.	We advise that this should be presented in the ES and that the CBR assessment should be based on relevant geotechnical survey data.	Yellow
	31	Table 5.2	It is not clear how the pre-construction surveys inform the mitigation measures and marine licence discharge.	We advise that clarity is provided.	Yellow
	32	Table 5.2	Natural England notes that the potential area of impact to KKE MCZ is 0.04km ² . We advise the Applicant refers to findings on the impacts to designated sites from Hornsea Project 3, and Norfolk Vanguard and Boreas, and the associated requirements for compensation.	We advise that the Project reviews the findings in relation to the projects specified, and reconsiders their own findings in light of this. We advise consideration should be given in the first instance to avoiding construction within the MCZ.	Red
	33	Table 5.2	Natural England notes that drill strings are referenced in the MCZ Assessment, but the impacts these on KKE MCZ are not included alone and/or cumulatively.	Natural England advises the MCZ Assessment is revised to consider drill strings.	Red
	34	Section 5.7	We draw the Applicant's attention to the list of benthic mitigation measures which should be considered within the MCZ assessment in more detail.	We advise that the Applicant consults the list provided above.	Red
	35	Section 5	Section 5 would benefit from inclusion of similar maps to those provided within MCZ screening document.	We advise that maps are provided in an updated assessment.	Yellow
	36	Para 167	Natural England advises that impacts to each of the interest features are considered when undertaking.	We advise that the assessment is updated accordingly.	Yellow

Benthic and Intertidal Ecology

Noted.

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			assessments, rather than comparing to the whole site		
	37	Table 8.3 and Para 174	Natural England advises that from review of current post construction benthic monitoring reports, that if the required mitigation measures are incorporated into the project design, their recovery is more likely to occur with suitable sand habitats.	We advise consideration is given to how sand/wave levelling can be utilised to potentially avoid impacts from cable protection. Natural England advises that this is adequately assessed and presented in the ES.	
	38	Para 173	Natural England advises that the Advice on Operations (AO) requires some updates to take account of evidence from post construction monitoring. Natural England advises that evidence is demonstrating that within Holderness (northern MZ) losing scalls have been created by OVF cable installation. Therefore, we are unable to agree with the recovery timescales as presented. Natural England also advises that within windfarms located within the water Wash (Norfolk/East Midlands) it has been demonstrated on multiple occasions that mixed sediment poses a risk of sub optimally buried cables and the need for cable protection.	Natural England advises that options to avoid this risk should be progressed and presented in the ES.	
	39	Para 173	It is not clear from the documents where the lasting impact from cable protection will be located and within which sediments.	We advise that this is included within the assessment.	
	40	Para 175	Natural England advises that the Greater Oribaster Offshore Windfarm (GOW) monitoring reports used to support conclusions drawn are provided as part of this application, with clear information on	Natural England advises that the discussion on the reports should clearly demonstrate sediment recovery for each sediment type and associated impact. We advise further discussion is required around sand/wave	

Benthic and Intertidal Ecology

Noted.

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Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			imped recovery demonstrated across the different sediment types/habitats. In addition, clarity is required on how comparable this is with the activities/impacts for North Falls and the types of sediments impacted.	leveling, as we understand that sandwave levelling was not used as part of the GGOW installation. We advise a clear assessment is required for KKE MCE.	Yellow
	41	Section 8.2.1.4	Natural England cannot currently agree with the assessment of the effects on sediment transport during construction. We note that North Falls have not collected any project-specific wind/wave/flow/sediment transport data. The project has instead relied on the results of modelling from previous projects. We note that the North Falls south array has a different seabed morphology/topography to the Greater Gabbard arrays and Gallopier reef farm array.	We advise that we need to see up to date and site-specific data in order to support conclusions regarding sediment transport effects at KKE MCE. Please refer to our comments on Marine Physical Processes for further information.	Red
	42	Section 6.2.2	In relation to Operational Impacts, Natural England notes that the amount of and location of cable repair, maintenance, anchorage and jack up vessel use within a 2-year period (this is the recovery period identified by the Applicant), and over the lifetime of the project is not specified within the assessment.	We advise that the assessment is updated to include these parameters in the final assessment.	Red
	43	Para 1.28	Natural England advises that all suitable infrastructure should be removed at the time of decommissioning unless evidence is provided to agree that it remains in situ.	We advise that the ES is adjusted accordingly. It should be noted that even with removal, the impacts over the lifetime of a project are still considered lasting.	Yellow

Benthic and Intertidal Ecology

Noted.

N

NFOWFS3_049_063_040723

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
	44	Section 2.6.1	Whilst Natural England agrees with the conclusions, we do not agree with the rationale provided and this will require further consideration.	We advise that further information is provided to clearly demonstrate and support the conclusion.	Yellow
	45	Table 6.6	Natural England advises that more evidence is required before it can be concluded that there will be no disruption to sediment transport and if there is, it will not hinder the conservation objectives for the site.	We advise that the Applicant refers to our marine physical processes advice to update the assessment.	Yellow
MCZ Assessment Conclusion	46	General Comment	We are unable to agree with the conclusions of the MCZ Assessment and associated documents as they cannot and should not be considered as a standalone assessment as they do not include the required evidence to support the conclusions drawn.	Natural England advises that this should be fully addressed in the ES and advises the Applicant to engage further with us in this critical matter.	Red
Measures of Equivalent Environmental Benefit (MEEB) Document Used: Measures of Equivalent Environmental Benefit (MCZA Appendix 3)					
MEEB	(Para. 5) and Table 3.1 (Ref 5)		We acknowledge that NKE MCZ was designated after The Crown Estate plan level HRA for extension projects which included North Falls. However, it should be noted that MCZs are not considered in that assessment. At the time of issuing extension projects there was insufficient information and confidence to consider them as a planktonic to intertidal designations. In addition, the surveys to inform the designation were undertaken before the leasing of extensions completed.	We advise this should be acknowledged in the assessment.	Yellow

Benthic and Intertidal Ecology

46 - The MCZ Assessment has been included as a standalone assessment to ensure it considers the specific requirements of the Marine and Coastal Access Act 2009, and this approach has subsequently been agreed with NE. The array area has been reduced in size and no longer overlaps the Kentish Knock East MCZ.

Y

<p>NFOWFS3_049_064_040723</p>	<table border="1"> <thead> <tr> <th colspan="2">Natural England's Key Considerations</th> <th colspan="4">Natural England's Advice</th> <th rowspan="2">Risk (RAG)</th> </tr> <tr> <th>Section 42 Preliminary Environmental Information Report (PEIR)</th> <th>NE Ref</th> <th>PEIR Ref</th> <th>Comment</th> <th>Recommendation</th> </tr> </thead> <tbody> <tr> <td></td> <td>47</td> <td>(Para 6.1)</td> <td>We note that the export cable avoids designated sites and therefore we would expect a similar approach to the array within KRE MCZ</td> <td>Natural England advises that this should be fully addressed in the Environmental Statement. The necessity to construct with the KRE MCZ needs to be fully justified and presented. We strongly advise that the Applicant considers refining their project design to avoid any construction within KRE MCZ boundary in the first instance. We advise that the Applicant takes note of other projects such as Hornsea Project 3, for which it was agreed that Marham's Triangle MCZ would be an infrastructure exclusion zone. Natural England would advise further engagement on this critical design principle.</td> <td></td> <td></td> </tr> <tr> <td></td> <td>48</td> <td>Table 3.1 Ref 9 -12 and 14</td> <td>We draw your attention to Natural England's advice on debris removal dated May 2014 in the Secretary of State (SoS) in relation to debris removal as a compensation option for the Norfolk Vanguard and Boreas projects.</td> <td>Natural England's position on debris removal as suitable compensation of MEEB remains unchanged.</td> <td></td> <td></td> </tr> <tr> <td></td> <td>49</td> <td>Section 4.4</td> <td>Please see our comments on the Stage 1 assessment which are also relevant to this document.</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>50</td> <td>General Comment</td> <td>Natural England notes that no one option for MEEB has been progressed. Natural England have advised through the EIU process and in our written responses, that this needs to be addressed prior to submission. It should be noted that recent decisions by the SoS support our position.</td> <td>We advise that the Applicant continues to engage with Natural England on this crucial issue, noting our preference for the construction within KRE MCZ, which in line with mitigation proposed for Hornsea Project 3. Clear justification through the Mitigation Hierarchy must be presented.</td> <td></td> <td></td> </tr> </tbody> </table>	Natural England's Key Considerations		Natural England's Advice				Risk (RAG)	Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation		47	(Para 6.1)	We note that the export cable avoids designated sites and therefore we would expect a similar approach to the array within KRE MCZ	Natural England advises that this should be fully addressed in the Environmental Statement. The necessity to construct with the KRE MCZ needs to be fully justified and presented. We strongly advise that the Applicant considers refining their project design to avoid any construction within KRE MCZ boundary in the first instance. We advise that the Applicant takes note of other projects such as Hornsea Project 3, for which it was agreed that Marham's Triangle MCZ would be an infrastructure exclusion zone. Natural England would advise further engagement on this critical design principle.				48	Table 3.1 Ref 9 -12 and 14	We draw your attention to Natural England's advice on debris removal dated May 2014 in the Secretary of State (SoS) in relation to debris removal as a compensation option for the Norfolk Vanguard and Boreas projects.	Natural England's position on debris removal as suitable compensation of MEEB remains unchanged.				49	Section 4.4	Please see our comments on the Stage 1 assessment which are also relevant to this document.					50	General Comment	Natural England notes that no one option for MEEB has been progressed. Natural England have advised through the EIU process and in our written responses, that this needs to be addressed prior to submission. It should be noted that recent decisions by the SoS support our position.	We advise that the Applicant continues to engage with Natural England on this crucial issue, noting our preference for the construction within KRE MCZ, which in line with mitigation proposed for Hornsea Project 3. Clear justification through the Mitigation Hierarchy must be presented.			<p>Benthic and Intertidal Ecology</p>		<p>Noted.</p>	<p>N</p>
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NFOWFS3_049_066_040723	<p>Appendix A - In relation to consideration of small-scale habitat loss within Marine Protected Areas with benthic features in relation to cable/turbine foundation scour protection Natural England provides the following advice:</p> <p>1.1. Natural England will usually consider permanent, long-lasting, and irreversible loss to be an adverse effect unless it can be clearly demonstrated otherwise.</p> <p>1.2. The following points should be considered (but not exclusively) when providing evidence to underpin an assessment of whether the conservation objectives are likely to be hindered:</p> <ul style="list-style-type: none"> • Location of the predicted loss in terms of whether it sits on a designated or supporting feature of the site; • Duration of the loss – for loss to be considered temporary it must be clearly time-limited to the point where the impact is predicted to return to the same pre-impact condition and must include a detailed remediation plan using proven techniques as part of the licence; • Scale of the loss in relation to the feature / sub feature of the site including consideration of the quality and rarity of the affected area; • Impact on structure, functioning or supporting processes of the habitat; • Feature condition; and • Existing habitat loss within the same site/ feature/ sub feature. <p>1.3. Whilst there are no hard and fast rules or thresholds, in order for Natural England to advise that the conservation objectives have not been hindered the project would need to demonstrate the following:</p> <ol style="list-style-type: none"> 1) That the loss is not on the priority habitat/feature/ sub feature/ supporting habitat and/or 2) That the loss is temporarily and reversible (within guidelines above) and/or 3) That the scale of loss is so small as to be de minimus alone and/ or 4) That the scale of loss is inconsequential including other impacts on the site/ feature/ sub feature <p>1.4. It is noted that Applicant's will argue that they have provided the above information and provided the necessary assessment and evidence. However, as set out in (C-294/17 Cooperatie Mobilisation for the Environment UA and Others v College van gedeputeerde staten van Limburg and Others) and other case law relating to People over Wind (2018) for a plan/project to be consented within a designated site there needs to be sufficient certainty in the evidence presented and the recoverability of the features and/or absolute certainty that any proposed mitigation measures will remove an adverse</p>	Benthic and Intertidal Ecology	Offshore Ecology	Noted.	N
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	<p>effect on integrity. While this applies to sites designated under the Habitats Directive, the principles within the decision are still a relevant consideration for other designations and, therefore, do have implications for the NF project.</p> <p>1.5. Therefore, we welcome any further work the applicant can do to provide more certainty in relation to the Worst-Case Scenario presented and/or minimise the impacts as much as possible.</p>				
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NFOWFS3_049_067_040723	<p>Annex 3. Fish and Shellfish Ecology</p> <p>In formulating these comments, the following documents have been considered:</p> <ul style="list-style-type: none"> • Chapter 11 Fish and Shellfish Ecology Document Reference Appendix 11.1 Fish and Shellfish Ecology Technical Report Chapter 11 Fish and Shellfish Ecology – Figures (Volume II) • Appendix 12.2 Underwater Noise Modelling Report • Appendix 12.3 Underwater Noise Technical Assessment Natural England’s Advice and Recommendations <p>A summary of Natural England’s advice in relation to Fish and Shellfish Ecology is set out in Table 1. Our key concerns along with recommendations are presented in this table. Some additional summary comments are also included in Table 2.</p> <p>Please note the format of the comments in this section differs to that used for other ecological chapters.</p>	Fish and Shellfish Ecology		Noted.	N
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Table 1 Summary of Key Issues – Fish and Shellfish Ecology

NE Ref	Summary of Key Comments	Natural England's Recommendations to Resolve Issues	Risk
1	Natural England refers to the expertise of Cetas in relation to fish and shellfish, where they are not features of designated sites or a prey species associated with the feature of a designated site. The absence of comment on aspects such as underwater noise, adequate baseline characterisation, and the impact assessment etc., should not be assumed to mean the absence of any concerns.	We advise that Natural England's comments are read in conjunction with the advice of Cetas. It should be noted that Natural England's remit differs to that of Cetas. Natural England's role is to advise on features of designated sites in the context of the conservation objectives, to ensure that the sites fulfil their function and make their due contribution to the Marine Protected Areas network. Cetas' role is to advise on how the development might interact with the fish populations as a whole. This context should be considered when reading the advice of both organisations and is likely to be the reason for any perceived differences. Natural England's RAG rating relates to our remit, and this may not fully reflect the severity of an issue when considered under Cetas' remit.	High
2	Outer Thames Estuary Special Protection Area (OTE SPA) - as recognised in Natural England's Submarine Cables in the London Estuary (2016) for the site, species such as herring and sand eels are key prey species of rock-fish (RTD). Impacts to these key fish species therefore have the potential to reduce prey availability for RTD. Impacts to the mobility, fitness or distribution of these species have the potential to add to existing pressures on RTD due to anthropogenic disturbances.	We advise that providing an adequate baseline, covering the best available evidence for herring and sand eel, is key to the assessment of impacts on these species. Such evidence is also required to inform the assessment of impacts on prey availability for RTD in the Demology Chapter and through the Habitats Regulations Assessment (HRA).	Medium
3	Native oyster (Ostrea edulis) and native oyster beds are features of Blackwater, Crouch, Roach, and Colne Estuaries Marine Conservation Zone (MCZ). We note that these features are recognised in the MCZ Assessment. However, we advise that in relation to suspended sediments the assessment is reliant on details within the marine geology, oceanography, and physical processes chapter. Until our concerns in the marine processes chapter have been addressed, we cannot provide comment on the appropriateness of the decisions within the MCZ Assessment related to fish and shellfish. We also note that impacts have been considered in relation to light sedimentation. We advise that further justification is provided as to why light as opposed to heavy sedimentation, has been associated, in relation to the distribution of native oysters, we advise that, in the absence of information being provided by the Applicant on their distribution	We advise that the MCZ Assessment is updated when agreement has been reached regarding the assessment of sediment plume in the marine geology, oceanography, and physical processes chapter.	Medium

Fish and Shellfish Ecology

Noted.

N

WE Ref	Summary of Key Concerns	Natural England's Recommendations to Resolving Issue(s)	Risk
	with the site. It should be assessed that they are present in the area of the site closest to the works location.		
4	The reporting presents details relating to fish being a fishing resource. Natural England advises that there is insufficient evidence to support fish being a fishing resource and that consequently we would expect them to be considered a recreational resource in an existing and appropriate manner.	Fish should be considered a stationary resource through all monitoring and assessments in the submitted ESI (Environmental Statement).	
5	We refer from the Chapter 11 Fish and Shellfish Ecology Figure 11.4 (note in that there is overlap with spawning grounds and nursery grounds for herring (Figure 11.2) and spawning grounds and nursery grounds for sand eel (Figure 11.4). We note that Table 11.14 incorrectly suggests spawning grounds of Common Herring located in areas adjacent to the southern area, as opposed to directly overlapping with it. We note the wider study area overlaps with the spawning ground of the Thames/Blackwater herring population (However, Table 11.12 does not recognise their spawning season (between February and May)).	We highlight that whilst these species are not designated features of the Marine Protected Area (MPA) network sites in proximity of the works, herring are a Section 41 species under the Natural Environment and Rural Communities Act 2006 (NERC), and both provide prey resources for other receptors such as BTO designated within the Great Thames Estuary SPA. We advise that both the Down and Blackwater herring spawning seasons are recognised in the MBAs.	
6	Natural England refers to the value of Cofas in determining the sensitivity of the species identified. It is important that the mortality of each individual species is taken into account when determining potential impacts upon them. This includes aspects such as their lifecycle (and sensitive stages within this, such as spawning, when fish can be in poor body condition), physiology, habitat requirements for spawning etc. It is a key to note that both herring and sand eel are substrate specific demersal spawners. This makes them particularly sensitive to temporary or permanent changes in the particular substrate types that they use for spawning. Increased Suspended Solids Concentration (SSC) and subsequent deposition of sediment on gravel habitat and shell-rags and spines, also have the potential to impact negatively on spawning, which particularly needs to be considered in relation to the Down herring spawning site as this is potentially in the	We advise the Project needs the advice of Cofas on the sensitivity of particular species, and the acuity/sensitivity of the sensitivity assigned in the assessment. When agreement is reached on the marine protection duration, and the further characterisation work suggested by Cofas has been carried out, Natural England would welcome the opportunity to comment on an updated assessment in relation to the herring and sand eel. We advise that the further baseline work as detailed by Cofas is required to further understand the potential direct loss of spawning habitat, which where infrastructure is placed is likely to be permanent.	

Fish and Shellfish Ecology

Noted.

N

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NE Item	Summary of Key Concerns	Nature England's Recommendations to Receive Issues	Risk
	<p>direct footprint of the works. In relation to temporary increase in SSC and deposition please note our comments on the marine processes chapter.</p> <p>Where there is overlap with the Downs spawning area, we do not agree that habitat loss will be temporary, and the seabed will quickly recover to its original condition where infrastructure has been placed. This is because the habitat type will have changed. In relation to long-term habitat loss, we advise this is permanent rather than long term. This is due to the elements of the development remaining in place and the lack of certainty all infrastructure will be removed at decommissioning.</p>		
7	We note the lack of suitable mapped modelling in relation to behavioural responses, despite the presence of the Downs and Backwater herring spawning grounds. We understand that Cefas generally advise modelling a 12568 threshold for Sould Exposure Level single strike (SELS1) following Hawkins et al (2014) to predict the range of effect for behavioural responses in herring.	We advise mapped modelling of 12568 (SELS1) is provided as part of the consideration of impacts on the Downs and Backwater Herring spawning sites, and advise that the Applicant discuss this further with Cefas.	
8	We refer to Cefas in relation to the appropriate mitigation but note that, based on the overlap proximity of the Downs herring spawning area, it is likely mitigation measures will need to be further explored. Any mitigation proposed will need to be accompanied by suitable evidence to demonstrate its efficacy.	Take on board advice received from CEFAS regarding mitigation measures for the Downs herring spawning area.	
9	In relation to cumulative effects, we note that the use of winch, buoy area for OWT, as well as subsea cables, aggregate dredging, and fishing activities such as trawling. All of these activities should be considered in terms of the potential to act cumulatively with North Falls, as well as ongoing activities such as fisheries.	We advise the Applicant seeks to continually update this assessment to ensure a robust and up to date list of projects is included at the ES stage. We note that further baseline characterisation and modelling, may lead to changes in the cumulative assessment and that therefore this will need to be updated.	
10	Given that North Falls and Five Estuaries appear to be on very similar trajectories, it is particularly key that impacts on fisheries receptors from these projects occurring concurrently and sequentially are considered.	The submitted ES should carefully assess the potential build scenario of North Falls and Five Estuaries on fish receptors to ensure that the Worst-Case Scenario (WCS) is captured.	

Fish and Shellfish Ecology

Noted.

N

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Table 1 Additional Summary Comments – Fish and Shellfish Ecology

Rev	Summary of Comments	Author's Recommended Action	Notes
11	A study is referenced by Pineda et al. (2013). This study relates to feeding and response to acoustic signals. We advise the reference is not appropriate as it does not relate to spawning.	We advise that this paper is removed, alongside the reference in a lack of response of noise during spawning.	
12	Natural England broadly supports the use of Popper et al. (2014), which classifies fish according to their hearing capabilities, for defining thresholds for mortality and potential mortal injury. We refer to Cetas for more detailed advice pertaining to this.	To remain.	
13	We note the mock (figure 11 v - 11.10) do not state the hammer energy and pile diameter used in the modelling.	We seek clarification that the modelling data are based on the worst-case scenario in terms of maximum hammer energy and pile diameter.	

Fish and Shellfish Ecology

Noted.

N

NFOWFS3_049_072_040723	<p>Annex 4. Marine Mammals</p> <p>In formulating these comments, the following documents have been considered:</p> <ul style="list-style-type: none"> • Chapter 12 Marine Mammals • Appendix 12.1 Marine Mammal Baseline • Appendix 12.2 Underwater Noise Modelling Report • Appendix 12.3 Underwater Noise Technical Assessment • Appendix 12.4 Unexploded Ordnance Clearance Information and Assessment • Appendix 12.5 Marine Mammal Cumulative Effects Screening • Draft Report to Inform Appropriate Assessment • Appendix 1 HRA Screening Report • Schedule of Mitigation <p>Natural England's Advice and Recommendations</p> <p>A summary of Natural England's advice in relation to Marine Mammals is set out in Table 1. Our key concerns along with recommendations are presented in further detail in Table 2.</p>	Marine Mammals		Noted.	N
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Table 1 Summary of Key Issues – Marine Mammals

NE Ref	Summary of Key Concerns	Natural England's Recommendations to Remove Issues	Risk
1	The worst-case scenario (WCS) for Acoustic Disturbance (ADD) activation duration is 10 minutes	Provide justification to explain why 10 minutes ADD activation is the WCS.	High
2	As the Marine Mammal Mitigation Plan/Protocol (MMMP) has not been drafted yet, we cannot agree at this stage that the measures in the MMMP will be sufficient to significantly reduce any potential for Permanent Threshold Shift (PTS) injury.	Engage with Natural England on the draft MMMP prior to including in the submitted Environmental Statement (ES).	High
3	A consistent approach in selecting the appropriate Seal Management Units (SMUs) for grey seals is required between the PER Chapter and MARINE REGULATIONS Assessment (MRA).	Apply a consistent approach for grey seal SMUs in the submitted ES and HRA and provide a clear justification for the approach chosen for the assessment.	High
4	The total number of days piling for all Offshore Wind Farms (OWFs) should be used for in-combination assessment to calculate equal impacts (i.e. any potential exceedance of the seasonal noise threshold).	In the submitted ES, take into consideration the total number of days of piling for all OWF projects, not only the number of days piling for North Falls.	High
5	Natural England supports use of noise reduction measures, such as bubble curtains, as a potential mitigation tool to reduce the risk of PTS injury from piling and Unexploded Ordnance (UXO) clearance.	Consider all available mitigation tools and techniques to reduce the risk of PTS injury (including bubble curtains) and incorporate the mitigation into the submitted ES.	High

Marine Mammals

1 - The ES and HRA have been updated to include the actual required ADD duration to cover PTS (cumulative) ranges based on the current underwater noise modelling results. Further information on ADD durations is provided within the Outline MMMP (document reference 7.7).

2 - Natural England have been consulted on the Outline MMMP, which is submitted as part of the DCO Application (document reference 7.7).

3 - Both the South-East England MU reference population (30,592) and the wider reference population (South-East and North-East England MU populations combined, 56,505) of grey seals will be presented in the assessments within the ES (Chapter 12, Marine Mammals). As a worst case it is assumed that all seals are from the nearest MU, the South-East England MU, although the more realistic assessment is based on wider reference population which takes into account the movement of seals.

The assessments provided in the RIAA are based on SAC population estimates rather than MU population estimates.

4 - The in-combination assessment for the Southern North Sea SAC has been updated to take account of the total days of activity with the relevant season, rather than just the days that overlap with North Falls (RIAA Section 6.2.3.4.1, document reference 7.1).

N

				<p>5 - All potential mitigation measures are being considered, including noise reduction measures (such as bubble curtains), see the Outline MMMP (document reference 7.7) for further information.</p>																									
<p>NFOWFS3_049_074_040723</p>	<p>Table 2 Natural England's Key Advice and Recommendations - Marine Mammals</p> <table border="1"> <thead> <tr> <th colspan="2">Natural England's Key Considerations</th> <th colspan="4">Natural England's Advice</th> </tr> <tr> <th>Section 42 Preliminary Environmental Information Report (PEIR)</th> <th>NE Ref</th> <th>PEIR Ref</th> <th>Comment</th> <th>Recommendation</th> <th>Risk (RAG)</th> </tr> </thead> <tbody> <tr> <td colspan="6">Project Parameters, Document(s) Used: Chapter 12 Marine Mammals</td> </tr> <tr> <td>Project Description</td> <td>6</td> <td>Table 12.57</td> <td>The stated duration of the Worst-Case Scenario (WCS) ADD activation time is 16 minutes. Natural England seeks justification</td> <td>Provide justification for the chosen WCS for the duration of the ADD activation.</td> <td></td> </tr> </tbody> </table>	Natural England's Key Considerations		Natural England's Advice				Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)	Project Parameters, Document(s) Used: Chapter 12 Marine Mammals						Project Description	6	Table 12.57	The stated duration of the Worst-Case Scenario (WCS) ADD activation time is 16 minutes. Natural England seeks justification	Provide justification for the chosen WCS for the duration of the ADD activation.		<p>Marine Mammals</p>		<p>6 - The ES and HRA have been updated to include the actual required ADD duration to cover PTS (cumulative) ranges. The worst case ADD activation time is based on the current underwater noise modelling (see the Outline MMMP (document reference 7.7) for further detail).</p>	<p>N</p>
Natural England's Key Considerations		Natural England's Advice																											
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Natural England's Key Considerations		Natural England's Advice		Recommendation	Risk (MAG)
NE Ref	PER Ref	Comment			
Section 42 Preliminary Environmental Information Report (PEIR)					
as to why such a short duration of ADD activities has been chosen as a VPC					
Baseline Characterisation - (document) Unit: Appendix 12.1 Marine Mammals					
Survey Unit Acquisition	1.2. 9	Natural England agrees with the four key marine mammal objectives identified	N/A		
	1.3. 10	Natural England agrees with the Management Limit (ML) for the key marine mammal species	N/A		
	1.5. 10 1.5. 10	The first paragraph calculates a total of 16 partially identified seals and 6 separate cetacean species, while the second states that a total of 23 seal species and 17 cetacean cetacean species were recorded	Clarification is required on which figures are agreed		
	Table 2	Natural England queries whether partially identified species were assigned to any species categories for the purposes of calculating densities and abundance	When analysing the full survey data, the Applicant should clearly present the results and justification on how unidentified species have been apportioned. The approach to apportioning species should be undertaken in discussion with Natural England and in view of the best practice advice		
Table 6. 11a	Table 6 indicates that the total reference population of grey seals is 60,310, while the paragraph below states that the NMU reference population for the assessment is 24,861. Thus, it is not clear from the text what value will be taken forward to the assessment. Natural England advises that the total population of each Total Management Unit (TMU) is taken forward	We advise clarification should be provided in the submitted EIR on the reference population that will be taken forward to the assessment.			

Marine Mammals

7 - Noted.

8 - Noted.

9 - This has been corrected; see Appendix 12.2, section 1.6.4.3 (document reference 3.3.7).

10 - A correction factor has been applied to the harbour porpoise data to account for availability bias.

No survey data has been apportioned (i.e. no species group data has been used within the density and abundance calculations), although note there were a very low number of 'cetacean species (n=5) and 'seal/cetacean species' (n=17) compared to the total number of harbour porpoise (n=702); therefore, would not significantly alter the densities, see Appendix 12.2, Section 1.6.2.2 (document reference 3.3.7).

11 - This has been amended in Chapter 12 (Marine Mammals) Section 12.4.3.3. Both the SE MU reference population and the wider reference population will be used within assessments.

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
	12	1.8.6	The maximum foraging range of grey seals, 448km should be noted here as per Carter et al. (2022)	Add the reference for the maximum foraging range of grey seals as per Carter et al. (2022)	
	13	General Comment	JAMMWG 2023 review has been used for information on Management Units. The most up to date (AMMWS report is 2021)	Use the 2023 update of Management Units (AMMWS, 2023) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/1116177/AMMWS-2023-report-19-2021.pdf	
Environmental Impact Assessment - Document(s) Used: Chapter 12 Marine Mammals, Appendix 12.5 Underwater Noise Modelling Report, Appendix 12.3 Underwater Noise Technical Assessment, Appendix 12.5 Marine Mammal Cumulative Effects Screening					
Meteorology	14	Table 12.2	The stated duration of the WCS ADD activation time is 10 minutes. Natural England seeks justification as to why such a short duration of ADD activation has been chosen as a WCS.	Provide justification for the chosen WCS for the duration of the ADD activation.	
	15	Table 12.3	As is stated in Table 12.3, the ramp up would be minimum 20 minutes, however the soft start duration is not specified. This is not in line with Table 12.2, where it is stated that soft start would be 10 minutes at 15% with ramp up to 120 minutes. Clarification is needed on the exact soft start procedure that will be implemented as an unblocked mitigation measure.	The submitted ES should be consistent regarding the chosen duration of soft start and ramp up.	
	16	Table 12.3	The Vessel Management Plan (VMP) should be listed as an embedded mitigation in relation to vessel collision risk. We advise that specific best practice documents/qualifiers to reduce any risk of collisions are included in the VMP. Furthermore, Natural England advises that the VMP is included within the Project Environmental Management Plan (PEMP).	Add the VMP to the list of embedded mitigation and ensure that it is included in PEMP to cover all stages of the project.	

Marine Mammals

12 - This has been amended in Chapter 12 (Marine Mammals) Section 12.5.1.

13 - This has been amended throughout Chapter 12 (Marine Mammals) and relevant appendices.

15 - New proposed soft start and ramp up scenarios have been consistently applied throughout the ES (Chapter 12, Marine Mammals) and relevant Appendices.

16 - Vessel management measures are included within the Outline PEMP (document reference 7.6).

This is listed as mitigation within Section 12.8 of the ES Chapter 12 (Marine Mammals).

Y

Natural England's Key Contributions		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			and best practice measures are followed in order to mitigate the impacts of increased vessel presence on marine mammals at all stages of the project (including operation/maintenance phase).		
	17	Table 12.6	Natural England is satisfied with the key data sources used to inform the assessment. However, the inclusion of survey data from other OWF in the area would add context to the information on the presence, abundance, and densities of marine mammals in the region.	We advise information is included from other OWF surveys where available.	
	18	13.4.4.1 44	Natural England welcomes the application of the Tiered approach as per the NE Best Practice Guidelines.	N/A	
	19	93	It is not clear whether the total reference population (SE England and NE England Seal Management Units (SMU)) or the SE England SMU population will be taken forward for the assessment.	The submitted ES should provide clarification on SMUs taken forward to the assessment.	
	20	Table 12.16	It is not clear how the figure of 35,583 grey seals is derived, and why the harbour seal population of 4,853 for SE England MU is different from the figure for the wider reference population based in the SE England MU.	Correction and clarification are required in relation to this figure in the submitted ES.	
	21	Table 17.17	Natural England agrees with the chosen density estimates for the four key marine mammal species.	N/A	
	22	Table 12.9	It was previously stated that harbour porpoise winter densities obtained from the site survey will be used for the assessment. Therefore	The submitted ES should apply the most precautionary approach by using winter	

Marine Mammals

17 - A summary of the available (and relevant) survey data from other nearby offshore wind farms (namely Five Estuaries, Greater Gabbard and Galloper) is provided in Appendix 12.2 (document reference 3.3.7).

18 - Noted.

19 - Both the South-East England MU reference population (30,592) and the wider reference population (South-East England and North-East England England MU populations combined, 56,505) of grey seals are presented in the assessments. As a worst case it is assumed that all seals are from the nearest MU, (the South-East England England MU), although the more realistic assessment is based on wider reference population which takes into account the movement of seals.

20 - Population figures have been updated throughout Chapter 12 (Marine Mammals) and appendices.

21 - Noted.

22 - Only the winter density estimate for harbour porpoise has been used to inform the magnitude of effects throughout the ES (Chapter 12, Marine Mammals). However, an assessment against all Relevant harbour porpoise densities has been provided in Appendix 12.4 (document reference 3.3.9) for completeness.

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			only final figures should be presented here with the resulting magnitude of low.	Densities obtained from site-surveys as a basis for the assessment.	
	23	Table 12.9, 12.23, general	Natural England advises that the number of impacted animals greater than 1 is presented as a whole number, i.e., 2.6 harbour porpoises should be presented as 3 and this number should be used to calculate the % of the reference population affected. This is to bring an ecological meaning to the assessment as it is not possible to equate 0.6 to a fraction (0.6) of an animal; it should be noted that this comment also applies to further tables for other species too.	We advise to review the tables that detail the number of animals expected as per our advice.	
	24	Table 12.24, 12.25	Natural England has not yet had sight of the draft Marine Mammal Monitoring Plan (MMMP). Therefore, we cannot agree at this stage that the measures in the MMMP will be sufficient to significantly reduce any potential for PTS injury.	We advise engaging with Natural England on the draft MMMP prior to its submission.	
	25	106	It should be acknowledged that, based on the current modelling results with a potential PTS range of 60m and 550m, the standard mitigation zone of 500m has been exceeded. Thus, it is likely that the mitigation zone will need to be extended to account for these modelled ranges. We advise that all available mitigation measures to minimise the risk of injury should be considered including the use of bubble curtains.	We advise that the reporting acknowledges that the standard mitigation zone of 500m has been exceeded based on the modelling results. We advise that bubble curtains are added to the list of mitigation measures that will be considered.	

Marine Mammals

23 - This has been applied to assessments throughout the ES (Chapter 12, Marine Mammals), the RIAA (document reference 7.1), and all relevant Appendices (Appendix 12.4 and 12.5, document reference 3.3.9 and 3.3.10).

24 - Natural England have consulted on the Outline MMMP, which is submitted as part of the DCO Application (document reference 7.7).

25 - An updated mitigation zone has been proposed based on the PTS impact range, as seen in the Outline MMMP (document reference 7.7)

N

Natural England's Key Considerations		Natural England's Advice			Recommendation	Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment			
	26	166	A clear definition of soft plant and ramp up, as well as the duration and associated energies, should be provided within the MMMP.	The submitted ES should define the terms soft rise) and ramp up and use them consistently across the documents.		
	27	168	We do not agree that vessel disturbance should be considered as a mitigation measure to reduce the risk of injury from PTS and please update proposals in the submitted ES.	We agree to recommend the avoidance mitigation measures to reduce the risk of injury from PTS and please update proposals in the submitted ES.		
	28	Table 12.37	The stated duration of the WGS ADD activation time is 10 minutes. Natural England seeks justification as to why such a short duration of ADD activation has been chosen as a WCS.	Provide justification for the chosen WCS for the duration of the ADD activation.		
	30	403	This paragraph requires clarification as different durations of ADD activation were mentioned (e.g. 30 minutes and 10 minutes).	Clarification is required on the duration of ADD activation.		
	30	633	The statement on Temporary Threshold Shift (TTS) from underwater noise being screened out is in contradiction with Table 12.89, where it is stated "the potential risk of TTS to marine mammals from cumulative effects will be considered alongside that of disturbance from underwater noise, and the highest known potential effect ranges of either TTS or disturbance will be used to inform the cumulative assessment..." The approach to screening impacts in the cumulative effects assessment should be reviewed, and full and considered justification should be provided for the screening decision.	Clarification is needed on whether TTS is considered as a potential cumulative effect, and full justification of screening decisions should be provided in the submitted ES.		
	31	633	Justification is needed for the screening-out of all operational effects from the cumulative	We agree revising the decision to screen out all operational effects from the cumulative		

Marine Mammals

26 - This has been included within the Outline MMMP (document reference 7.7) .

27 - Proposed mitigation has been reviewed, and the text has been amended as seen in Chapter 12 (Marine Mammals).

28 - The ES and HRA have been updated to include the actual required ADD duration to cover PTS (cumulative) ranges based on current underwater noise modelling. Further information on ADD durations is provided within the Outline MMMP (document reference 7.7).

29 - The ES and HRA have been updated to include the actual required ADD duration to cover PTS (cumulative) ranges. Further information on ADD durations is provided within the Outline MMMP (document reference 7.7).

30 - Text has been reviewed and amended to provide further clarification over the effects that have been screened into the cumulative assessment, see Section 12.9 in ES Chapter 12 (Marine Mammals).

31 - Further consideration has been given for the potential cumulative vessel disturbance and vessel collision risk during the operational and maintenance phase of offshore wind farms. See Chapter 12 (Marine Mammals) Section 12.9.3.3.

N

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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			assessment. Given that there will be increased levels of vessel traffic during operation and maintenance phases, vessel disturbance and collision risk should be considered.	assessments and provide a clear justification for screening decisions in the submitted ES.	Yellow
	32	736	Natural England queries this statement given the close proximity of both Fife to Five Estuaries ODF's. "Taking into account the locations of the ODF's and other noise sources from North Falls, the maximum underwater effect ranges for disturbance at North Falls during piling and construction. Therefore, there is no potential for underwater noise from North Falls, other ODF's and noise sources to result in a barrier of movement in marine mammals". We recommend that a figure is produced mapping the maximum potential disturbance ranges of both ODF's to illustrate no overlap.	We advise the statement is revised or that a figure is provided in the submitted ES to evidence this conclusion.	Yellow
	33	Appendix 12.4.1	Natural England notes that the UXO assessment is provided for information purposes only and that a separate marine-licence application will be submitted post-consent once more details become available.	N/A	Yellow
	34	Appendix 12.4.1 Table 1.2	Natural England recommends that Positive Acoustic Monitoring (PAM) is considered as a potential mitigation measure for UXO clearance alongside Marine Mammal Observers (MMOs).	We recommend the use of PAM as a mitigation tool for acoustic monitoring alongside MMOs.	Purple

Marine Mammals

32 - The disturbance ranges indicate there is the potential for impact ranges between North Falls and Five Estuaries to overlap. Therefore the cumulative barrier effects assessment has been reviewed and amended in Chapter 12 (Marine Mammals) Section 12.9.3.2.

33 - Noted.

34 - The potential use of PAM has been considered and has been listed as a potential mitigation measure for UXO clearance. Further information is provided within the Outline MMMP (document reference 7.7).

N

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Natural England's Key Considerations		Natural England's Advice			Recommendations	Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment			
		35	Appendix 17.4.6B Natural England agrees that passive mitigation measures such as habitat creation, for high order divergence larger than 200g are required to fully mitigate the VLA impact regime and avoid injury to European Protected Species (EPS). NB: If there is any residual effect, i.e. potential for injury, it is a requirement to demonstrate that all mitigation options have been considered (i.e. the second test) in order for EIS consent to be granted.	N/A		Yellow
		36	Appendix 12.5.1 Natural England notes that the assessment of cumulative effects presented in the PEIR is preliminary and the full Cumulative Effects Assessment (CEA) will be presented in the CE.	Natural England will comment on this when it is completed in full. The list of projects should be regularly updated before ES submission.		Green
		37	Appendix 3.2.2, Page 14 Note: The Applicant states that up to 4 pin pile foundations can be installed in a 24-hour period. This applies to both sequential and simultaneous piling. We query how up to 4 pin piles has been considered in the simultaneous piling scenarios and seeks clarity regarding how this has been assessed. At present only simultaneous piling at North and South locations have been considered. Therefore, Natural England require confirmation that simultaneous (pin) piling at more than 2 locations is not included in the ground envelope.	The submitted ES should provide clarity on the assessment scenarios of simultaneous piles in a 24-hour period and what the WCS is. Update assessment and modeling if required.		Purple

Marine Mammals

35 - All mitigation measures will be considered depending on the outcome of EPS risk assessments.

36 - CEA list has been updated for the ES submission, as seen in Appendix 12.6 (document reference 3.3.11).

37 - New piling scenarios have been modelled for. The updated worst case scenarios include 3 sequential monopiles per day- at both south and east locations (6 piles per day in total); for pin piles the worst case is based on 6 piles per day at both south and east locations (12 piles per day in total), see Appendix 12.3 (document reference 3.3.8) for further information.

Y

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			If up to 4 pin piles can be installed at two locations, it follows that 2 pin piles can be installed at each location (i.e. are installed sequentially). This should be reflected in the modelling.		
	38	Appendix 12.2, 4.1.1, Page 22	The Applicant has noted that the impact ranges from pin piles are greater than monopiles because of the soft start and ramp up methods used, despite monopiles having a higher source level and maximum hammer energy. The Applicant should provide further justification as to why the soft start and ramp up methods have been selected, and whether these can be varied in order to reduce the impact ranges to marine mammals.	The submitted ES should provide justification as to why the chosen soft start and ramp up profiles have been used, and whether they can be varied to reduce impact ranges.	
	38	Appendix 12.2, Table 4, Page 23	The table (and others) used in the cases that unweighted cumulative sound exposure levels (SELcum) are presented, whereas the text in the table states that weighted SELcum have been used. This should be corrected.	Correct the text for the submitted ES to ensure it is consistent and to provide clarity on whether weighted or unweighted SELcum have been used.	
	40	Appendix 12.2, Table 4, Page 24	Nature England notes that the maximum instantaneous PTS distance is 600m, based on monopiles and very high frequency (VHF) stations. The maximum PTS distance should be considered when determining the appropriate size of the mitigation zone in the MMMP.	To raise.	
	41	Appendix 12.2, 4.2, Page 33	The East location comprises the maximum precaution distances. We request that the Applicant demonstrates that inclusion of the East location in the multiple piling scenario would not lead to larger impact areas.	The submitted ES should demonstrate that inclusion of the East location for a multiple piling scenario would not be the WUS.	

Marine Mammals

38 - The soft-start and ramp-up scenarios have been reviewed and the pin pile scenario amended to reduce impact ranges; see Appendix 12.3 (document reference 3.3.8).

39 - Appendix 12.3 (document reference 3.3.8) has been amended to correct to the table headings.

40 - Maximum PTS distance has been considered for the MMMP, 700m mitigation zone has been proposed, as seen in the Outline MMMP (document reference 7.7).

41 - The East location has been included within the latest UWN underwater noise modelling for simultaneous piling locations (Appendix 12.3, document reference 3.3.8).

Y

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
	42	Appendix 12.2, Table 6-35 Page 36	This table presents an in-combination area for TTS for VHF of 270 km ² , which appears anomalous as it is smaller than the areas from North or South alone. The value should be checked!	Check the value and amend the submitted ES if needed. It may be 2700 km ² as stated in the Technical Assessment	Yellow
	43	Appendix 12.2, Table 6-2 Page 40	The assessment assumed that other sources of noise during construction would only occur for 12 hours per day. However, evidence is not presented to justify this approach. We advise that it should be ensured that the noise could occur for 24 hours a day, unless there is evidence to the contrary.	Provide evidence that these activities would only happen for 12 hours a day. Or consider them as occurring for 24 hours a day in the submitted ES.	Yellow
	44	Appendix 12.2, Table 6-8 Page 45	Natural England best practice advice is to use 750kg plus an appropriate donor charge size as the maximum UXO size. The Applicant should justify why they have not used this value.	Provide justification in the submitted version	Orange
	45	Appendix 12.2, E Page 46	It is stated here that sequential piling causes negligible increases compared to single piling. Whilst it is only minor, we do note that for pile installation at the East Molesay (the WCS), sequential piling leads to an impact range of 5.2km for VHF catenary, compared to 5.1km for single piling. The maximum impact range should be used in the assessment, and it is noted that this does relate to sequential piling.	The submitted ES should use the maximum impact ranges, which in some instances are from sequential piling, which generates slightly greater values than for single piling.	Yellow
	46	Appendix 12.3, 1.2.1.3 Page 14-15	Have the Applicant state that the soft start occurs over the first 30 minutes. However, this does not align with the time increments in Table 1.1, where 30 minutes from the start falls within the second stage of the ramp up.	Review and provide clarity regarding the definition/duration of soft start for monopiles in the submitted version.	Yellow

Marine Mammals

42 - The multiple location modelling has been updated and checked, see Section 4.3.1 of Appendix 12.3 (document reference 3.3.8).

43 - The underwater noise modelling results have been updated to include 24 hours a day of working for all noisy activities; see Appendix 12.3 (document reference 3.3.8).

44 - The underwater noise modelling and relevant assessments have been updated to include a UXO of up to 750kg, as seen in Appendix 12.5 (document reference 3.3.10).

45 - Maximum impact ranges have been used throughout the assessments within ES Chapter 12 Section 12.6.1.1. for both single strike and cumulative modelling scenarios.

46 - Soft start and ramp up procedures have been reviewed and applied consistently throughout the reports, see Appendix 12.3 (document reference 3.3.8) for soft start and ramp up details.

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			The Applicant should review their position that the soft start is 30 minutes, in relation to the magnitude being set.		
	47	Appendix 12.3, Table 1.1 Page 15	The number of pile strikes for two monopiles is incorrect. It should read 29,897.	Correct the value in the submitted version.	
	48	Appendix 12.3, 1.2.2 Page 23	Natural England supports the use of dose response curves to assess disturbance where available for the species.	To note.	
	49	Appendix 12.3, Table 1.5 Page 24	The percentage of the population that is impacted based on the reference (pre-impact) summer density is incorrect. It currently states 0.02%, but it should be lower. This should be changed to demonstrate that the negligible magnitude is correct.	Correct the value in the submitted version.	
	50	Appendix 12.3, Table 1.5 and others Page 25	There are some magnitudes in this table which appear to be on the threshold of the higher magnitude definition, but have not been assigned that higher magnitude (e.g. 0.01% being low, 0.001% being negligible). The magnitudes in this table and other tables should be checked.	Check all of the magnitudes across the table and amend the submitted version if needed.	
	51	Appendix 12.3, Table 1.2 Page 14 and 15	As per the underwater noise modelling report (Table 5.4) the TT3 metric for rock placement is 1.0m for VME assessments, rather than 0.1m as has been presented here. This value should be corrected and the assessment re-calculated.	Re-calculate the assessment based on the corrected impact ranges. These changes should be carried through to Table 1.24 in the submitted version.	

Marine Mammals

47 - This has been updated in Appendix 12.4 (document reference 3.3.9).

48 - Noted.

49 - All assessments have been updated and checked in Appendix 12.4 (document reference 3.3.9).

50 - Magnitude levels have been reviewed and updated throughout assessments in Appendix 12.4 (document reference 3.3.9).

51 - Assessments have been updated in Appendix 12.4 (document reference 3.3.9).

N

Natural England's Key Considerations	Natural England's Advice				Recommendation	Risk (RAG)
	NE Ref	PEIR Ref	Comment			
Section 42 Preliminary Environmental Information Report (PEIR)			In addition, the TTE range for FCW should be 0.1 km (200m) than 1.0 km.			Yellow
HRA – Document Details: Appendix 1 HRA Screening Report, North Falls Draft Report to Inform Appropriate Assessment						
Screening	53	Appendix 1.102	When assessing connectivity, the maximum rather than the average foraging range should be considered. Thus Natural England recommends that the list of licensed in European sites is revised to account for this.	An updated screening report should revise the list of European sites based on the maximum foraging ranges.		Yellow
	53	Appendix 1.07.08	We note that NE England (SAU) for grey seals is no longer included within the assessment population of grey seals. This is inconsistent with the PEIR document where the SAU is included in the assessment. We advise reconsidering in the approach?	Apply the consistent approach for grey seal SAUs and provide a clear justification for the approach chosen for the assessment in both assessments.		Yellow
	54	Table 6.3 and 6.3 para 200	As in the PEIR there is a discrepancy in the indicated soft start duration. Natural England recommends that soft start and ramp up are clearly defined and the same terminology are used across the documents. It would be beneficial to state which best practice documents and procedures will be implemented to reduce the collision risk.	Clarification and consistency are needed in relation to soft start and ramp up duration and methods used. Provide reference to relevant best practice documents.		Orange
Assessment	55	Table 6.4	Natural England does not support use of scale charges for ESD clearance. Also, we recommend that use of Passive Acoustic Monitoring (PAM) is considered for marine mammal monitoring alongside Marine Mammal Observers (MNO).	To note:		Yellow
	56	Table 6.4	A Vessel Management Plan should be included in the list of documents relevant for mitigation.	Add the Vessel Management Plan to the list of documents in the submitted version.		Yellow

Marine Mammals

52 - Screening list has been amended to include maximum foraging range rather than average, see the HRA Screening report (Document Reference: 7.1.1.1) for further details.

53 - Both the SE MU reference population (30,592) and the wider reference population (SE and NE England MU populations combined, 56,505) of grey seals will be presented in the EIA assessments. As a worst case it is assumed that all seals are from the nearest MU, the SE England MU, although the more realistic assessment is based on wider reference population which takes into account the movement of seals, see Section 1.6.4. For assessments in the RIAA, they are based on connectivity with SACs therefore the specific SAC populations are used for seal species, RIAA Part 3, Marine Mammals (Document Reference: 7.1.3).

54 - Noted.

55 - Noted.

56 - Noted.

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Natural England's Key Considerations		Natural England's Advice				
Section 42 Preliminary Environmental Information Report (PEIR)		NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
		57	250	It is stated here that the most precautionary approach will be applied for the assessment using average winter density estimates for harbour porpoises (2.6 animals/km ²), yet in Table 6.10 the assessment has been made using annual density estimates. Natural England advises that the calculations are revised using the most precautionary density estimate as stated in the paragraph 256.	The submitted report should use the most precautionary density estimates for the assessment.	Yellow
		58	Table 6.10	Natural England recommends that calculations which involve a decimal number of animals impacted should be rounded up as it is ecologically not possible to impact 0.5 of an animal. In the example, 2.8 harbour porpoises should be 3. This applies to other instances that needs to be revised throughout the document.	The submitted version should revise the numbers of impacted animals as stated in our advice.	Orange
		59	300	We understand the rationale behind the assessment, but due to the large number of animals that could potentially be affected by the PTS from the cumulative exposure to piling, we can only agree with the conclusion that there will be no adverse effect on the integrity of the SNS SAC if appropriate mitigation is implemented. We note that previous sections have mentioned the SIP and MMMP but assume there have been omitted in the text here.	Natural England advises that mitigation should be incorporated 'up front' in the submitted proposal, rather than deferring consideration of mitigation measures to the post-consent stage. If the relevant text is missing regarding the SIP and MMMP, then it should be added.	Yellow
		60	Table 6.16	A separate winch, one micro-pile and one jacket pile are piled per day should also be considered if consent for this is being sought. It should be acknowledged that in	We advise this scenario needs to be considered within the assessment and mitigation identified to address the impacts.	Yellow

Marine Mammals

Noted.

N

Natural England's Key Considerations Section 42 Preliminary Environmental Information Report (PEIR)		Natural England's Advice			Risk (RAG)
NE Ref	PEIR Ref	Comment	Recommendation		
		such scenario the 20% daily threshold would be exceeded. This scenario should be assessed through it.			Yellow
E1	318	It should be acknowledged that the seasonal threshold of 10% will be exceeded for two piling events per day.	The updated version should acknowledge the threshold exceeded in the text.		Orange
E2	Table 8.52	It is not clear why SNS SAC sensitive area has been mentioned in the text file, while the table itself only refers to other area. Also, the paragraph below refers to the seasonal threshold of 10% for winter area as relevant to the project given the location in the SNS SAC.	Clarification is required.		Yellow
E3	8.4.3.1	We note that the section on harbour seal assessment does not follow the same format as the assessments for harbour porpoise and grey seal. For clarity, we recommend that the results of the assessments are presented in tables as in previous chapters.	Present results of assessments for harbour seals in tables, using the same format as has been followed for other species.		Yellow
E4	8.01	We advise that the potential for disturbance at seal haul out sites is revised when the information on ports and shipping routes becomes available. Currently, due to the lack of information on the ports the risk is high, but cannot agree with the outcome of the assessment.	Re-assess the disturbance at seal haul out sites when the potential likely ports to be used are identified.		Purple
E5	Table 8.54	In order to conduct a more accurate in-situ cetacean assessment (particularly where local harbour porpoise densities are higher than those from Small Cetacean Abundance in the North Sea (SCANAS) surveys), we advise that project specific densities, where	Obtain the site survey data from other CIVIL projects, where available, and revise the assessment.		Yellow

Marine Mammals

Noted.

N

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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)	
Section 42 Preliminary Environmental Information Report (PEIR)	RE Ref	PEIR Ref	Comment	Recommendation		
			assessments. Should be taken if, for example, harbour porpoise densities obtained from the site survey for Horizon Project Four are in the public domain.		Yellow	
In-combination	66	450	In order to correctly calculate if the seasonal threshold will be exceeded as a result of in-combination effects with other OWF, any piling activity at North Falls happening in the season, but outside of the 14 or 76 days of piling, should be taken into account.	Take into consideration the total number of days for piling from all OWF projects, not only the number of days piling at North Falls.	Orange	
		67	We appreciate that it is currently difficult to estimate the number and location of geophysical surveys that should be undertaken, but considering the amount of activity anticipated in the North Sea, two surveys occurring at the same time as construction at North Falls appear to be likely to be registered a WCS.	We advise the figure is reconsidered and increased.	Orange	
		68	Table 6.36 The maximum overlap with the seasonal area should be included in this table in order to present the WCS.		The submitted version should present the WCS for overlap during the winter season.	Orange
		69	Table 6.35, 6.41 and 6.42 The use of generic North Sea MU density should be avoided. As further information becomes available, we would expect that more local and more precautionary densities will be applied for the in-combination assessment for disturbance.		We advise that the Applicant avoids using generic North Sea MU density. We advise the assessment is refined as far as possible in the submitted ES.	Yellow
Mitigation – Comment User(s): Schedule of Mitigation						
	70	Table 2.5	Natural England agrees with the listed additional mitigation. However, we do not support use of 'seal' changes as a mitigation.	Amend the submitted version accordingly.	Green	

Marine Mammals

Noted.

N

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Metical England's Key Considerations		Metical England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	No. Ref	PEIR Ref	Comment	Recommendation	
			Not for LVO clearance also it would be desirable to include the risk in the top 10 as a way of reducing vessel disturbance and collision risk.		Low

REFERENCES
 Carter, Matt & Weather, Lisa & Cross, Michelle & Clark, Emma & Graham, W. & Harris, Gordon & Jolley, Mark & Katsouridou, Zeynep & Muzzwell, Barrie & Miller, David & Morris, Chris & Muir, Steven & Thompson, David & Thompson, Paul & Russell, Debbie. (2022). Sympatric Scales: Satellite Tracking and Protected Areas: Habitat Based Distribution Estimates for Conservation and Management migration. *Frontiers in Marine Science*, 9, 875869. [10.3389/fmars.2022.875869](https://doi.org/10.3389/fmars.2022.875869)

IAMMWS. (2021). Review of Management Unit boundaries for cetaceans in UK waters (2021). JNCC Report F34. JNCC, Peterborough. ISBN: 0953-8091

Marine Mammals

Noted.

N

NFOWFS3_049_090_040723	<p>Annex 5. Offshore Ornithology</p> <p>In formulating these comments, the following documents have been considered:</p> <ul style="list-style-type: none"> • Guide to PEIR • Chapter 1 Introduction • Figures - Chapter 1 Introduction • Chapter 2 Need for the Project • Chapter 5 Project Description • Chapter 6 EIA Methodology • Appendix 6.1 Grid Connection Optionality – Worst Case Assessment • Chapter 13 Offshore Ornithology • Figures – Chapter 13 Offshore Ornithology • Appendix 13.1 Consultation Responses • Appendix 13.2 Offshore Ornithology Technical Report • Appendix 13.3 Supplementary Information for Cumulative Assessment • Schedule of Mitigation • Draft Report to Inform Appropriate Assessment • Habitats Regulations Assessment Screening • In Principle Compensation Options Review <p>Natural England's Advice and Recommendations</p> <p>A summary of Natural England's advice in relation to Offshore Ornithology is set out in Table 1. Our key concerns along with recommendations are presented in further detail in Table 2.</p>	Offshore Ornithology		Noted.	N
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Table 1 Summary of Key Issues – Offshore Ornithology

NE Ref	Summary of Key Concerns	Natural England's Recommendations to Mitigate Issues	Risk	
1	<p>The PCO maintains that the project aims and its contribution will not lead to an adverse effect on integrity (AEI) on red-breasted nuthatches (RTD) at Queen Thorne, Priority Special Protection Area (SPA).</p> <p>Natural England's position is that an AEI is arising on CTF SPA RTD due to displacement impacts from existing and proposed Offshore Wind farms (OWF), the intention is to consider that any additional displacement would add to the in combination AEI. The evidence base strongly suggests that the project alone will exert a displacement effect on red-breasted nuthatches in the CTF SPA, which will inevitably impact their distribution in the site, in combination of the relevant conservation objectives.</p> <p>It is stated that a total area of 100 km², representing 3.8% of the SPA, may be subject to displacement impacts from surrounding a 10km buffer for North Falls OWF. This buffer distance is considered appropriate as it is informed by evidence from the nearby London Array OWF.</p>	<p>Natural England advises that the proposed western boundary of the southern North Falls array should be amended so that it lies at least 10km away from the SPA to avoid potential adverse and in-combination AEI for RTD.</p> <p>In the light of the requirement to demonstrate there are no satisfactory alternatives that would be less damaging to the SPA, Natural England encourages the full exploration of all measures to avoid, reduce and mitigate the displacement impact on RTD at the CTF SPA by application of the mitigation hierarchy.</p>		
2	<p>Natural England highlights the underdeveloped and high level nature of documents relating to compensatory measures. This is of significant concern given the apparent early reliance on compensatory measures from a consenting perspective.</p> <p>We note that our consultation responses on the draft of Prohibitive Compensation Options Review have not yet been addressed and the concerns raised in those responses remain.</p> <p>We highlight the significant difficulties experienced by other projects where compensatory measures have been required. Designing and implementing measures, as well as</p>	<p>We advise the project work collaboratively using the Expert Topic Group (ETG) process to evaluate the development of compensatory measures prior to submission. This is a practical means for RTD and broader back-grounded (BIBO), although it should be noted that Natural England does not yet believe all options to avoid, reduce and mitigate impacts on these species have been exhausted. Compensatory measures should be considered a last resort once the mitigation hierarchy is exhausted.</p> <p>Where compensatory measures are likely to be required, or there is a level of uncertainty pre-submission, Natural England advises that the Examination period will be insufficient for measures to be adequately developed and secured. This could carry significant consenting risk.</p>		

Offshore Ornithology

Noted.

N

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NE Ref	Summary of Key Concerns	Natural England's Recommendations to Mitigate Issues	Risk
	<p>ensuring that effectiveness and connectivity to the impacted SPA on the national site network are justified significant challenges.</p> <p>It remains unclear that an appropriate compensatory measure can be identified, secured and delivered by the project by RTD.</p>		

Offshore Ornithology

Noted.

N

Table 2 Natural England's Key Advice and Recommendations – Offshore Ornithology

Natural England's Key Considerations	Natural England's Advice				Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NS Ref	PEIR Ref	Comment	Recommendation	
Project Parameters – Documents <i>Used: Chapter 13 Offshore Ornithology</i>					
Project Description	4	Ch 13, Table 13.2 Table 13.3 App 13.1 (pg 36-37)	Natural England welcomes the commitment to an increased air gap above the maximum standard. We note that the airgap for all design scenarios is stated as 270m above MROV (26.6m above HA) and that the air gap increases if the tower that required for navigational purposes is proposed as embedded mitigation to reduce collision risk. In relation to the consultation responses outlined on pg 36-37 of Appendix 13.1, Natural England notes, with respect to increasing the air gap further, it is suggested that the installation vessel options for large turbines are limited, and compensatory measures for lesser black backed gull will be required to support a Habitats Regulations Assessment (HRA) derogation case.	Natural England highlights that increasing the rotor clearance further would give greater reductions in collision risk estimates generated by the project. We do not consider it appropriate to suggest that compensatory measures are considered at an early stage of project design when the full extent of all mitigation options are not fully resolved. We remind the Applicant that compensating for impacts should only be considered as a last resort and that it will be necessary to demonstrate no satisfactory alternatives should adverse effects be identified. We also draw the Applicant's attention to the significant difficulties encountered to date by projects seeking to compensate for ornithological impacts, including for lesser black-backed gull. This gives further weight to the requirement to exhaust the mitigation hierarchy.	
Baseline Characterisation – Documents <i>Used: Chapter 13 Offshore Ornithology</i>					
Survey Data Acquisition	4	App 13.2 Section 2.1	Natural England notes that species identifications are given confidence levels of certain, probable, or possible. All survey reports are treated as positively identified.	Please present proportions of data assigned to all categories (i.e. certain, probable, and likely) as well as in generic groupings (e.g. all sp. etc.). Natural England requests that	

Offshore Ornithology

3 - Following PEIR, refinements to the project design envelope have been made in accordance with the mitigation hierarchy, described in ES Chapter 13, Section 13.3.3 and RIAA (document reference 7.1).

Evidence to support an HRA derogation case is provided with the DCO application. The derogation case includes an assessment of alternative solutions to reduce effects on the national site network, such as alternative air gap. The derogation case also includes compensatory measures for lesser black-backed gull at the Alde-Ore Estuary SPA.

4 - This data are provided in ES Appendix 13.2 (document reference 3.3.13).

N

Natural England's Key Considerations Section 42 Preliminary Environmental Information Report (PEIR)	Natural England's Advice				Risk (RAD)
	NE Ref	PEIR Ref	Comment	Recommendation	
			No identification (ID) codes appear to be reported. Thus, it is not clear what ID data were achieved nor the varied seasonal and location of approaching unidentified data to species according to the ratio of identified birds in each survey is appropriate.	Use a common ID for each species for all surveys to facilitate for review of the variability of ID rates. Natural England is particularly interested in getting a more complete understanding of the underlying data used to calculate abundance estimates for birds.	Yellow
	6	App 13.2 Table 3	Natural England notes the relatively consistent survey length and short duration of surveys. Although concerning, it is worth noting that surveys were only undertaken in two areas 5 or fewer, given a common criticism of dual-based methods being restricted to those conditions and that one would bias the data. It would be useful to understand the variation in survey duration. The shortest survey being 2:25 hours and the longest 4:15. As it is not reported otherwise and no month has multiple surveys, we assume all surveys achieved 100% coverage of transects.	Detail the level of coverage achieved for each survey, i.e., number of transects completed, with % completed detailed for each transect.	Yellow
	6	App 13.2 Table 3	We note either the monthly totals or the total number of sightings over reported in the extended survey area for Year 2 appear to be incorrect (245 total reported from 37+195).	Please QA these data and confirm the total.	Yellow
Loss Case	7	App 13.2 Section 2.1 6, Ch 13 Para 16	Natural England notes that the extended 12km buffer was only surveyed during 2 of the 24 surveys, during the second winter period and in response to updated SHCC advice.	Given we accept that the updated statutory Nature Conservation Body (SNCOB) advice on buffers for survey of red-throated divers in the vicinity of SPAs designated for that species was published during the survey program, we highlight that best practice dictates that a minimum of two years of baseline data should	Purple

Offshore Ornithology

5 - The variation in survey duration is largely due to the plane transits for repositioning prior to the survey. The level of coverage per survey is detailed in Appendix 13.2 (document reference 3.3.13).

6 - Total amended (to 232).

7 - The RTD data from the extended survey area are not used for the ES, where RTD displacement effects are considered to 4km from the array area only, as advised by Natural England, and two years of baseline data are available for this area. Data from the extended buffer are used in the RIAA, where two years of data were also available for the area being assessed (overlap between the 12km buffer of North Falls and the OTE SPA), from the project baseline surveys in 2021, and the SPA surveys in 2018.

N

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Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAD)
				be gathered. In lieu of this data it may be necessary for the submitted Environmental Statement (ES) to apply more precaution in any assessment of the extended buffer area as interannual variation cannot be accounted for.	
Data Analysis, Modelling and Reporting	8	App 13.2 Table 21 & Table 73-82	Natural England is not sure of the methods used to generate confidence intervals (CIs) and standard deviations (SDs) for the monthly flight densities used in Collision Risk Modelling (CRM). However, for the displacement analysis it appears that monthly statistics have been calculated by taking a mean of the mean population and a mean of the upper confidence interval (UCI) and lower confidence interval (LCI). We do not believe this method generates appropriate CIs.	The submitted ES should clearly describe how SDs & CIs were estimated for total populations, densities, apporportioned behaviours and corrected apporportioned behaviours. Natural England suggests totorisation of the following approach for deriving mean abundance and density estimates: and that associated SDs and CIs when bootstrapping is used. Apportioning (underfilled birds or behaviours) and application of correction factors (e.g. availability corrections) should be applied to bootstrap sample estimates for each survey. The resultant overall abundance distributions from the samples should be used to derive the means, SDs and CIs. If a mean, SD and CI are required based on two or more surveys (e.g. from two peak abundance estimates within a season or two estimates of birds in flight in a calendar month), the relevant corrected bootstrap samples should be pooled to provide a single sample from which to draw the estimates.	
	8	App 13.2, Tables 84-85	We welcome the use of white highlighted cells to indicate displacement and mortality	We consider it would be useful if the tables in the submitted ES also indicated where >1%	

Offshore Ornithology

8 - The Natural England suggested approach to deriving mean abundance and density estimates has been followed for the ES.

9 - This has been done: in displacement matrices, mortality values which represent >1% increase in population mortality are in red text.

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RIAG)
			rates used in the project alone displacement assessment	increase in baseline mortality is predicted (if viable on the table), e.g. by not highlighting	
	10	Ch. 13 Table 13.13	It is unclear where the productivity figure for little gull originates as this is not included in Horvath & Robinson (2015)	The submitted ES should clarify the source or justify the use of these little gull survival rates, productivity, and average mortality values.	
	11	Ch. 13 (Risk 10)	Natural England considers there is insufficient evidence to categorically state that there have been no changes in population size during spring migration in the German North Sea over the period 2001-2021 since there have been changes to survey platform, and presumably detection rates, during that period. Furthermore, Vilela et al. (2022) point out that "the main construction period of offshore wind farms in the German Bight started in 2012 and the most relevant wind farms (closest to the core area of the birds) became operational in 2014/2015. Population level effects may (thus not yet) have been visible". What is clear is that there is a body of evidence consistently showing that dove distribution has shifted to avoid OWFs. This is significant when considering the OTE SPA conservation objective target to "Maintain the extent, distribution and availability of suitable habitat (either within or outside the site boundary) which supports the feature for all necessary stages of the fish"	Natural England urges caution in interpreting population estimates showing apparently stable or even increasing populations in regions where wintering red-throated divers have been subject to displacement impacts. The population estimates used are frequently incomparable due to differences in survey methodology, with modern digital aerial survey (DAS) methods having higher detection rates than boat-based or visual aerial survey (VAS) methods. Please also refer to our comments below on the Report to Inform Appropriately Assessment (RIAA).	

Offshore Ornithology

10 - Little gull demographic data has been deleted from the table, as this species is not scoped in for assessment.

11 - In relation to the German North Sea, Vilela et al. (2022), reports fluctuations but no trend in RTD population size in spring between 2001-2021, which includes a seven-year period since OWFs became operational in 2014/15. If the observed displacement from OWFs in this area were to affect the survival of adult birds using this area during the non-breeding season it might be expected that population level effects would have manifested in this seven-year period. Vilela et al. (2022) suggest that in this area, the carrying capacity of the available habitat has not been reached. Tracking data from tagged red-throated divers show large home ranges (several thousand square kilometres) during the non-breeding season (Kleinschmidt et al. 2022, Nehls et al. 2017)) such that displacement effects of OWFs will only affect a part of the home range of an individual bird. The effects of displacement on RTDs, if any, may be via body condition and perhaps breeding success.

Vilela et al. (2022) and earlier studies in the same area (Vilela et al, 2021, 2020), use data from visual aerial and digital aerial surveys. It is reported that it was possible to incorporate differences in detection rate between techniques in the statistical analysis. Ship survey data were not included in the

				<p>analysis as density estimates were considered to have large uncertainties and they were not considered comparable with aerial survey data.</p> <p>In relation to the OTE SPA, it is considered that the change in population estimates between SPA classification in 2010 (6,466 individuals) and 2018 (18,079 individuals) has been interpreted with caution based on the change from visual to digital aerial surveys. No assumptions have been made about any increasing population trend in this area. Nevertheless, the scale of the increase in estimated population size (180%) is such that it would seem highly unlikely that there has been a decrease in the numbers of RTDs present during the non-breeding season.</p> <p>For more information, see ES Chapter 13, Offshore Ecology and Appendix 13.1 (document reference 3.3.12).</p>	
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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			breeding/wintering period (moult, roosting, loafing, feeding)?"		
	12	Ch 13 Para 101 Para 102 Para 207	A > 1% increase in baseline mortality is calculated for the worst-case scenario (10% mortality). The adoption of a 'precautionary evidence-based 1% mortality' rate is suggested, under which the increase in baseline mortality is < 1%. Natural England does not believe the overestimation of a 1% mortality rate as 'evidence-based' is defensible. Empirical evidence regarding the consequences of displacement for seabirds and wintering waterbirds using the marine environment remains very limited. Furthermore, the role of overwinter survival on seabird population dynamics is poorly understood. While accepting that a 10% mortality rate is likely to be precautionary, we highlight it is intended to be, and that the mortality rates also represent a crude method of capturing a range of potentially deleterious direct, indirect and carry-over effects that could conceivably arise from displacement.	Where increases to baseline mortality of <1% are identified in the range of displacement and mortality impacts recommended for assessment by SNCBs it may be necessary to investigate this impact further, e.g., by population viability analysis (PVA) modelling. Natural England suggest further discussion on this issue with respect to red-throated diver in future ET14.	
	13	Ch 13 184	This section relates to razorbill so references to gulliforms are presumed to be erroneous.	QA the text for copy/paste errors in the submitted ES.	
	14	Ch 13 Tables 13.17 13.18 13.21	We welcome the use of highlighted cells to indicate displacement and mortality rates used in the project alone displacement assessment.	We consider it would be useful if the submitted ES tables also indicated where 1% of baseline mortality was exceeded (if visible on the matrix).	

Offshore Ornithology

12 - The likely range of mortality for displaced red-throated divers is discussed further in ES chapter 13 (Offshore Ornithology) and RIAA (document reference 7.1), in the context of the recent JNCC red-throated diver energetics study (Thompson et al., 2023) and the Natural England review of that study.

A range of mortality of 1-10% for displaced birds is presented, although it is still considered that 1% is an appropriate precautionary estimate, and that expert opinion based on available evidence suggests that red-throated divers are able to accommodate any additional energetic costs of displacement during the non-breeding season.

13 - Q/A has been undertaken for submitted ES.

14 - This has been done for the ES and RIAA (document reference 7.1): in displacement matrices mortality values which represent >1% increase in population mortality are in red text.

N

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Natural England's Key Considerations		Natural England's Advice				
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)	
			13.22 13.24 13.27 13.29 13.31 13.45 13.47 13.48 13.49 13.50 13.51 13.52 13.53 13.54 13.55 13.56 13.57 13.58 13.59 13.60 13.61 13.62 13.63 13.64 13.65 13.66 13.67 13.68 13.69 13.70 13.71 13.72 13.73 13.74 13.75 13.76 13.77 13.78 13.79 13.80 13.81 13.82 13.83 13.84 13.85 13.86 13.87 13.88 13.89 13.90 13.91 13.92 13.93 13.94 13.95 13.96 13.97 13.98 13.99 14.00 14.01 14.02 14.03 14.04 14.05 14.06 14.07 14.08 14.09 14.10 14.11 14.12 14.13 14.14 14.15 14.16 14.17 14.18 14.19 14.20 14.21 14.22 14.23 14.24 14.25 14.26 14.27 14.28 14.29 14.30 14.31 14.32 14.33 14.34 14.35 14.36 14.37 14.38 14.39 14.40 14.41 14.42 14.43 14.44 14.45 14.46 14.47 14.48 14.49 14.50 14.51 14.52 14.53 14.54 14.55 14.56 14.57 14.58 14.59 14.60 14.61 14.62 14.63 14.64 14.65 14.66 14.67 14.68 14.69 14.70 14.71 14.72 14.73 14.74 14.75 14.76 14.77 14.78 14.79 14.80 14.81 14.82 14.83 14.84 14.85 14.86 14.87 14.88 14.89 14.90 14.91 14.92 14.93 14.94 14.95 14.96 14.97 14.98 14.99 15.00			
	(i)	Ch 12, Para 260	It is stated that there is a +1% increase in the mortality rate of the corresponding reference population of lesser black-backed gull with the exception of the upper confidence limits associated with scenario 1b (72 subjects of 2000 total biomass: 0.26 and 0.6 individual activity) during the breeding season. We note however that scenario 1a also shows a +1% increase in predicted mortality rate in UCI for NAP at 0.25 and 0.50 during the breeding season for the reference population.	Please amend if necessary following updated Oubser Risk Modelling (CRM)		
	(ii)	Ch 13, Para 307	It is stated by the Applicant that, "at Hyatt Falls, the largest numbers of red-throated"	If the assertion is to appear in the submitted ES, it would be necessary to provide evidence		

Offshore Ornithology

15 - CRM results tables have been updated.

N

16 - The comments from Natural England on the importance of wintering/staging areas whether they are short- or long-term resources for migratory birds are acknowledged.

Data from tracking studies indicates that red-throated divers wintering in the southern North Sea are linked to breeding populations in Fennoscandia (as well as Greenland and Northern Russia). Fennoscandian birds migrate from their breeding grounds in autumn, spending time in the Baltic Sea and the southern North Sea during the non-breeding season. For divers captured and tagged in the German Bight during winter (n=33), staging stops during spring migration varied from approximately 3 – 13 days in duration for birds travelling to different breeding locations (although sample sizes were generally small and confidence limits were wide). While individuals from the same breeding areas largely followed the same routes, birds dispersed to different areas during the non-breeding period, so the non-breeding season home ranges only partially overlapped. A subsample of birds (n=9) followed for 2 years showed generally high site fidelity during spring staging (Kleinschmidt et al. 2022).

While there is currently no availability bias estimate for RTD, the availability biases for other diving bird species can be

				<p>used to give some indication of whether changes in diving behaviour might account for changes in RTD numbers between different surveys. Based on available data on diving behaviour, HiDef scales up abundance estimates of guillemots, razorbill and puffins sitting on the water by respective factors of 1.2375, 1.174 and 1.1416. Surveys of the OTE SPA on 4 and 17 February 2022 produced estimates of 10,148 and 22,280 individual RTDs within the SPA boundary (Irwin et al. 2019). If it were to be assumed that all RTDs recorded on 4 February were sitting on the water (availability bias is applied only to birds recorded on the water, not birds in flight), and the highest availability bias for auks were to be applied (1.2375 for guillemot), then this would increase the abundance estimate to 12,558, which is still much lower than the estimate for 17 February (without any consideration of availability bias in relation to the latter survey).</p> <p>More information can be found in ES Chapter 13, Offshore Ecology and Appendix 13.1 (document reference 3.3.12).</p>	
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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PER Ref	Comment	Recommendation	
		Para 211 Para 214 Para 217 Para 220 Para 226	<p>divers were recorded during the spring migration period (Table 12.16), of which King there is likely to be a turnover of individuals passing through the area, rather than a resident population. Thus, a given individual might only be displaced once from the wind farm, as opposed to being displaced multiple times if it was resident over the three-month spring migration period." There are other references to turnover of birds during migration periods and a suggestion that displacement effects are therefore less likely to incur adverse consequences. Natural England does not agree with this assertion. On the contrary, if birds are relying on the area as a short-term migratory staging area, projects could be felt more acutely. Energetically depleted birds may be less able to compete for resources or find alternative habitat. It may be harder for these individuals to increase foraging rates to adjust for being displaced into potentially sub-optimal habitat. Migration could be delayed or even aborted (with consequences for breeding success) if sufficient resources are not obtained to complete the journey. Indeed, there may be insufficient alternative habitat and we highlight our concerns that red-throated divers may already be subject to an ALI in-comparison in relation to habitat, distribution and availability of habitat during</p>	<p>of re-throated diver turnover to substantiate the claim that displacement of individuals is more temporary (less) than the season of assessment.</p>	

Offshore Ornithology

See above.

N

Natural England's Key Considerations		Natural England's Advice			Risk (RAD)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			<p>from disturbance and displacement impacts in the OTE SPA.</p> <p>Natural England also questions the value of available survey results in similar time periods as evidence of foraging. Red-throated divers are known to spend a significant amount of time underwater, but availability data is not accounted for. Furthermore, foraging may be focused on specific time periods, e.g., associated with the tidal cycle. Such confounding factors, in addition to other factors influencing detection rates, would need to be fully considered to understand the underlying reasons for the quoted disparities in survey estimates.</p>		
	17	Ch 15, Para 216	This section relates to additional mortality of red-throated divers during the spring migration period. References to the Autumn BDMPS are therefore assumed to be a copy/paste error.	OK and amend this in the submitted ES. Natural England suggests following the convention as presented in the relevant Biologically Defined Minimum Population Levels (BDMPS) tables for clarity, which simply define spring and autumn as 'migration seasons' due to the population being constant across both time periods.	
	18	Ch 13 Para 230	Natural England notes that CRMs are to be updated for Environmental Impact Assessments (EIA) and Habitats Regulations Assessments (HRA) to reflect the latest guidance on avoidance rates and other parameters.	Natural England will refrain from commenting on the results of CRM conducted to date in the knowledge that these will be superseded.	

Offshore Ornithology

17 - QA and update in submitted ES. While the Natural England advice is noted, it is considered appropriate to distinguish spring and autumn migration seasons, for clarity in the assessment.

18 - Noted. Revised CRM results and assessments are presented in the ES.

N

Natural England's Key Considerations		Natural England's Advice				
Section 42 Preliminary Environmental Information Report (PEIR)		NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
		19	Ch 13 Table 13.42	Natural England maintains that it may be necessary to consider the cumulative impact of construction with Five Estuaries as well as existing operational impacts from Galloper Offshore Wind Farm (GOWF) and Greater Gabbard Offshore Wind Farm (GGOWF). While displacement impacts may already be occurring, this does not preclude an increase in this impact, i.e. birds that have not been displaced yet may be displaced due to new activity.	Natural England would welcome discussion on the approach to cumulative effects assessment (CEA) of construction impacts at future ETO meetings. We advise consideration of options to reduce recurrent construction impacts, e.g., by aligning vessel routes used with Five Estuaries OWF.	Yellow
		20	Ch 13 Para 286, 287	Natural England does not agree with the approach to project screening. The exclusion of displacement causing activities from the CEA on the grounds that they do not have large-scale permanent infrastructure does not consider the fact that aggregate extraction and busy commercial shipping lanes can lead to long term displacement of birds.	The submitted ES should consider other displacement-generating projects (including relevant aggregate extraction) projects in the CEA.	Orange
		21	Ch 13 Para 287 & Tables 13.44, 13.46, 13.48, 13.50, 13.56 & App 13.3	The cumulative and in-combination assessments for gannet, great black-backed gull, kittiwake, and lesser black-backed gull do not draw data from a number of other projects (for kittiwake, for example predicted collisions have been zeroed for Dudgeon, Gulliver Sands, Lyn and Inner Doreing, Sornby Sands, and Sheringham Shoal). This is either because the predicted mortality was zero or an estimate was not provided in the ES for a given OWF. However, it is not clear whether it is the former or the latter.	Please differentiate between impacts where data exists but the impact is predicted to be zero and where impacts have not been calculated. Natural England recommends updating the figures used for CEA and in-combination assessment once they have been agreed upon in the Sheringham Shoal and Dudgeon Extensions (SEP & DEP) examination, which is currently ongoing.	Yellow

Offshore Ornithology

19 - As there is potential for construction works at North Falls and Five Estuaries to be ongoing simultaneously, and the offshore cable corridors are aligned, the cumulative effect of construction within the ECC cable corridor is assessed.

It is considered that the presence of, and existing operational activities associated with Galloper and Greater Gabbard OWFs are reflected in the baseline density and abundance estimates for North Falls, so to apply additional operational effects from these OWFs to the North Falls baseline would effectively be to double-count their impacts.

20 - North Falls is of the view that there is a distinction to be made between permanent infrastructure above the sea surface, within OWF turbine arrays, and aggregate extraction areas where disturbance would take place only when extraction is ongoing and would be spatially limited to areas in the vicinity of extraction vessel(s). Aggregate extraction is an ongoing activity considered to be part of the baseline conditions when the project surveys were undertaken. Similarly commercial shipping lanes are considered to be part of the baseline conditions. Including these activities in a cumulative or in combination assessment would be considered to be effectively double-counting their impacts.

21 - Based on checks back to some of the original ES

N

				<p>documents for the OWFs referred to, it is not always clear (based on from documents held by RHDHV and available from internet searches) whether predicted collision mortality was zero or an estimate was not provided in the ES (for example for 'early' OWFs, collision risk modelling results may be presented only for a few species in the ES, with no information on whether CRM was run for other species). Therefore, it can be difficult to distinguish between these two scenarios. For the ES it is proposed to follow the final CEA figures for SEP and DEP are referred to in this regard, to assume that where '-' is included there is no estimate for a given OWF, and where '0' is included, the collision risk was zero.</p>	
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Natural England's Key Considerations		Natural England's Advice				
Section 42 Preliminary Environmental Information Report (PEIR)		NE Ref	PER Ref	Comment	Recommendation	Risk (RAQ)
NBA - 13/03/2016 (12) Used: Draft Report to Inform the Appropriate Assessment						
	21	SCAA Plans 1203		In addition to the targeted quidd, please note also: "Monitor the extent, distribution and availability of suitable habitat (either within or outside the site boundary) which supports the habitat for all necessary stages of the non-brooding/rearing period (moulting, roosting, feeding, feeding) at the following areas: Substrate sand (230,209.88); Substrate pebble sediment (73,804.64); Substrate gravel sediment (62,100.63); Substrate mud (72,549.14); Circalittoral rock (235.2); and Water column"	The submitted LS should reflect all relevant Supplementary Advice on Conservation Objectives (SACOs) targets. This information can be found here .	
	22	RIAA Plans 1212 1216		A 1% mortality rate for dissolved RTD is proposed as being an appropriate precautionary estimate. The justification given is that RTDs utilise a range of habitats (very specific, local, at low density and are highly mobile). The Applicant also states: "...if it is biologically implausible that OWP displacement would add substantially to the existing mortality rate of the species." Natural England strongly disagrees with this assertion. We consider the available evidence (supported by scientific expert judgement) of a mortality rate for dissolved fish. Furthermore, it is of increasing concern that an increased lack of population level impact, about which there is some uncertainty, is used as justification to continue increasing the pressure on fish.	We advise due consideration is given to the relative importance of the OWP SPA for wintering RTD within the LR national site network.	

Offshore Ornithology

Noted.

N

NFOWFS3_049_103_040723

Natural England's Key Considerations		Natural England's Advice					
Section 42 Preliminary Environmental Information Report (PEIR)		NE Ref	PER Ref	Comment	Recommendation	Risk (RAG)	
				Species through further displacement. SPAs are classified for being the 'most suitable' territories for the species in question and have a central role in securing the favourable conservation status for the species as a whole. Clearly, the OTE SPA protects vital wintering habitat for this species.			
		24	NEAA 1213 1214	Natural England notes that the 12km buffer overlap is in fact (approximately) 193 km ² due to a 4 km ² overlap that is not considered.	For the calculation of SPA overlap with the project buffer set to 12km, please state the actual area in the submitted EIS. With the additional 4 km ² included we calculate this as representing 3.0% of the SPA area. It is a 0.1% increase, but note that the 4 km ² figure is an approximation. The joint SPA's Interim Advice on the Treatment of Displacement for Red-throated Loon 1202 states that: "For non-breeding red-throated loon, a pragmatic displacement buffer of at least 10km is recommended for use in site characterisation, impact assessments and post consent monitoring where a plan or project is within 10km of a Special Protection Area (SPA) designated for non-breeding red-throated loon." Post-consent monitoring at the nearby London Array OTE detected displacement effects at distances of 11.5 km. Natural England's response to the London Array report is available here: LONDON ARRAY OTE - Natural England Response July 2015		

Offshore Ornithology

Noted.

N

NFOWFS3_049_105_040723

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			Refer to the resulting population estimates and their application for the calculation of predicted mortality in Tables 7.3 and 7.4	Ensure SPA (PEIR report) to return discussions in future ETO and to attend an appropriate assessment, include in the submitted E3	
	36	1216 1216 7.3 7.4	When rounding the number of BTH completed Natural England notes results of +9 but -10% have been rounded down to a -6.48 birds displaced assuming 3% of 15 birds has been presented as 0.	Natural England considers that any errors of +0 should be rounded up to 1 bird	
	27	1223 1224	An effective displacement area (EDA) is described (the area of overlap weighted by the predicted proportion of birds displaced at different distances from OWFs). Following the EAM/EAZ examination Natural England has reflected on the validity of the EDA approach and concluded that these calculations are (and/or) are questionable assumptions and have significant potential to be misleading, especially when the area of habitat loss which displacement is occurring is of principal importance. The proportion of the population that is displaced is in no way equivalent to the area that birds are subject to displacement from. The logical assumption if the area of 'effective' displacement is 50% would be that the remaining 45% of the area is not subject to displacement effects. This is clearly not the	The submitted E3 should present the total area over which displacement may occur to calculate the area of the SPA that may be impacted	

Offshore Ornithology

Noted.

N

NFOWFS3_049_106_040723

Natural England's Key Contributions: Section 42 Preliminary Environmental Information Report (PEIR)		Natural England's Advice			
NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)	
		<p>viii. The displaced proportion of the population cannot visit any of the area, i.e. displacement is occurring over the full extent of the area. Birds that are not displaced are likely (but not necessarily) dispersed over the entire area. Therefore, there is no logical way to proportionally reduce the risks of effective fatality loss by the scale of impact on the population. We do recognise the inherent value in trying to account for the gradient of effect in spatial terms, but in light of the relevant parameters in this context, Natural England considers that an area subject to any displacement effect is compromised in its ability to support no-threatened great owl across the entire of that area.</p>			
ii	00AA Para 1227	<p>Other sources of displacement that overlap with the projects, 12km buffer are detailed and used as justification to reduce the area over which the project will exert a displacement impact.</p> <p>While it is accepted that there is overlap between the 12km buffer with shipping routes and other DWPs which may be exerting displacement effects (over a buffer area) on the RFD population, it is evident that there are still red-throated divers present in these areas. It is these birds that are being assessed as at risk of displacement from this project. Their dispersal benefits of the already impacted status of the habitat in</p>	<p>The submitted ES should present the total area over which displacement may occur (i) calculate the area of the DPA that may be impacted</p>		

Offshore Ornithology

Noted.

N

NFOWFS3_049_107_040723

Natural England's Key Considerations: Section 42 Preliminary Environmental Information Report (PEIR)		Natural England's Advice			Risk (RAG)
NE Ref	PEIR Ref	Comment	Recommendation		
		Question is not evidence that a further impact could be identified. There is no basis on which to conclude that the project will not additionally impact the distribution of red-throated divers within the SPA in these areas.			Yellow
23	RIA4 Para 122a	The Applicant states that North Falls would not contribute significantly to the existing sources of disturbance/displacement for red-throated divers in this area and that a Project alone effect on the distribution of the species within the SPA can be excluded.	Natural England's position is that an adverse effect on integrity arising from pre-existing OWT displacement effects on the red-throated diver fauna of the OTE SPA cannot be ruled out. Natural England therefore considers any additional displacement would add to the disturbance/displacement. It is noted that a total area of 188.4 km ² , representing 3.2% of the SPA, may be subject to disturbance impacts when considering a 12km buffer for North Falls OWT. This buffer distance is considered appropriate as it is informed by evidence from the nearby London Array OWT. Natural England advises that the avoidance measures suggested that the proposed site will exert a displacement effect on red-throated divers in the OTE SPA, which will inevitably impact their distribution in the site. In consideration of the relevant conservation objectives. Accordingly Natural England advises that identifying avoidance and mitigation measures to reduce the impacts on		Red

Offshore Ornithology

Noted.

N

Natural England's Key Considerations Section 42 Preliminary Environmental Information Report (PEIR)		Natural England's Advice			Risk (RAD)
NE Ref	PEIR Ref	Comment	Recommendation		
	3)	RAAA Para 1238	The Applicant states that "it is concluded that adverse effects on the population size of red-throated divers of the Outer Thames Estuary SPA from a combination assessment from OWPs can be excluded". Natural England does not consider that this assessment is independent. No quantitative or qualitative in combination assessment of displacement resulting has been carried out.	OTE SPA should be given the highest priority prior to submission. Natural England suggests further discussion is sought through the RTD's regarding this point.	Red
	3)	RAAA Para 7.7	The area of the SPA subject to displacement appears to be calculated as being reduced if North Falls OWP is built. It is noted in the table footnote that "Measurements of the overlap between OWPs and the SPA take account of areas of overlap between the buffers of more than one OWP, assuming the OWP which is closest, so no area is counted twice. For the 10-17km buffers, because of the relative positioning of OWPs, the area of overlap is actually larger without North Falls".	Natural England recommends that further clarity on the methodology used is provided in the E-10, given it appears to result in a reduction in the area of the SPA (even when displacement may occur).	Yellow
	3)	RAAA Para 1246	The Applicant explains that the North Falls OWP increases the area of the SPA subject to displacement by 2% in combination, from 48% to 51%. This increase is portrayed as insignificant in the context of contribution to the total impact. Natural England strongly disagrees with this interpretation of the	Natural England considers that for the project to avoid contributing further to the ADI to RTD at OTE SPA the North Falls project boundary must be moved to at least 10km from the SPA boundary.	Red

Offshore Ornithology

32 - The North Falls array area has been refined to be as far from the OTE SPA as feasible, in response to the PEIR feedback. This is discussed further in the HRA Derogation Provision of Evidence (document reference EN010119/APP/7.2), submitted with the DCO application.

Y

NFOWFS3_049_109_040723

Natural England's Key Considerations		Natural England's Advice			Risk (NAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
			<p>In part, we already recommend the project, reviews the Secretary of State's Habitats Regulations Assessment for the East Angles One North and East Angles Two CWP.</p> <p>The Applicant states, "It is therefore concluded that North Falls would not contribute to a significant increase in the existing or combination effect of COWs on the distribution of red-throated divers within the OTE/ SPA, considering the existing AOTI we do not consider any non-tidal additional areas impacted to be significant."</p>	See above comment.	
	JJ	HAA Para 1247	<p>Natural England indicates our caution that in terms of adding to the spatial area over which replacement impacts an occurrence of the OTE/ SPA, considering the existing AOTI we do not consider any non-tidal additional areas impacted to be significant.</p>		
	M	HAA Para 1248	<p>Compensatory measures are proposed for FTO in the OTE/ SPA, Essex England. Highlights our concerns that it will not be possible to deliver effective compensation at the project level. It should also be noted that compensation is a last resort once the mitigation hierarchy has been exhausted and that it will be necessary to demonstrate no satisfactory alternatives in any derogation case. Again, Natural England advises that specific objectives and mitigation.</p>	See comment on HAA Para 1248.	

Offshore Ornithology

Noted.

N

NFOWFS3_049_110_040723

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
	35	RAA Para 1284	measures should be given the highest priority prior to submission. Impacts arising from recently consented projects with compensatory measures in place to offset their impacts have been deducted from the in combination total for lesser black-backed gull. Natural England advises that in combination totals should be presented both with and without the impacts of compensated-for projects in the ES, as this is likely to reflect Department for Energy Security and Low Carbon (DESL) assessment requirements and take account of the current uncertainty regarding the effectiveness of compensatory measures for seabirds.	Impacts arising from consented projects with compensatory measures should be considered in the in combination impact total	Red
	36	RAA Para 1293	Natural England welcomes the early consideration of compensatory measures. Until the impact assessment has been completed it is unclear what scale of impact these measures will need to compensate for. We highlight the inherent difficulties in evidencing and securing acceptable compensatory measures for SPA seabirds that satisfy the requirements of the Nature Regulations.	We advise that the mitigation hierarchy is followed, which should be articulated before considering the provision of compensatory measures.	Yellow
	37	RAA 1345	We note that without precise compensatory measures have been included for kittiwake, but that we are awaiting updates to the modelling, which will provide updated figures (see comment above on CH 12 para. 230).	Natural England will provide further comments when the updated figures are available and would welcome further discussion on this through the ETG process.	Purple

Offshore Ornithology

Noted.

N

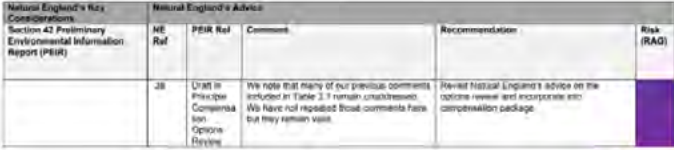
<p>NFOWFS3_049_111_040723</p>		<p>Offshore Ornithology</p>		<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_049_112_040723</p>	<p>Annex 6. Onshore Ecology and Onshore Ornithology In formulating these comments, the following documents have been considered:</p> <ul style="list-style-type: none"> • Guide to PEIR • Chapter 1 Introduction • Chapter 2 Need for the Project • Chapter 4 Site Selection • Chapter 4 Site Selection Figures • Chapter 5 Project Description • Chapter 6 EIA Methodology • Appendix 6.1 Grid connection optionality • Chapter 8 Marine Geology, Oceanography and Physical Processes. • Figures – Chapter 8 Marine Geology, Oceanography and Physical Processes. • Chapter 10 Benthic and Intertidal Ecology • Chapter 23 Onshore Ecology and Appendices 23.1-23.7 • Chapter 24 Onshore Ornithology and Appendices 24.1-24.5 • Schedule of Mitigation • Report to Inform Appropriate Assessment Appendix 1 Habitats Regulations Assessment Screening Report May 2023 • Habitats Regulations Assessment Draft Report to Inform Appropriate Assessment May 2023 • Habitats Regulations Assessment Draft In Principle Compensation Options Review <p>Natural England's Advice and Recommendations A summary of Natural England's advice in relation to Onshore Ecology and Onshore Ornithology is set out in Table 1. Our</p>	<p>Onshore Ecology</p>	<p>Onshore Ornithology</p>	<p>Noted.</p>	<p>N</p>

Table 1 Summary of Key Issues – Onshore Ecology and Onshore Ornithology

Ref. No.	Summary of Key Issues	Natural England's Recommendations to Resolve Issues	Risk
1	We note that the Applicant is yet to undertake all required ecological surveys including noise for bats and river-wintering birds.	We advise that a complete set of surveys are carried out according to our onshore ecology and industry standard guidance, and that the results are included within the Environmental Statement (ES), including 24 months of ornithology data within areas of functional linked land to coastal Special Protection Areas (SPAs). Any potential impacts that emerge from these surveys will need to be identified and suitable mitigation provided where required. This will be key to the application, and we advise that the Applicant consults NE on this.	High
2	We note that the proposed location is not yet known (S.P. – Chapter 5 – Project Description) but will be installed using Horizontal Directional Drilling (HDD) to enter the sea defences and sensitive ecological designations at the coast. We are unable to comment further on impacts effects on particular Site of Special Scientific Interest (SSSI) features in the direct locality with the location of the drilled HDD is further refined.	Natural England advises that HDD and its associated operations are not licensed within or immediately adjacent to Ramsar Haven Marshes SSSI. Survey information obtained to locate the works compound should be used to identify where the least damage and disturbance would be caused to flora and fauna associated with the SSSI. Suitable mitigation measures should be identified to avoid-onset disturbance arising from noise and vibration, lighting, hydrological impacts, and pollution arising from 'breakout' of drilling fluid etc. These should be documented in the relevant mitigation plans prepared. We advise that an Ecological Check of Works should be part of any mitigation plan prepared and prepared during the works.	Medium
3	It needs to be determined whether any protected species licences will be required and the potential need for a Letter of no Impediment (LONI) to accompany the application.	NE advises that based on the findings of sparrow surveys the Applicant may need to submit a draft protected species licence application where necessary including necessary mitigation measures. We advise consultation with the licensing team should be sought.	Medium
	Mitigation for impacts on Great Crested Newt through the SSSI Chalk Level Licensing (CLL) Scheme, should be represented where necessary.	We advise consultation with NE's licensing team should be sought and a CLL application submitted for review where required.	Medium

Onshore Ecology

Onshore Ornithology

1 - The two-year baseline onshore ornithology survey programme commenced in September 2020 and was completed in March 2023. Details of survey methodology and results are presented in Volume III, Appendices 23.1 to 23.8 (document reference 3.3.30 and 3.3.37).

The results of the surveys form the basis of the assessment within this chapter, and the determination of embedded mitigation (section 24.3.3 of Chapter 24, Onshore Ornithology) and additional mitigation (referred to throughout the assessment in section 24.6 of Chapter 24).

Natural England were consulted on results of bat surveys in Onshore Ecology and Ornithology ETG (October 2023). The project's Bat Activity Survey and Bat Emergence Survey are considered adequate to define the ecological baseline for bat species for the Project.

2 - The results of the baseline ornithology surveys have where available been used in the process of determining the location of temporary and permanent onshore infrastructure, as well as embedded mitigation requirements (section 24.3.3 of Chapter 24). Of key concern was ensuring that construction activities do not impact upon the bird assemblage of Holland Haven Marshes SSSI, and there would be no direct habitat loss or disturbance within the SSSI (see assessment in section 24.6

N

				<p>of Chapter 24).</p> <p>Provision of an Ecological Clerk of Works (ECoW) for to landfall HDD has been included in the Project's embedded mitigation.</p> <p>Embedded mitigation is summarised in Section 23.3.3 of Chapter 23, Onshore Ecology.</p> <p>Impacts relating to Holland Haven Marshes SSSI are set out in Section 23.6.1.1 of Chapter 23.</p> <p>This is also considered in Chapter 24 Onshore Ornithology.</p> <p>3 - NFOW have reviewed conclusions regarding protected species licences following identification of the final onshore project area for DCO application. Apart from in relation to great crested newts (considered separately, under DLL) no licenses are considered required, as described in Section 23.6.1.10 - 23.6.1.16 of Chapter 23.</p>	
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NE Ref	Summary of Key Concerns	Natural England's Recommendations to Mitigate Issues:	Risk
4	Natural England have concerns regarding the intertidal cable protection impact assessment.	It is concluded that intertidal cable protection will act as additional protection. However, no evidence is provided to support the overall conclusions nor any in combination impact assessment with Five Estuaries (VE) potential onshore connection as a separate project requiring cable protection. Natural England advise further evidence is provided as to the extent of the intertidal cable protection. Natural England also advise that an option to avoid potential additional impacts are explored in the first instance, including avoiding cable protection in the area entirely. The potential cable protection has not been assessed as part of the HRA which states there is no impact on the intertidal zone. We seek clarity on whether cable protection will be included within the intertidal as well as the adjacent beach.	High
5	Any requirement for works across the foreshore which is in proximity to Habitat Marine Special SSSI may give rise to significant adverse impacts (e.g. noise, lighting, visual disturbance) on the SSSI.	Provide further details of any anticipated works located on the foreshore and intertidal areas. Consider and assess potential impacts on the SSSI, as the project is further refined and include in the Application submissions.	High
6	In combination with cumulative effects with other projects, notably Five Estuaries and East Anglia GREEN (EAG) should be fully explored.	The temporary disturbance impacts to marine, species and soils would be reduced by constructing the onshore cable route for Five Estuaries OWP at the same time as North Falls. Similarly, for both OWP substations which will feed into the National Grid at the EAG substation. However, we understand that the projects are currently being assessed as progressing separately.	High
7	The biodiversity net gain (BNG) of the development should be assessed using the Biodiversity Metric 4.0. Note BNG is pre-mandatory, so this is advisory only at present, but this will become mandatory.	The inclusion of BNG will future proof the project for when it becomes mandatory. The development should aim to achieve at least 10% BNG. Mitigation will be required to address loss of important habitat (e.g. hedgerow), and the 10% net gain should be additional to this.	Medium

Onshore Ecology

Onshore Ornithology

4 - The location of the HDD drill exit will be below Mean Low Water Springs (MLWS), meaning that there will be no construction footprint, and therefore no cable protection required, within the intertidal area.

Intertidal impacts are assessed in Chapter 10 Benthic and Intertidal Ecology.

5 - No foreshore access is required for the construction works relating to the onshore export cables, and so no impacts will occur on birds utilising the intertidal area. Potential noise, lighting and visual disturbance impacts on the SSSI are considered in relation to onshore construction works in section 24.6 of Chapter 24 (Onshore Ornithology).

Intertidal impacts are assessed in Chapter 10 Benthic and Intertidal Ecology.

6 - Both projects are considered in the CEA, see section 24.8 of Chapter 24, Onshore Ornithology.

The cumulative effects assessment is set out in Section 23.8 of Chapter 23, Onshore Ecology.

7 - The Project has used the most up to date version of the Defra Statutory Biodiversity Metric at the time of writing. The Early Design BNG assessment and strategy is set out in the BNG Strategy (doc ref 7.22).

Y

Table 2 Natural England's Key Advice and Recommendations – Onshore Ecology and Onshore Ornithology

Natural England's Key Considerations					
Natural England's Advice					
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
Project Parameters – Documents Used: Chapter 5 & Chapter 20					
Project Description	8	General Comment	The project description is as defined as possible at this stage. But we note currently that there is no commitment yet for a final route/ microtailing, and that all relevant surveys have not yet been completed. How will the project design be refined prior to submission to help avoid, reduce, and mitigate impacts?	All relevant surveys to be completed and reported in the ES. Provide details on final cable route and any necessary mitigation measures including but not exclusively increasing	Yellow
Baseline Characterisation – Documents Used: Chapter 23 Onshore Ecology, Appendices 23.1-23.7, Chapter 24 Onshore Ornithology, Appendices 24.1-24.5					
Survey Data Acquisition	9	Para 21 – 23	We advise that the desk-based data search is satisfactory	N/A	Purple
	10	General Comment	Based on the assessment of the impacts on breeding birds from the onshore cable corridor, it appears that data for skylarks should be available, but impacts on them are not currently sufficiently assessed	We advise that skylarks are included as a target species for onshore ornithology.	Yellow
Data Gaps	11	General Comment	As detailed further in our comment above in table 2, we note the potential impacts on coastal processes from cable protection in the intertidal area acting as groynes.	We advise that further information is required as detailed in table 2 above	Yellow
	12	General Comment	We note that further survey data will be provided for bats and non-breeding birds.	We advise that the survey data should be provided when it is available, and the assessment updated	Yellow
	13	General Comment	We note that no nocturnal surveys have been provided for non-breeding birds.	We advise that consideration is given to carrying out nocturnal surveys using thermal imaging for species such as golden plover if night-time working will be required	Yellow
	14	General Comment	There is no calculation of Biodiversity Net Gain provided.	We advise that a calculation is provided using Metric 4 B, when habitat data is available.	Yellow

Onshore Ecology

Onshore Ornithology

8 - All ornithology surveys are now complete and are included in ES Chapter 24 Onshore Ornithology.

9 - Noted.

10 - Skylark was scoped out of the assessment in the PEIR because, as a relatively abundant species, population level effects are considered very unlikely even under the worst-case scenario.

Upon request, the species has been scoped into the assessment here (see section 24.6.1 of Chapter 24 Onshore Ornithology). No significant effects are predicted for this species, but it is considered as part of proposed enhancement measures which would benefit breeding and non-breeding birds.

This is addressed in ES Chapter 24 Onshore Ornithology.

11 - Intertidal impacts are assessed in Chapter 10 Benthic and Intertidal Ecology.

12 - It is considered that nocturnal surveys are not required to be able to robustly assess the potential for impacts on birds that may be present during the hours of darkness, as presented within Chapter 24 Onshore Ornithology.

The realistic worst-case scenario outlined in Table 24.4 in Chapter 24 states that 24-hour working may be required occasionally at the landfall and at other major HDD locations, but elsewhere,

N

				<p>work would be limited to 07:00 to 19:00 from Monday to Saturday. It is therefore the case that the spatial extent of potentially disturbing works at night (due to HDD work, and likely occurring at a single location), would be very small. Some other construction works may extend into the hours of darkness during winter, but where required the temporal extent of these works would be very limited, and therefore potential disturbance to wintering birds also limited to short periods.</p> <p>Any mitigation measures that would be deployed during the construction phase to minimise the risk of disturbance (see section 24.3.3 of Chapter 24 Summary of mitigation embedded in the design) would also apply to nocturnal working.</p> <p>For the purposes of assessment it has been assumed that curlew, lapwing and golden plover may utilise agricultural land within the onshore project area for feeding or roosting during the night, potentially using different fields to those used during the day. It has also been considered that birds' use of fields may be different between years, in response to changes in field management from year to year. The assessment of construction disturbance therefore assumes that these species could use any suitable fields within the onshore project area, not just the fields they were recorded using during daytime baseline surveys.</p> <p>As it is assumed that birds may be disturbed during any works</p>	
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				<p>within potentially suitable habitat, regardless of the recorded distribution during the surveys, collecting nocturnal survey data would therefore not change the approach to assessment and consideration of the potential for significant effects.</p> <p>It is added that due to generally accepted limitations in detecting and counting birds at night, it is unlikely that peak counts would be obtained during nocturnal surveys and upon which to undertake an assessment. A robust approach to assessment has therefore been undertaken, informed by daytime baseline surveys. It is considered that the collection of nocturnal data would not change the conclusions of assessment presented herein.</p> <p>All bat surveys are now complete and their findings are summarised in Section 23.5.4.2 of Chapter 23, Onshore Ecology (and Appendices 23.8 and 23.9, document reference 3.3.37 and 3.3.38).</p> <p>All ornithology surveys are now complete and will be included in ES Chapter 24 Onshore Ornithology.</p> <p>No adverse significant effects are predicted to occur to bats.</p> <p>13 - This is addressed in Chapter 24 Onshore Ornithology.</p> <p>14 - This has been addressed in the Biodiversity Net Gain Strategy (Document Reference 7.22).</p>	
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National England's Key Considerations		National England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
	15	Para 104.114	We note that some areas have not been surveyed due to loss of temporary access permissions.	We advise that these ground-truthing surveys are carried out once access can be arranged.	
Environmental Impact Assessment - Document(s) Used: Chapter 23 and relevant appendices					
Landfall impacts	16	General Comment	We note that our survey results are not yet reported.	Any investigations to be removed will require a bat assessment. Additionally, habitat which may be long-term/overlying habitat will need to be assessed. We advise consideration is given to surveys for Nathusius pipistrelle (Pipistrellus nathusius), which migrates across the North Sea. Any surveys will need to be carried out at an appropriate time and in appropriate locations. Please refer to our steering advice.	
	17	General Comment	We advise knowing their spawning advice for protected species, any departures from survey protocols should be fully justified and the implications for disturbance fully assessed.		
	18	Chapters 23 & 24	We note that the precise landfall location will be determined following PEIR. We also note that the Project has committed to HCDI at landfall and the seabed drilling location will be set back approx. 100m from the coast. We do have concerns, however, regarding the consideration of noise, sign and visual disturbance from the indicative landfall compound. We are also concerned about potential in-combination impacts (with other projects such as Five Subareas) to SPA, SSSI and breeding birds along the SSSI.	Provide further details regarding the landfall compound location. Fully consider and assess any impacts to SPA birds that use the SSSI and potentially breeding birds. Furthermore, if works or access to the compound or immediate area are required, then further information should be provided, and potential impacts assessed. We also advise that potential in-combination effects due to the landfall compound and any intertidal works should be fully considered and assessed in the EIA.	
			It is also noted whether any works or access will be required on the foreshore at		

Onshore Ecology

Onshore Ornithology

15 - Additional surveys have been carried out on such areas where access permission was able to be obtained. These have been added into the ES ecological baseline assessment in Sections 23.5 and 23.6 of Chapter 23, Onshore Ecology.

16 - All bat surveys are now complete and are summarised in Sections 23.5.4.2 of Chapter 23.

Chapter 23 includes considerations of potential effects upon migrating Nathusius' pipistrelle in Section 23.5.4.2.3. This includes data provided by the BCT's National Nathusius' Pipistrelle Project.

No adverse significant effects are predicted to occur to bats.

17 - Noted.

18 - The location and extent of the landfall area has been refined since the PEIR (see Figure 24.1, document reference 3.2.20). This has been designed to minimise risk of disturbance and other impacts on the part of the Holland Haven Marshes SSSI which is of greatest importance to the SSSI assemblage throughout the year, namely the lagoon and wetland area that located within the Holland Haven Local Nature Reserve (LNR). Potential disturbance impacts relating to landfall activities are assessed in section 24.6.2.2 of Chapter 24, Onshore Ornithology.

In-combination impacts on SPAs are assessed in the RIAA (doc ref 7.1).

Y

				<p>There would be no construction activities within the foreshore or intertidal areas, and as such, all related potential impacts have been scoped out of the assessment.</p> <p>Full consideration of impacts of landfall compound and intertidal works on birds are included in Chapter 24 Onshore Ornithology.</p> <p>Intertidal impacts are assessed in Chapter 10 Benthic and Intertidal Ecology.</p>	
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Natural England's Key Considerations		Natural England's Advice			Risk (RAG)	
Section 41 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation		
		19	Chapter 24, para 25	address the comment. This should be confirmed, and further details provided. The criteria for selection for target breeding and species-richness that listed species (skylarks are listed but not considered a target species in the region plans list) as it is suspected they are not inherently rare and are an invasive.	Natural England advises that as well as being listed as a species of principal importance in Section 41 of the NERC Act, Skylark are considered a species at decline in Essex and their nesting habitat (despite farmland) will be impacted. We note that countermeasures (prohibitions have been exercised in the corridor area, so there is likely to be nesting within the area. Therefore, we advise that they are sensitive to disturbance and there is the potential for permanent loss of their habitat for substitution. We advise that they are included as a target species.	Yellow
Ornithology		20	Chapter 8, para 25	The fencing constraint is assessed as having medium sensitivity to cable protection in certain areas, adverse effects caused protection restricts adjacent transport, and the absence of cable protection would act as additional stresses, benefiting that existing protection.	We note that there is no discussion of the impact of further restricting adjacent transport to those habitats in Core Industry regulated areas. These areas are already experiencing coastal squeeze because of the existing defences. It is important that this is fully considered, avoided and avoided. We advise that it is also considered in conjunction with the impact of VE also having to put cable protection.	Yellow
		21	Chapter 10, Table 10.3	Coastal Invertebrate Non-Native Species (INNS) are not considered (only marine and terrestrial ones have been included). The mitigation for INNS risk focuses on the marine risk pathways and not risks in the terrestrial area.	We note there is no discussion about working in the terrestrial area to (1) the conditions, and potential pathways for INNS, are not considered. If terrestrial cable protection is required or physical work in intertidal areas is required, then this should be assessed.	Yellow

Onshore Ecology

Onshore Ornithology

19 - In accordance with the advice provided, the potential for impacts upon skylark has been scoped into the assessment (see section 24.6.1 of Chapter 24, Onshore Ornithology). Measures which would benefit breeding and non-breeding skylarks have also been proposed as part of the Project as detailed in the Outline Landscape and Ecological Management Strategy (OLEMS) (doc ref 7.14), which will form the basis of the Project's Ecological Management Plan (EMP) developed post-consent, secured by DCO Requirement. See also section 24.3.3 of Chapter 24 Summary of mitigation embedded in the design for relevant mitigation for skylarks.

This is addressed in ES Chapter 24 Onshore Ornithology (Volume I).

20 - This is addressed in Chapter 24 Onshore Ornithology (Volume I).

21 - Intertidal works and associated INNS are included in Chapter 10 Benthic and Intertidal Ecology (Volume I).

N

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
	22	Chapter 24	We note that there is no assessment of the use of the intertidal areas by waterbirds in the Onshore Ornithology or the Offshore Ornithology reports. Birds were mapped in the area as part of the surveys, so it is unclear why this assessment has not been included.	We advise including best practice guidance for working in intertidal areas and using land based or small vessels launched from land. We advise that reference is made to the potential impacts on birds using the intertidal and foreshore areas and that this is thoroughly assessed.	Yellow
	23	General Comment	We note that the mitigation for vegetation clearance in the nesting season is following best practice i.e. surveying a maximum of 48 hours before the works take place.	It is stated that the survey will be conducted by an Ecological Clerk of Works (ECoW) and that there will be one ECoW for the project. Natural England seeks confirmation that this person will be fit a suitably qualified ECoW for nesting bird surveys. We also seek further consideration of all possible mitigation measures to ensure that all viable options have been thoroughly considered.	Yellow
	24	General Comment	There is mitigation proposed which involves avoiding working in areas used by gulls and waders in overwintering periods.	We note the mitigation potentially conflicts with the mitigation to not undertake vegetation clearance in nesting season. We note the mitigation proposed will be further clarified when the ECoW contract etc. is finalised. Natural England may have further comments at that stage.	Yellow
HRA – Document(s) Used: Draft Report to Inform the Appropriate Assessment					
Screening	25	Para 153	We agree with the creation Special Area of Conservation (SAC) site screened in to the HRA in relation to marine ecology.	N/A	Purple
	26	General Comment	We note the avoidance of land within designated site boundaries, although we note that the offshore project area is in doubt.	Consideration will therefore be required of impacts on Annex I birds that are using functionally linked land surrounding the EPA. As	Yellow

Onshore Ecology

Onshore Ornithology

22 - There would be no construction activities within the foreshore or intertidal areas, and as such, all related potential impacts can be scoped out of the assessment.

Bird activity recorded within the intertidal and foreshore areas was generally low, and due to the high background levels of human disturbance, mainly comprised species with lower sensitivities to disturbance such as gulls.

This is addressed in ES Chapter 24 Onshore Ornithology (Volume I).

23 - The role of the ECoW, if required, will be detailed within the Project's EMP secured by DCO Requirement. Should it be required, a suitably qualified ornithologist would also be appointed to conduct breeding bird checks.

Embedded and additional mitigation options are presented, and these have been refined since the PEIR due to the refinement of proposed layout and completion of baseline studies.

The ECoW will suitably qualified to conduct nesting bird surveys. This is addressed in Chapter 24 Onshore Ornithology, and the OLEMS (document reference 7.14).

24 - The extent and duration of such restrictions would be determined by a risk assessment carried out by the ECoW and/or qualified

Y

				<p>ornithologist, but it is not considered likely that these would prohibit any works from taking place during the non-breeding season.</p> <p>Any restrictions to potentially disturbing construction activities during the non-breeding season, as advised by the ECoW and/or qualified ornithologist, would most likely be restricted to key times and locations, for example a recorded roost site used at high tide by SPA birds. Indicative measures are provided within the OLEMS (doc ref 7.14) and see also section 24.3.3 of Chapter 24 (Offshore Ornithology) Summary of mitigation embedded in the design for embedded mitigation as well as Additional Mitigation sections within the Assessment of Significance section.</p> <p>The OLEMS (document reference 7.14) and Schedule of Mitigation (document reference 2.6) address the seasonality of mitigatory measures.</p> <p>25 - Noted.</p> <p>26 - There would be no construction works within the intertidal area, and so all potential impacts associated with birds in this location can be scoped out of the assessment.</p> <p>Impacts on SPAs are fully considered as part of the HRA (document reference 7.1.1.1).</p>	
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Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			proximity to Hamford Water SAC SPA/Ramsar site (300m at closest point)	advised for all OIAF Nationally Significant Infrastructure Projects (NSIPs) two years of data is required to support Applications to take account of intertidal variation.	
	27	HRA Screening Section 9.3, para 134	We note that the potential effects considered do not appear to include cable protection in the intertidal area. The offshore considerations go up to MLWS. If the Holland Haven Marshes SSSI is functionally linked to Hamford Water SPA/Ramsar, then the intertidal area has the potential to provide a feeding resource, so potential land structures and working in that area should be considered.	We advise that the potential for intertidal working (including any additional compound) and placement of rock changing the habitat conditions should be included in the screening process.	
	28	RIAA Section 8 para 1409	Reference is included to Chapter 24- Onshore Ornithology and that embedded mitigation for onshore ornithology includes that monitoring will be carried out to 'assess' no significant disturbance to overwintering birds. We note that no reference is included to avoiding (where possible) work in land identified as potentially important to Habitats Water SPA features during key periods of the non-breeding season or keeping hedges etc. for visual screening (Chapter 24, para 249 251). We note that this mitigation could conflict with embedded mitigation around not removing vegetation, which relates to ground nesting birds at the nesting season.	We advise that any mitigation included in the Chapters, should be included in the HRA where it relates to impacts on designated sites. This includes the mitigation included in chapter 24. We advise that consideration is given to functional links to Hamford Water SPA.	
	29	General Comment	We agree with the methodology that has been used to assess potential impact	N/A	

Onshore Ecology

Onshore Ornithology

27 - Intertidal works are included in Chapter 10 Benthic and Intertidal Ecology.

28 - This has been considered above. In addition, it would be ensured that mitigation measures required for ecological or ornithological features would be complimentary with each other, and reference is made in this assessment of proposed ecological mitigation and enhancement measures. These are also considered in the RIAA (doc ref 7.1) as part of the HRA process.

The OLEMS (document reference 7.14) and Schedule of Mitigation (document reference 2.6) address the seasonality of mitigatory measures.

29 - Noted. See section 24.4 of Chapter 24 Onshore Ornithology for assessment methodology, which follows that previously detailed within the PEIR.

Y

Natural Engineer's Key Considerations		Natural Engineer's Advice		Recommendation	Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment		
			<p>primary to international nature features e.g. wetland and breeding birds, and Fishers Estuarine Muds as a feature of Ramsar Sites SAC.</p>		
Assessment	30	General Comment	<p>We agree that key impacts are:</p> <ul style="list-style-type: none"> Temporary loss of feeding habitat for waders and species which is functionally linked to SPA/Ramsar sites and associated loss of feeding habitat at substitution site. Pollution arising from construction, consistent to designated sites and functionally linked land arising from "breakout" incidents during HCO. Light spill from artificial lighting during construction affecting ecology of the SAC/Fishers Estuarine Mud. Operational lighting at substitution site causing disturbance to SPA birds. 	<p>We advise that good practice and mitigation measures will need to be implemented which includes (but not exclusively) the following:</p> <ul style="list-style-type: none"> Avoid construction works in functionally linked land during sensitive periods for winter birds. Explore collaborative working with Five Estuaries if any projects are ongoing on functionally linked areas. We advise shared cable routing areas resulting during the term when the two projects overlap is explored. Ecological Care of Works (ECOW) during construction, noting this may need to be different people, depending on the agreement required to ensure a suitable quality is present. Consideration of planting unsuitable crops in advance of construction in order to deter dark bellied brent geese for the areas that construction will take place. Agreed Landscapes and Ecological Management Plan. 	

Onshore Ecology

Onshore Ornithology

30 - Noted. The impacts relating to ornithological features have been assessed accordingly in section 24.6 of Chapter 24 (Onshore Ornithology).

N

This advice has been noted.

The planting of unsuitable crops is not considered to be necessary, because of the relatively small scale of potential disturbance to geese, both spatially and temporally (see section 24.6.2.2.2 in Chapter 24 for assessment of construction disturbance on non-breeding birds).

The establishment of unsuitable crops could also result in implications for re-establishing normal cropping cycles and therefore suitable crops for brent geese following the completion of construction activities.

A sensitive lighting scheme is not proposed, although good practice would be followed (see embedded mitigation in Table 24.5 in Chapter 24) and where the possibility of lighting disturbance is identified (in particular to Schedule 1 breeding species or SSSI/SPA assemblages), effort would be made to screen construction works if possible, as determined by the ECoW.

The onshore cable route has been identified in coordination with Five Estuaries and the ability for one project to lay ducting for the other project has been accommodate within the design envelope.

				<p>List of mitigation relating to onshore ecology is set out within the OLEMS (document reference 7.14) and Schedule of Mitigation (document reference 2.6).</p> <p>Measures relating to ornithology are addressed in Chapter 24 Onshore Ornithology.</p>	
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Natural England's Key Considerations		Natural England's Advice			Risk (RA)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
				<ul style="list-style-type: none"> Agreed HDD Mitigation Statements and Seasonal Contingency Plan Agreed Sensitive Signing Scheme 	
	31	General Comment	There is no mention in the HRA of embedded mitigation leading to not carrying out works in overwintering period.	We advise that any mitigation measures in the Chapter relevant to Nature 2000 sites should be included in the HRA.	
	32	General Comment	We agree with the plans and projects which have been identified for potential in-combination effects, namely Five Estuarial and Five Angles CEFEN. These are both subject to separate Development Consent Order (DCO) permissions which may or may not be granted to allow construction within the same timeframe and/or consecutive timeframes.	<p>There would be less disturbance if Five Estuarial O&W and North Falls O&W construction activities took simultaneously along the same construction route, if they were to further individual connections, particularly in the same area, for example connecting. This could lead to continual impacts over an extended period.</p> <p>We note that the grid connection is dependent on F&E installation being constructed.</p>	
Assessment of SSSI Impacts					
Screening	33	Para 23.30	We note that there is embedded mitigation in relation to proposed Nature 2000 SSSI which involves the use of HDD to avoid direct impacts from trenching across the SSSI.	<p>We advise that it is essential that the mitigation is achievable and advised to ensure there will be no temporary or permanent habitat loss within F&E SSSI. Please note that vehicle movement across the SSSI in support of line HDD should also be excluded with an alternative route found.</p> <p>Consideration will also need to be given to any drilling fluid (bentonite) breakout.</p> <p>We advise this is taken into consideration.</p>	
	34	Para 30	Island Haven Marshes SSSI should be considered of high importance when taken		

Onshore Ecology

Onshore Ornithology

Y

31 - Noted. Embedded and additional mitigation is included in the HRA (document reference 7.1.1.1)

32 - In-combination effects are considered in the RIAA (doc ref 7.1), but these projects have also been scoped into the cumulative assessment in section 24.8 of Chapter 24 Onshore Ornithology).

The worst-case cumulative scenario for the construction of the Project and Five Estuaries has been assessed, which for onshore ornithology, is considered to be the sequential construction of the two projects, with a gap of at least three years between construction phases ('Scenario 3'). See section 24.8 of Chapter 24 for further information.

The scenario of joint construction of North Falls and Five Estuaries is considered in Chapter 24 of the ES.

33 - The proposed mitigation in relation to the landfall HDD works would be adhered to, in order to avoid any direct impacts on the SSSI. For further details, see Chapter 5 Project Description.

The risk of a bentonite 'frac out' affecting ornithological features is assessed in section 24.6.2.3 of Chapter 24 (Onshore Ornithology).

Mitigation measures in the event of bentonite breakouts are included in this ES chapter, as

				<p>described in Sections 23.3.3 and 23.6 in Chapter 23 (Onshore Ecology), and in the OLEMS (document reference 7.14).</p> <p>34 - The breeding and non-breeding assemblages of Holland Haven Marshes SSSI have been considered as single IOF, where appropriate, i.e. if predicted impacts are similar for all species. Where this occurs, the assessment of impacts is precautionary, being based on the species with the highest sensitivity to the impact (e.g. furthest disturbance distance).</p> <p>Noted. Section 23.6.1.1 of Chapter 23 (Onshore Ecology) reflects our position that individual species and habitats are of different importance depending on their current status within Holland Haven Marshes SSSI. Therefore, these are assessed separately.</p>	
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Natural England's Key Considerations		Natural England's Advice			Risk (RIAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
	35	General Comment	We note that Fisher's Estuarine Muds is a food plant. Hog's Merald has been listed at HRM SSSI. Fisher's Estuarine Muds is protected under Schedule 5 of the Wildlife and Countryside Act 1981, under which it is an offence to intentionally kill, injure, or take, possess, or trade in them.	Therefore, no direct vehicle access should be permitted to the SSSI during HDD activities. Any access track will need to be full compacted and designed so rippers can occur in the short time if this is not considered at the time of consent, then separate/additional planning and MMC (Marine Management Organisation) consents will be required.	Yellow
	36	Para 211	We note that the extent of temporary habitat loss at the landfall area cannot yet be determined, and we are therefore unable to fully determine any to direct impacts on the Designated Features of Holland Haven Marshes (HRM) SSSI. The indirect effects of HDD through Holland Haven Marshes SSSI identified include effects from HDD breakout and road traffic emissions.	We advise that indirect effects should also include noise, vibration, construction dust, human disturbance, lighting etc. In relation to potential impacts on surrounding saltmarsh from HDD it is stated in the documents that it is considered that any silt or impacts from HDD breakout will be cleared by next high tide. The saltmarsh is only covered by Spring High Tides (PTE) so only cleared twice monthly. Therefore, we advise further consideration is given to the efficacy of this mitigation measure. We also advise that careful consideration is given to locating the exit points away from areas of sensitive habitats.	
Assessment	37	Table 23.3, 215, Table 23.30	We note that there is a risk of impacts on HRM SSSI during construction from breakout during HDD, i.e. release of drilling fluids. We note that as part of 'embedded' mitigation, the HDD will be designed appropriately to the local ground conditions to minimise the risk of a breakout where	We advise in relation to Holland Haven Marshes SSSI, that risk mitigation should be put in place to minimise the risk of HDD track scale density into water bodies. Due to their formation, sediments associated with marsh habitats have unconsolidated layers which often include water filled air pockets, thus resulting in a 'loosely' consistency. If we fail	Yellow

Onshore Ecology

Onshore Ornithology

35 - Noted.

36 - Temporary habitat loss within landfall area would be outside of Holland Haven Marshes SSSI – see Figure 24.1 (document reference 3.2.20). Indirect disturbance and impacts due to HDD breakout are however assessed.

The design of the Project layout has been refined since the PEIR, taking into account sensitive habitats for ornithological features. This has included keeping landfall infrastructure away from the lagoon and wetland areas of Holland Haven Marshes SSSI where the highest bird counts were recorded (see Figure 24.1, document reference 3.2.20).

Mitigatory measures for habitats potentially affected by the Project are addressed in Sections 23.3.3 and 23.6 of Chapter 23 (Onshore Ecology), and in the OLEMS (document reference 7.14).

37 - Mitigation measures in the event of bentonite breakouts are included in this ES chapter in Sections 23.3.3 and 23.6 of Chapter 23 (Onshore Ecology), and in the OLEMS (document reference 7.14).

Y

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Natural England's Key Considerations		Natural England's Advice				
Section 42 Preliminary Environmental Information Report (PEIR)		NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
				<p>practicable. Table 23.5 refers to an 'Outline HDD Method and Draft 'Break Out' Contingency Plan that will be submitted as part of the DCO Application.'</p>	<p>been found in other areas along the East Coast of England, these layers interact with the HDD. There is an increased risk of the drilling holes not being maintained and becoming (drilling mud) backfills and, in some worst-case scenarios, considerable sinkholes occurring, both of which would be a concern to the notified vascular plant and aquatic invertebrate communities within Hilsland Haven Marine SSSI. Therefore, further geotechnical data is required within an HDD risk assessment to provide certainty that these issues will not occur. We advise that remediation options are unlikely to be feasible due to the proposed significant impacts.</p> <p>Natural England queries if an engineering assessment has been undertaken to ensure that the defences can be drilled under or through without necessitating the lowering of the defences, including the provision of temporary defence mechanisms in the interval and/or the shortening of the HDD as a result of increased depth. Both scenarios could potentially lead to negative environmental implications because:</p> <ul style="list-style-type: none"> the locations of the soil pits tentatively are paramount to determining no significant impact to the SSSI by ensuring that they are within appropriate arable land and as relevant infrastructure and construction activities remain outside of the notified site. 	
		iii	General Comment	<p>Natural England note that the HDD will have to go under hard sea defences in front of HEM RSSI.</p>		

Onshore Ecology

Onshore Ornithology

38 - The potential for impact is considered to be low given the depth of the drill (20 m). A detailed assessment of drilling below the existing flood defences will be undertaken post-consent (i.e. at detailed design).

This is addressed in Chapter 21 Water Resources and Flood Risk.

Y

Natural England's Key Considerations		Natural England's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
				<ul style="list-style-type: none"> Any site defence work has the potential to impact upon the SSSI and wider environment. <p>We recommend that if an HDD risk assessment is not available, then the applicant should provide alongside the submitted ES and evidence provided to address NE's concerns.</p>	Yellow
	33	General Comment	To ensure minimal disturbance to SSSI features during construction, there should be monitoring of wintering and breeding birds and other features during construction, when it agreed with NE prior to construction.	We advise that an Ecological Clerk of Works (ECOW) is instructed, and works are conducted based on an agreed SSSI Mitigation and Monitoring Plan.	Yellow
	41	General Comment	Natural England highlights the potential for disturbance of Overwintering and breeding birds at the landfill at Holland Haven Marshes SSSI.	<p>Wherever possible preparation and HDD works should avoid sensitive periods for breeding and overwintering birds, if these cannot be avoided:</p> <ul style="list-style-type: none"> The location of the exit pits should be made unsuitable for nesting birds either through the use of bird screens in the form of trees and/or vegetation clearance. An Ecological Clerk of Works (ECOW) should undertake walk over surveys prior to and during construction to identify any nesting birds and implement an agreed protocol for implementing disturbance free buffer zones around active nests; screening/fencing of HDD pits and other working areas at landfill. 	Yellow

Priority Habitats and Species listed under Section 41 list of the Natural Environmental and Rural Communities (NERC) Act, 2006.

Onshore Ecology

Onshore Ornithology

39 - Monitoring will take place throughout the year during the construction phase, focussing on key areas of sensitivity. A monitoring plan would be part of the EMP.

The monitoring would be undertaken by the appointed ECoW or suitably qualified ornithologist.

An ECoW will be present to identify potential disturbance on SSSI features. This is addressed in Section 23.6.1.1 of Chapter 23 (Onshore Ecology) and in the OLEMS (document reference 7.14)

40 - The design of the Project layout has been refined since the PEIR, taking into account sensitive habitats for ornithological features. This has included keeping landfill infrastructure away from the lagoon and wetland areas of Holland Haven Marshes SSSI where the highest bird counts were recorded (see Figure 24.1, document reference 3.2.20).

Measures would be implemented during the construction phase to minimise the risk of any disturbance to breeding or non-breeding birds within the SSSI, which may include avoiding, or minimising work undertaken at sensitive times of the day and year.

If it is identified in advance that construction of infrastructure such as exit pits may overlap with the breeding season and carry a risk of impacting nesting birds, then deterrents or

Y

				<p>screening would be considered by the ECoW and monitored to ensure legal compliance with the Wildlife and Countryside Act 1981 (as amended).</p> <p>Measures to avoid disturbance would be included in the EMP secured by DCO Requirement and would be enforced by the ECoW during the construction phase, which would cover the whole onshore project area. An Outline Landscape and Ecological Management Strategy (OLEMS) (Document Reference: 7.14) has been prepared and submitted with the DCO application, which includes outline measures. The EMP will be based on the OLEMS.</p>	
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Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
Potential impact pathways where further risk assessment required	41	General Comment	Red-listed priority farmland breeding birds, such as corn bunting, grey partridge, could be temporarily disturbed by construction.	We advise avoidance of important breeding locations, and adoption of suitable mitigation measures. For example (but not exclusively) the construction duration should be minimised in sensitive locations/sites, alongside minimised disturbance due to lighting, noise etc. We advise farmland habitats should be reinstated as soon as possible, and all work carried out under ECoW supervision. Consideration should be given to how winter works might impact on breeding bird habitat for the following year.	
	42	General Comment	We advise that Red-listed priority birds may be permanently affected by loss of habitat due to substation construction.	We advise that suitable habitat for such species should be incorporated into the landscaping design scheme for substations.	
	43	General Comment	We agree with Five Estuaries and East Anglia GREEN being taken forward for CIA (Cumulative Impact Assessment).	The Applicant should seek to continue to gain the most up to date information on these projects to consider in the ES.	

Onshore Ecology

Onshore Ornithology

41 - These Red-listed species have been assessed and seen as priority breeding species for construction mitigation. These measures are outlined in the assessment section and include ECoW supervision and habitat reinstatement.

Habitat enhancement to benefit these Red-listed species is proposed for the onshore substation works area (see section 24.6.2.1.1 of Chapter 24 (Onshore Ornithology)).

42 - These Red-listed species have been assessed and seen as priority breeding species for construction mitigation. These measures are outlined in the assessment section and include ECoW supervision and habitat reinstatement.

Habitat enhancement to benefit these Red-listed species is proposed for the onshore substation works area (see section 24.6.2.1.1 of Chapter 24 (Onshore Ornithology)).

43 - Noted.

N

Other Onshore Related Matters					
National Document Title		National Document's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
Other Onshore Related Matters					
Onshore Protected Species	44	General Comment	Natural England has produced guidance advice to help planning authorities understand the impact of particular developments on protected species. We advise you to refer to this advice. Natural England will only provide bespoke advice on protected species where they form part of a Site of Special Scientific Interest or in exceptional circumstances.	The ES should assess impacts on protected species in line with Natural England's standing advice. Any departures from standing advice will need to be clearly highlighted, justified, and associated risks should be assessed and appropriately mitigated.	
Biodiversity Net Gain	45	General Comment	Development should provide net gains for biodiversity in line with the NPPF (National Planning Policy Framework) paragraphs 174(i), 175 and 180. Development also provides opportunities to secure wider environmental gains: as outlined in the NPPF (paragraphs 8, 73, 104, 120, 174, 175 and 180). We advise you to follow the Mitigation Hierarchy as set out in paragraph 160 of the NPPF and firstly consider what existing environmental features on and around the site can be retained or enhanced or what new features could be incorporated into the development proposal.	Natural England's Guidance Advice may be used to calculate biodiversity losses and gains for terrestrial and intertidal habitats and can be used to inform any development project. For small development sites the Small Sites Matrix may be used. This is a simplified version of Guidance Advice and is designed for use where certain criteria are met. Natural England's Environmental Benefits Statement may be used to identify nature and to avoid and minimise any negative impacts. It is designed to work alongside Guidance Advice .	

Onshore Ecology

Onshore Ornithology

44 - Noted.

45 - Noted. This is addressed in the Biodiversity Net Gain Strategy (Document Reference 7.22) and the OLEMS (Document Reference 7.14).

N

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Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			<p>Where on-site measures are not possible, you should consider off-site measures. Opportunities for enhancement might include:</p> <ul style="list-style-type: none"> • Re-orienting a neglected hedgerow • Creating a new pond as an attractive feature on the site. • Planting trees characteristic to the local area to create a positive contribution to the local landscape. • Using native plants in landscaping schemes for better nectar and seed sources for bees and birds. • Incorporating swill boxes or fat boxes into the design of new buildings. • Designing lighting to encourage wildlife. • Adding a green roof to new buildings. 	<p>Major 1.0 and is available as a top text version.</p>	
Soils and Best and Most Versatile Agricultural Land	46	General Comment	<p>Local planning authorities are responsible for ensuring that they have sufficiently detailed agricultural land classification (ALC) information to apply NPPF policies (Paragraphs 174 and 175). This is the case regardless of whether the proposed development is sufficiently large to consult Natural England. Further information is contained in GOV.UK contacts. Agricultural Land Classification information is available on the MAGIC website on the Civil Servants website. If you consider the proposal has</p>	<p>We recommend that a Soil Management Plan (SMP) is a requirement of the DCO. The SMP should identify best practice for the handling of soils subject to temporary disturbance during construction, the protection of soils which may be affected by compaction etc. during construction and other issues.</p> <p>We advise that the construction of North Falls at the same time as Five Estuaries and East Anglia GREEN onshore structures at one</p>	

Onshore Ecology

Onshore Ornithology

46 - This is addressed in the OCoCP (Document Reference 7.13).

Cumulative impacts relating to Norwich to Tilbury are described in Section 23.8.3.2 of Chapter 23 (Onshore Ecology).

N

Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAQ)
			<p>significant implications for further loss of best and most versatile agricultural land, we would be pleased to discuss the matter further.</p> <p>Guidance on soil protection is available in the Defra Construction Code of Practice for the Sustainable Use of Soil on Construction Sites, and we recommend its use in the design and construction of development, including any planning conditions. For mineral working and landfilling separate guidance on soil protection for site restoration and aftercare is available on Soil4U website. Detailed guidance on soil handling for mineral sites is contained in the Institute of Quarrying Good Practice Guide to Handling Soil in Mineral Working.</p> <p>Should the development proceed, we advise that the developer uses an appropriately experienced and specialist to advise on and supervise soil handling, including identifying which soils are thin enough to be handled and how to make the best use of soils on site.</p>	<p>soil route could minimise the damage and disturbance to soils.</p>	
Ancient Woodland and Ancient/Veteran Trees	47	General Comment	<p>You should consider any impacts on ancient woodland and ancient and veteran trees in line with paragraph 16G of the NPPF. Natural England maintains the Ancient Woodland Inventory, which can help identify ancient woodland. Natural England and the</p>	<p>An Ancient Woodland and Ancient/Veteran Tree management plan should be included with the Application.</p>	

Onshore Ecology

Onshore Ornithology

47 - This is addressed in Section 23.6.1.5 of Chapter 23 (Onshore Ecology) and in the OLEMS (Document Reference 7.14).

N

Natural Environment Policy		Onshore Ecology			
Section 42 Preliminary Environmental Information Report (PEIR)					
	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAid)
			Forestry Commission have produced advice for planning authorities in relation to ancient woodland and ancient and veteran trees. This should be taken into account by planning authorities when determining relevant planning applications. Natural England will only provide bespoke advice on ancient woodland, ancient and veteran trees where they form part of a Site of Special Scientific Interest, supporting habitat for European protected species or in exceptional circumstances.		
Connecting people with nature (National Trails, open access land and England Coast Path)	48	General Comment	Paragraphs 100 and 174 of the NPPF highlight the importance of public rights of way and access. Development should consider potential impacts on access land, common land, rights of way and coastal access routes in the vicinity of the development. Consideration should also be given to the potential impacts on the nearby National Trails. The National Trails website www.nationaltrails.org.uk provides information including contact details for the National Trail Officer. Appropriate mitigation measures should be incorporated for any adverse impacts.	A Public Rights of Way management plan should be included within the Outline Landscape and Ecology Management plan.	
	49	General Comment	There are possible implications for users of King Charles III England Coast Path (ECP) depending on timing of opening of ECP.	We advise due regard to scheme design and timings of project works are given to avoid impacts as far as practicable to coastal access. England Coast Path is likely to be open this area by summer 2025 at the earliest.	

Onshore Ecology

Onshore Ornithology

48 - This is addressed in the OLEMS (document reference 7.14).

49 - The King Charles III England Coast Path is noted as part of the existing environment in Section 32.5 of Chapter 32 (Tourism and Recreation) and is considered in the assessment within Section 32.6 and Section 32.10 of Chapter 32. The assessment assumes that the King Charles III England Coast Path will be open by the time onshore construction works begin.

N

NFOWFS3_049_130_040723	<p>Annex 7. Seascape, Landscape and Visual Impact Assessment</p> <p>Natural England is the Government’s statutory adviser on landscape, the designating authority for National Parks (NPs) and Areas of Outstanding Natural Beauty (AONBs), and the defining authority for Heritage Coasts in England. Natural England’s comments relate only to seascape, landscape, and visual effects associated with the statutory purpose of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (SCHAONB), the special character of the Suffolk Heritage Coast (SHC), and their seascape settings. The presence and special character of the SHC within the SCHAONB helps to define that part of the designated area which is most likely to experience significant adverse effects arising from the North Falls scheme. Although a defined rather than a designated landscape, the SHC covers a geographical area, which lies wholly within the SCHAONB. To understand the likely extent of the indirect onshore influence of the North Falls scheme it is therefore helpful to refer to the boundary of the SHC.</p> <p>In preparing this response, the following sections of the Preliminary Environmental Information Report (PEIR) have been reviewed:</p> <ul style="list-style-type: none"> • 004447040-03_North-Falls-PEIR_Chapter-29-Offshore Seascape, Landscape and Visual Impact Assessment • 004742751-02_Appendix-29.1_North-Falls-SLVIA-Visualisation-Methodology • Chapter-29-SLVIA-Figures-Volume-II <p>Natural England also undertook site visits to selected viewpoints within the SCHAONB in the summer of 2018 and again in August 2019. We have also drawn upon our experience of advising on other major offshore renewable energy schemes located within the seascape setting of nationally designated landscapes, specifically East Anglia 2 Offshore Wind Farm (EA2 OWF) and East Anglia 1 North (EA1N) OWF</p>	Seascape and Landscape Visual Impact Assessment		Noted.	N
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NFOWFS3_049_131_040723	<p>Natural England's Advice and Recommendations</p> <p>A preamble has been provided along with a summary of Natural England's advice in relation to Offshore Seascape, Landscape and Visual Impact Assessment is set out in Table 1. Our key concerns along with recommendations are presented in further detail in Table 2.</p> <p>Preamble</p> <ol style="list-style-type: none"> 1. For landscape and seascape effects both within and outside of the SCHAONB we advise that close attention is paid to the comments and advice provided by the relevant Local Planning Authorities. 2. We also recommend that close attention is paid to any advice provided by the SCHAONB Partnership. Their detailed local knowledge of the designated landscape, its special qualities, its management needs and the relationship between land and sea in supporting the area's statutory purpose will provide greater depth and detail than can be provided by Natural England. 3. Natural England offers its comments and advice without prejudice. Our comments and advice on the landscape, seascape and visual effects of the offshore elements of the scheme may change as further evidence and information emerges as a part of the EIA process. We may also receive other relevant information from the local authorities, the SCHAONB Partnership or other sources. Natural England may also conduct site visits to further its own evidence to inform our comments and advice during the Pre-application phase and may continue to do so until the end of the Examination process. 	Seascape and Landscape Visual Impact Assessment		Noted.	N
NFOWFS3_049_132_040723	<p>Note about Turbine Height and Proximity to the Coastline of a Designated Landscape</p> <p>In the last 20 years offshore wind turbines have increased significantly in output capacity and size. In relation to the coastlines of designated landscapes, this upscaling has seen an increase from 132m high/3.6MW turbines (Sheringham Shoal OWF - Norfolk Coast AONB - closest point 17km) to 181m high/6.3MW turbines (Gallopier OWF - Suffolk Coast and Heaths AONB - closest point 29.3km). The emerging turbines are 15MW to 20MW and reach heights in excess of 397m, as is proposed for North Falls OWF.</p> <p>When viewed from any given location, the bigger the structure the greater the visual prominence it will have. Similarly, the bigger the structure the greater the distance (and geographic area) from which it can be seen from, and the greater the likelihood that individual structures or a collection of them will be prominent within the view. This is especially the case for offshore wind turbines and arrays because there is no means to screen them. These basic</p>	Seascape and Landscape Visual Impact Assessment		Noted.	N

	<p>principles have guided our appraisal of this proposal and our subsequent advice. We have also used our experience of, and drawn visual comparisons with, the Galloper OWF and Greater Gabbard OWF arrays which are already located in the seascape setting SCHAONB. We have used these two arrays to draw comparisons with the predicted effects of North Falls to illustrate the likely influence of the upscaling in technology on the seascape setting of the SCHAONB and SHC.</p>				
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Table 1 Summary of Key Issues - Offshore Seascape, Landscape and Visual Impact Assessment

NI Ref	Summary of Key Concerns	Natural England's Recommendations to Resolve Issues	Resp
1	We advise that the North Falls ODF has the potential to cause major adverse effects on landscape and visual receptors within the SCHAONB and SHC. We advise these are significant for the purposes of Environmental Impact Assessment (EIA). These major adverse effects are likely to occur along a ~10km stretch of coastline between Dunwich Coastguard Cottages to Bawdsey Marsh, and notably at Oford Ness. As a result of these effects, we advise that further harm to the natural beauty of the SCHAONB and special character of the SHC, will occur.	We advise the assessment is updated to reflect this.	
2	Natural England has outstanding concerns regarding the evidence used to assess the potential harm from the North Falls ODF (and particularly with regard to the North Ayley Area) on the statutory purposes of the SCHAONB and SHC. These concerns are repeated in 3a-3g below.	Amend the submitted Environmental Statement to reflect Natural England's advice.	
2a	We fail to understand how the assessment of special qualities (as set out in Table 26.13) relates to the SCHAONB being of special qualities or set out in the Management Plan (2016 - 2027) and related documents. As presented the potential impacts from the North Falls ODF on the natural beauty, as expressed through the special qualities of the SCHAONB and the special character of the SHC, are not assessed within the GLVIA.	Natural England considers the lack of a formal assessment of impacts to the special qualities listed by the SCHAONB management plan is a major omission and advise the assessment must be included in the Environmental Statement.	
2b	No justification is provided for the 30km limit used to establish the outer limit of significant seascape, landscape and visual effects.	See related comments section below and update assessment in the light of the advice.	
2c	We advise that the significance of effects, in FIA terms, from the North Falls ODF on some landscape and visual receptors located within the SCHAONB and SHC (as assessed at viewpoints from Covehithe to Bawdsey Marsh) have been underestimated.	We advise the assessment is revised in light of the advice.	
2d	There is insufficient evidence to be certain that the maximum height scenario in the Worst-Case Scenario.	Further evidence will be required in the submitted EIS.	

Seascape and Landscape Visual Impact Assessment

Noted.

N

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NE Ref	Summary of Key Concerns	Natural England's Recommendations to Resolve Issues	RNA
	(WCS) to be able to fully assess the potential impacts to the SCHACNE and SHC.		
2e	We disagree that the North Falls DWF will have no significant cumulative impacts on the SCHACNE and SHC.	We advise the submitted assessment is updated to reflect Natural England's advice.	
2f	Paragraph 107 of the SLVA states that there are no landscape mitigation proposals. Natural England advises that impacts from the North Falls DWF on the statutory purpose of the SCHACNE and SHC are highly dependent upon the design parameters of the project. We conclude from the Applicant's assessment that little, or no consideration has been given to the requirement for Good Design, as set out in section 4.5 of EN-1. Alternatively, it could be concluded that due to other constraints the Applicant has determined that the principles of Good Design cannot be applied to this scheme.	We advise that the Applicant should demonstrate in the submitted ES how Good Design has been considered. We advise that, to help achieve Good Design, the Project should look to establish some design principles, which may not prevent a significant impact occurring, but have the potential to reduce the severity of it. We advise this includes consideration of the ways in which the design can seek to reduce the geographical extent of the proposal and the apparent height of the turbines. Natural England advises that to move the design towards a more acceptable project in terms of SLVA impacts, the Applicant should consider principles to exclude development in the Northern array area and commit to using the smaller 310m turbines in the southern array.	
2g	The assessment of the sequential nature of possible visual effects associated with users of the Suffolk Coastal Path / King Charles II English Coastal Path is unclear.	Please provide clarity in the submitted ES regarding effects on users of the coastal path.	

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_136_040723

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			County Council Landscape Character Assessment, rather than the special qualities of the SCHAONE.		
	3c	Detailed comment	Table 29.13 also states that the LCTs Open Coastline and Wooded Fens and Estate Sandlands and Rolling Estate Sandlands will be affected by the North Falls OWF. This contradicts the assessment made in Table 29.4 which details that for each of these three LCTs 'There are no key characteristics for this LCT in which the relationship / influence of the sea is recognised. This LCT is not carried forward for further assessment.'	Natural England's assessment of impacts to LCTs can be found in Table 3. It appears that the assessor has not undertaken any site visits to understand for themselves the contribution that the sea makes to the LCTs. Therefore, we advise site visits are conducted to inform the assessment.	
	3d	Detailed comment	Natural England advises that the impacts of the North Falls OWF on the special character SHC is also not assessed within the SLVA. We note that effects on the SHC are considered in Chapter 25, Cultural Heritage Assessment.	We advise that for ease of understanding, this assessment is incorporated into the SLVA, as it will assist in the better understanding the effects on the SCHAONE.	
	4	Overarching Comment	Justification is not provided for the 30km threshold used to establish significant seascape, landscape and visual effects.	We advise that justification is provided and that the further detailed comments below are addressed.	
	4a	Detailed comment	The methodology used to establish this 30km threshold is not detailed within the SLVA, or the SLVA Methodology document (Appendix 29.1). The letter	We advise that Appendix 29.1 should include a description as to how the 30km threshold has been	

Seascape and Landscape Visual Impact Assessment

Noted.

N

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			document also makes a reference to Callisburgh onshore wind farm which is not the subject of this consultation and forms no part of the North Falls application.	established in relation to the 60km study area used for the SI, VIA.	Red
	40	Detailed comment	The most recent Review and Update of Scenic and Visual Quality Study for Callisburgh Wind Farm (RWP) , conducted to inform the Energy Strategic Environmental Assessment 4, recommends (in Table 13.4) that the buffer distance for 301m to 400m turbines in the presence of multiple stability technique designations should be at least 40km.	Natural England agrees with the recommendation and notes a greater separation distance was used for the EAIN and EAD Environmental Statements. We also note that the Applicant has not referred to this document although they do refer to the Suffolk Landscape Statement to Callisburgh Wind Farm , Suffolk County Council and Suffolk Coast and Heath AONB Partnership 2020.	Green
	42	Unstated comment	Table 4 of our response below confirms that visually significant views of the North Falls O&W turbines are still possible from Viewpoint 1 at Covehithe, over 42km away from the SCHAONB and SHC.	We advise that the Applicant to submit their assessment in light of this advice.	Red
	5	Overarching comment	We advise that significance of effects (in EIA terms) from the North Falls O&W on visual receptors at the ten assessed viewpoints from Covehithe to Bawsey Manor, (all located within the SCHAONB and SHC) have been underestimated.	We advise the assessment is to be evaluated and the submitted ES accurately estimates these impacts.	Red

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_138_040723

Natural England's Key Considerations		Natural England's Advice			Risk (YRAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	
	In	Created corrected	Table 2 details Natural England's advice on the significance of effects from the North Falls CWH on viewpoints 1 - 10 which are situated within the SICHADNS and SHC. These effects are judged to be Moderate - Major Adverse at Viewpoints 1 and 2, and Major Adverse at Viewpoints 3 to 10. Our judgements have been influenced by our experience of other offshore wind farms supported by the apparent height calculations of the proposed North Falls turbines at these viewpoints (see Table 2).	Align to Natural England's advice within Table 1 Detail	
	No	Detailed comment	Natural England's judgement is that the sensitivity of the landscape receptors within the SICHADNS and SHC is high, and not medium-high as judged by the applicant. The SICHADNS is a nationally protected landscape which has been designated for its natural beauty and has a statutory purpose to conserve and enhance that natural beauty. The SHC is a nationally defined landscape because of its special character of which natural beauty is one element. We also note that the criteria used by the Applicant to judge these receptors as a medium-high sensitivity has not been clearly articulated.	Natural England advises that based on the information provided we cannot support the sensitivity of medium-high that has been assigned to these areas and advise that this is amended to high in the submitted EIL.	

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_139_040723

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PER Ref	Comment	Recommendation	Risk (RAG)
	b3	Detailed comment	Natural England advises that the high sensitivity of the SCHAONB and SHC to offshore wind development at key viewpoints between Southwell to Old Tellinghoe has already been clearly established by previous Examinations, for example of the EA2 OWT. This stretch of coastline offers the opportunity for high quality views out to sea, and the availability of this experience allows people to enjoy the natural beauty for which the SCHAONB was designated. The natural beauty indicates scenic quality highlights the long distance and panoramic views looking out to sea and along the Heritage Coast which are available from within the designation. These views are highly susceptible to changes in landscape character.	We therefore advise that the Applicant examine these previous assessments and advise that the submitted assessment in this case is amended to high.	
	b4	Detailed comment	Natural England disagrees with the Applicant's judgement of the magnitude of effect of all ten assessed viewpoints within the SCHAONB and SHC. The size and scale of the scheme will affect twice the size of any consented or proposed OWT within the seascape setting of the SCHAONB and SHC. The geographical extent of the area influenced is also considerable.	We advise this is taken into consideration in the submitted CI.	

Seascape and Landscape Visual Impact Assessment

Noted.

N

Report Element's Key Considerations		Natural Engineer's Advice			Risk (RAG)
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendations	
	5f	Detailed comment	The North Falls scheme is still between two array areas (which are also adjacent array areas) with a significant gap of ~20km between them. We advise that when this gap, the lateral spread of the offshore OWF will be assessed from the SCHAONB and SHC.	This should be noted in the submitted EIS.	Red
	5f	Detailed comment	The potential areas (2) to west from the SCHAONB and SHC are likely to include a large number of operational arrays in the same seascape, including of EAZ, EATN and Five Eastward. This means that if the North Falls OWF is constructed, the ability to view out to sea from the SCHAONB and SHC and not see wind turbines will be infeasible.	We advise that this needs to be considered in relation to the configuration impact of the project and boundary described within the submitted EIS.	
	5	Overarching comment	There is insufficient evidence to be certain that the maximum height scenario is the Worst-Case Scenario (WCS) in terms of potential impacts on the SCHAONB and SHC.	Refer to detailed comment below.	
	5d	Detailed comment	Paragraph 29.3.2 states that 'for assessment purposes the smaller number of larger turbines will result in longer distance visibility due to the larger scale of the turbines and therefore this is judged to be the worst-case scenario'. However, the SLVIA presents	We advise that this imagery is presented and assessed for viewpoints 1 - 10 and 17 because: The screen heights of the 310m turbines are still potentially significant at these locations (see Table 4).	

Seascape and Landscape Visual Impact Assessment

6 - The worst-case scenario, in terms of seascape, landscape and visual effects, is judged to be the smaller number of larger turbines (rather than larger number of smaller turbines). The largest turbine size under consideration will create the largest viewshed and will be more prominent in views from the coast. Further information on the approach to worst case for the SLVIA is set out in Section 29.3.2 of Chapter 29 (Seascape, Landscape and Visual Impact Assessment).

Wirelines from selected viewpoints have been provided to show both scenarios, see Figures 29.3.3 to 29.3.17 of Chapter 29.

Natural England's Key Considerations:		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			no photomontage evidence detailing how the 72, 210m turbines would appear from key viewpoints within the SCHAQNB and SHC.	ii The impacts of despoiling the northern army area on the potential to views out to sea from the SCHAQNB and SHC have not been assessed.	Yellow
	7	Overarching comment	We disagree that the North Falls OWF will have no significant cumulative impacts on the SCHAQNB and SHC.	Refer to detailed comments below.	Red
	7a	Detailed comment	The SLVA does not find any difference between the significance of impacts on landscape and visual receptors within the SCHAQNB and SHC, when the project is considered alone or in combination with other LWF developments (either developed, consented, or proposed). However, the assessment does find the potential for significant (moderate) cumulative effects at viewpoints 1-6, 8-10 and for users of the Suffolk Coast Path / King Charles III English Coastal Path. These significant cumulative effects are ruled out based on an assessment that: When visible on clear days, offshore wind farms will occupy a wide extent of the seaward horizon in views to the east and south-west. This would be the case even without the Offshore Above-sea Development in the cumulative picture too. As such, the Offshore Above-sea	Given that the Cumulative SLVA (CSLVA) will be a key requirement of the EIA, as significant cumulative effects have been identified, we advise that the Applicant clearly sets out the additional items that the North Falls OWF will present to the statutory purpose of the SCHAQNB and special elements of the SHC, taking into consideration the advice provided.	Red

Seascape and Landscape Visual Impact Assessment

7 - The cumulative assessment presented in this assessment has been re-structured, to avoid any potential confusion in terms of reporting of cumulative effects. Further detail on the approach to the cumulative assessment is provided in Section 29.4.3 of Chapter 29 (Seascape, Landscape and Visual Impact Assessment).

N

NFOWFS3_049_142_040723

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAD)
			<p>Development is not judged to tip the balance towards fully cumulative effects being significant.</p> <p>This assessment is, in effect, asking the decision maker to agree that the statutory purposes of the SICHMNH and the special character of SIC have already been harmed to some extent by GWR development and to conclude that therefore additional impacts are acceptable. This is an inappropriate frame through which to consider the impacts on these designated landscapes, as it downplays the potential for additional impacts to further affect the special qualities and the designated landscape further away from its required state.</p> <p>The statutory purpose of the SICHMNH is to conserve and enhance. Adding further offshore wind turbines into the seascape setting of the SICHMNH and SIC will not conserve and enhance the natural beauty of the designation nor positively contribute to the special character of the Heritage Coast. It will degrade these areas further. Therefore, it is necessary to understand how much more damage to the special qualities the turbines of the North Falls proposal will</p>		

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_143_040723

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			Issue: The Applicant's conclusion is that due the presence of the existing DWT the development of North Farm would not cause any substantial harm to the statutory purposes of the SCAQOUE and the special character of the SMC. Natural England disagrees with this conclusion for the reasons we outline below.		
	b)	Detailed comment	Natural England requests that the methodology deriving from the judgements in the Cumulative SLVIA have been calibrated to provide Appendix 20.3 states that 'judgements on the magnitude of cumulative visual effect are recorded as high, medium, low or barely perceptible'. The judgements made in the SLVIA are not on this scale, as they are mostly considered as small. (for example, see Table 20.3.11). We request that clarification is provided.	Please provide the methodology and clarification on the assessment terms used in the submitted ES.	
	c)	Detailed comment	Paragraph 60 of the SLVIA states that some viewpoints illustrate key cumulative interactions.	We advise the submitted assessment identifies which viewpoints these are and why they have been selected.	
	d)	Overarching comment	Paragraph 107 of the SLVIA states that 'there are no landscape mitigation proposals'.	We advise that the Applicant takes the principles of Good Design into consideration and demonstrates how they have been applied in the submitted ES.	

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_144_040723

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (MAX)
			<p>Natural England advises that respect from the North Falls OWP on the statutory process of the SCMA/OWP and SNC will be highly dependent upon the design parameters of the project. We conclude from the Applicant's statement that it is, so no consideration has been given to the requirements for Coast Design, as set out in section 4.2 of CH. 1. The alternative conclusion is that due to other constraints the Applicant has determined that the concept of Coast Design cannot be applied to this scheme.</p>		
	42	Detected comment	<p>The 7 turbines (based on the WCS) of the northern array area present the greatest risk to further harming the natural beauty of the SCMA/OWP and the special character of the SNC. This is because:</p> <ul style="list-style-type: none"> The difference in scale and height between the proposed and existing offshore wind turbines will be readily apparent when viewed from the coastline of the SCMA/OWP / SNC. For example, at Oxford Ness. 	<p>We advise the information provided here is considered and the submitted assessment updated accordingly. The further information requested should be provided.</p>	

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_145_040723

Nature England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			<p>The North Falls turbines will appear at an angle of height of nearly 1 degree (0.952 degrees, see Table 4). In comparison the Greater Gullford and Gallop turbines will appear to be almost one third of this height (0.268 and 0.3 degrees respectively). The North Falls turbines will therefore appear to be 3 times the height of the existing wind turbines when seen from Oxford Ness. The proposed Five Episcopes turbines will appear approximately half the height (0.699 degrees) of the North Falls turbines, and the EAZ turbines a little over a third at 0.352 degrees or slightly later than the turbines of the Gallop array.</p> <p>The three most westerly turbines in the northern array area are so large that</p>		

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_146_040723

Natural England's Key Considerations		Natural England's Advice			
Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)
			<p>They are likely to be perceived by the human eye as three distinct structures between Dunwich Coastguard Cottages to (Ditch Ness) and this is despite the separation distance in excess of 40km (Dunwich Coastguard Cottages)</p> <p>4) Nighttime effects, in the form of the lateral spread of aviation lights from the array area, on the special qualities of the SCHOONS has not been assessed. Natural England advises that an assessment of nighttime effects is required, and suitable provisions should be prepared to illustrate the likely effect. See the EAZ Environmental Statement for an example.</p>		
	ii	Detailed comment	Although the outcrops of the northern array area, at 22.5km away, are likely to present the greatest magnitude of	We advise the information provided here is considered and the submitted assessment updated	

Seascape and Landscape Visual Impact Assessment

Noted.

N

NFOWFS3_049_147_040723	<table border="1"> <thead> <tr> <th colspan="2">Natural England's Key Considerations</th> <th colspan="4">Natural England's Advice</th> </tr> <tr> <th>Section 42 Preliminary Environmental Information Report (PEIR)</th> <th>NE Ref</th> <th>PEIR Ref</th> <th>Comment</th> <th>Recommendation</th> <th>Risk (RAG)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td>landscape and visual change along the sections of the SCA-MCH) and SMC. we advise that there is insufficient information to discount significant impacts to landscape and visual receptors between viewpoints 7 to 10 from turbines within the southern array area (see Table 4). We believe that there is potential for significant effects from the southern array area and wish to see evidence included in the Environmental Statement to determine whether or not this is the case.</td> <td>accordingly. The further information requested should be provided</td> <td></td> </tr> <tr> <td></td> <td>5</td> <td>Overarching Comment</td> <td>The assessment of the sequential nature of possible visual effects associated with users of the Suffolk Coastal Path is unclear.</td> <td>We advise clarity is provided on this within the submitted assessment</td> <td></td> </tr> <tr> <td></td> <td>16</td> <td>Unsettled Comment</td> <td>We are unable to find evidence in the SLVIA to support the conclusion that sequential effects become insignificant northwards of Worwye beach.</td> <td>Please provide evidence to amend the submitted assessment</td> <td></td> </tr> <tr> <td></td> <td>10</td> <td>Detailed Comment</td> <td>What is the total distance along which users of the Suffolk Coastal Path / King Charles III English Coastal Path are likely to experience noticeable adverse effects?</td> <td>We advise this information on the total distance is provided in the submitted EIS</td> <td></td> </tr> </tbody> </table>	Natural England's Key Considerations		Natural England's Advice				Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)				landscape and visual change along the sections of the SCA-MCH) and SMC. we advise that there is insufficient information to discount significant impacts to landscape and visual receptors between viewpoints 7 to 10 from turbines within the southern array area (see Table 4). We believe that there is potential for significant effects from the southern array area and wish to see evidence included in the Environmental Statement to determine whether or not this is the case.	accordingly. The further information requested should be provided			5	Overarching Comment	The assessment of the sequential nature of possible visual effects associated with users of the Suffolk Coastal Path is unclear.	We advise clarity is provided on this within the submitted assessment			16	Unsettled Comment	We are unable to find evidence in the SLVIA to support the conclusion that sequential effects become insignificant northwards of Worwye beach.	Please provide evidence to amend the submitted assessment			10	Detailed Comment	What is the total distance along which users of the Suffolk Coastal Path / King Charles III English Coastal Path are likely to experience noticeable adverse effects?	We advise this information on the total distance is provided in the submitted EIS		Seascape and Landscape Visual Impact Assessment		9 - Sequential effects from the Suffolk Coast Path and King Charles III England Coast Path have been considered. See Section 29.5.4.4 and Table 29.39 of Chapter 29 (Seascape, Landscape and Visual Impact Assessment).	N
Natural England's Key Considerations		Natural England's Advice																																							
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NFOWFS3_049_148_040723	<table border="1"> <thead> <tr> <th colspan="2">Natural England's Key Considerations</th> <th colspan="4">Natural England's Advice</th> </tr> <tr> <th>Section 42 Preliminary Environmental Information Report (PEIR)</th> <th>NE Ref</th> <th>PEIR Ref</th> <th>Comment</th> <th>Recommendation</th> <th>Risk (RAG)</th> </tr> </thead> <tbody> <tr> <td></td> <td>16</td> <td>Detailed Comment</td> <td>Natural England welcomes the windlines provided in Figures 29.2.17a, b and c regarding requested viewpoint 17, which is on the coastal path between Thorpeness and Sizewell.</td> <td>A full assessment of this viewpoint should be presented within the submitted SLVIA, and that the image data displays the correct distance from the North Path OYF</td> <td></td> </tr> </tbody> </table>	Natural England's Key Considerations		Natural England's Advice				Section 42 Preliminary Environmental Information Report (PEIR)	NE Ref	PEIR Ref	Comment	Recommendation	Risk (RAG)		16	Detailed Comment	Natural England welcomes the windlines provided in Figures 29.2.17a, b and c regarding requested viewpoint 17, which is on the coastal path between Thorpeness and Sizewell.	A full assessment of this viewpoint should be presented within the submitted SLVIA, and that the image data displays the correct distance from the North Path OYF		Seascape and Landscape Visual Impact Assessment		Noted.	N																		
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NFOWFS3_049_149_040723	<p>Natural England commentary to inform the final SLVIA SLVIAs (and LVIAs) have a tendency to be complex, highly interconnected, and multi-faceted documents which reflect the nature of their subject matter. Assessment of effects upon the natural beauty of designated landscapes and the special character of Heritage Coasts only adds to this complexity. NE has reviewed many SLVIAs and LVIAs since the introduction GLVIA3 in 2013, and we now have considerable experience in distilling out those aspects of the assessment which pertain to designated landscapes.</p> <p>GLIVA 3 provides a pithy reminder of the pitfalls into which LVIA / SLVIAs can fall into (paragraph 3.35 p.41). The 3rd bullet point states that 'losing sight of the most glaringly obvious significant effects because of the complexity of the assessment' should be avoided. In order to assist North Falls in preparing their submission, Natural England offers the following simple clear and accessible explanation of the issue as we understand it.</p>	Seascape and Landscape Visual Impact Assessment		Noted.	N
NFOWFS3_049_150_040723	<p>397m Turbines</p> <p>In relation to 397m turbines being located within the northern array area, Natural England has two key concerns, which are i) the size of the turbines and ii) their location being too close to the coastline of the SCHAONB and SHC. Natural England's advice is that their presence in the seascape setting of the SCHAONB and SHC will further degrade the quality of views out to sea. In particular, when seen from Orford Ness, their size, combined with the marked contrast in height with the existing wind turbines, will create a visually incoherent and cluttered seascape. This will lead to a further loss of natural beauty for which this highly sensitive landscape was designated. It will increase the industrialisation of the seascape setting of the SCHAONB, leading to further loss of the sense of wildness and tranquillity which is still, despite the presence of the Galloper OWF and Greater Gabbard OWF arrays, a special quality of this remote coastline. The introduction of the consented EA2 OWF will only erode this special quality further.</p> <p>Additionally, the proposed turbines located within the southern array area will also introduce a sense of industrialisation and clutter into the seascape setting of the SCHAONB. However, the adverse influence of these turbines will be less than those located in the northern array area and will likely be confined to a stretch of coastline from the southern coast limit of the SCHAONB (Old Felixstowe)</p>	Seascape and Landscape Visual Impact Assessment		Noted.	N

	<p>to Orford Ness. However, their presence in the seascape setting of the SCHAONB will further degrade the quality of views out to sea. As with the northern array, when seen from Orford Ness their size, combined with the marked contrast in height with the existing arrays, will create a visually incoherent and cluttered seascape, leading to further loss of the sense of wildness and tranquillity.</p>				
NFOWFS3_049_151_040723	<p>310m Turbines In relation to the 310m turbines being located within the northern array area, Natural England has two key concerns, which are i) the size of the turbines and ii) their location being too close to the coastline of the SCHANOB and SHC. This is true for all but the northern coastal portion of the SCHAONB i.e. those portions lying beyond Dunwich. Their presence in the seascape setting of the SCHAONB will further degrade the quality of views out to sea. When seen from Orford Ness their size, combined with the marked contrast in height with the existing wind turbines, will create a visually incoherent and cluttered seascape. This will lead to a further loss of natural beauty for which this landscape was designated. It will increase the industrialisation of the seascape setting of the SCHAONB leading to further loss of the sense of wildness and tranquillity which is still, despite the presence of the Galloper OWF and Greater Gabbard OWF arrays, a special quality of this remote coastline. The turbines located in the southern array area are unlikely to have a significant effect on the special qualities of the SCHAONB and special character of the SHC alone, although they will add to the visible presence of the Galloper OWF and Greater Gabbard OWF arrays and should be considered in the context of their impact adding to the wider visually incoherent and cluttered seascape described above. We concluded that the key test issue is the acceptability of further harm to the seascape setting of the SCHAONB, and</p>	Seascape and Landscape Visual Impact Assessment		Noted.	N

	special character of the SHC, and adverse consequences this has for the already compromised statutory purpose of the designation.				
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Appendix 1

Table 3: A comparison of the project's judgement and Natural England's judgement regarding the significance of landscape and visual effects.

Feature	Sensitivity of receptor		Magnitude of change		Significance of effect		Total cumulative impact		
	Applicant's Judgement	NE Judgement	Applicant's Judgement	NE Judgement	Applicant's Judgement	NE Judgement	Applicant's Judgement	NE Judgement	
Landscape Character Types	Coastal dunes and shingle ridges	High	Agree	Medium within 30km of proposals	Disagree – 30km threshold of significance not explained	Moderate Adverse	Disagree – major adverse	Moderate Adverse	Disagree – major adverse
	Coastal levels	High	Agree	Medium within 30km of proposals	Disagree – 30km threshold of significance not explained	Moderate Adverse	Disagree – major adverse	Moderate Adverse	Disagree – major adverse
	Saltmarsh and inter-tidal flats	High	Agree	Medium within 30km of proposals	Disagree – 30km threshold of significance not explained	Moderate Adverse	Disagree – major adverse	Moderate Adverse	Disagree – major adverse
National Landscape Designation	Suffolk Coast and Heaths AONB	High	Agree	Medium, for areas within 30km of the Offshore Above-sea Development and along the coastal edges of the AONB.	Disagree – major adverse, which is significant in 30km threshold of significance not explained, special qualities not assessed.	"Moderate adverse, which is significant in EIA terms, effects are predicted on certain perceptual qualities, where the relationship with the sea is a stronger influence, along the coastal edge of the AONB and within 30km."	Disagree – Major adverse.	Moderate Adverse	Disagree – major adverse
Suffolk Coastal Path	Suffolk Coastal Path	Medium-High	Disagree - High	Significant for viewpoints 4, 5, 9, 10 and 17	Disagree – significant for the continuous stretch of AONB coastline between viewpoints 1 to 10 and 17.	Moderate adverse, which is significant in EIA terms, effects are predicted where the Suffolk Coastal Path follows the coastal edge, between Sizewell Beach and Swardsey Manor.	Disagree - Major adverse	Moderate Adverse	Disagree – major adverse

Seascape and Landscape Visual Impact Assessment

Noted.

N

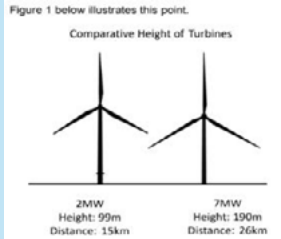
NFOWFS3_049_153_040723

SLVA Viewpoints	Covehithe	Medium-High	Disagree - High	Low	Disagree - Medium-High	Minor Adverse	Disagree - Moderate - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Southwold Pier (Heritage Coast)	Medium-High	Disagree - High	Low	Disagree - Medium High	Minor Adverse	Disagree - Moderate - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Dunwich Coastguard cottage	Medium-High	Disagree - High	Low	Disagree - Medium - High	Minor Adverse	Disagree - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Sizewell Beach	Medium-High	Disagree - High	Medium	Disagree - High	Moderate Adverse	Disagree - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Cliffs above Thorpeness	Medium-High	Disagree - High	Medium	Disagree - High	Moderate Adverse	Disagree - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Aldbrough	Medium-High	Disagree - High	Medium	Disagree - High	Moderate Adverse	Disagree - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Orford Castle	Medium-High	Disagree - High	Medium-Low	Disagree - High	Minor Adverse	Disagree - Major Adverse	Minor Adverse	Disagree - Major adverse
	Orford Ness	Medium-High	Disagree - High	Medium	Disagree - High	Moderate Adverse	Disagree - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Shingle Street	Medium-High	Disagree - High	Medium	Disagree - High	Moderate Adverse	Disagree - Major Adverse	Moderate Adverse	Disagree - Major adverse
	Pulhamite Cliffs (Dawsey Manor)	Medium-High	Disagree - High	Medium	Disagree - High	Moderate Adverse	Disagree - Major Adverse	Moderate Adverse	Disagree - Major adverse

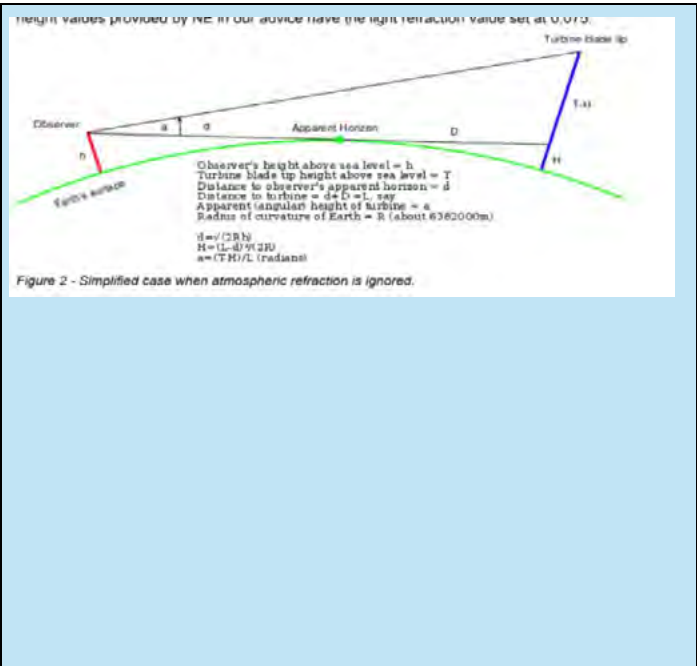
Seascape and Landscape Visual Impact Assessment

Noted.

N

<p>NFOWFS3_049_154_040723</p>	<p>Appendix 2 Note about the apparent height of offshore wind turbines Understanding the comparative apparent heights of offshore structures is a critical component in the assessment of the scale of effect that they have on the receiving landscape resource, associated visual amenity. Figure 1 below illustrates this point.</p>  <p>Figure 1 below illustrates this point. Comparative Height of Turbines</p> <p>Here the smaller structure on the left appears to be same height as the taller structure on the right, which is in fact located a further 11km away. The apparent heights of these differing structures are very nearly the same. A number of parameters need to be incorporated into the measurement of apparent height; the distance to the structure, the height of the structure, the effect of Earth's curvature on the visible heights and the height from which the turbines are viewed. Calculating the apparent heights of offshore structures is however relatively straightforward. The method set out by Scottish Natural Heritage (SNH) in their 20171 publication 'Visual Representation of Wind Farms Guidance 2.2' uses a version of this formula applied by Natural England, but it should be noted this uses metres rather than degrees as a unit of measurement. A diagrammatic representation is shown below in Figure 2 for the simplified case when atmospheric refraction is ignored². We note that such calculations are necessary for the creation of the photomontage images as they appear in Chapter 29 SLVIA Figures Volume-II. We note SNH's emphasis on the presence of the Earth's atmosphere as a critical factor i.e. the influence of the refraction of light in defining the apparent height of structures when seen from a distance. The formula used by NE also incorporates this emphasis on light refraction, using a refraction correction value (0.075) which is universally applied. If the effects of light refraction on apparent height are excluded from the formula this value is switched to 0. However, for comparative purposes the important point is that the correction is applied universally. All of the apparent height values provided by NE in our advice have the light refraction</p>	<p>Project Description</p>	<p>Seascape and Landscape Visual Impact Assessment</p>	<p>Noted.</p>	<p>N</p>
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	value set at 0.075.				
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<p>NFOWFS3_049_155_040723</p>		<p>Project Description</p>	<p>Seascape and Landscape Visual Impact Assessment</p>	<p>Noted.</p>	<p>N</p>
<p>NFOWFS3_049_156_040723</p>	<p>The NE method provides a result in the apparent, or angular (a), height of a turbine as seen by an observer expressed as degrees. Therefore, it is possible to compare the apparent height of a 99m turbine located at 15km away to that of a 190m turbine located at 26km. In this instance (when view from a height of 5m AOD) the values are 0.368 and 0.375, respectively. The 2020 BEIS 'Review and update of Seascape and visual Buffer study for Offshore Wind Farms' does essentially the same thing, as can be seen from the diagrams located within this report (p. 140 to 141).</p> <p>The calculation can also be used to predict the apparent height of (the not yet built) 397m turbines and 310m turbines as used in the North Falls worst case scenarios 1 and 2. These values can then be compared to the apparent heights of the Galloper OWF and Greater Gabbard OWF arrays. As the visual effects of the latter are known and can be readily experienced, their visual influence can be used to judge the likely effect of the proposed North Falls array when viewed from the same location. This information can also be used to inform the scale of effect judgement and hence the magnitude of change judgement. This is the approach NE has taken done, and Table 4 contains our evidence.</p> <p>NOTE: The maximum apparent height for the Galloper</p>	<p>Project Description</p>	<p>Seascape and Landscape Visual Impact Assessment</p>	<p>Noted.</p>	<p>N</p>

	OWF and Greater Gabbard OWF arrays when view from the closest point of the SCHAONB (at Orford Ness) is 0.3 and 0.268, respectively.				
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<p>NFOWFS3_049_157_040723</p>	<p>Appendix 3</p> <p>Table 4: Apparent heights in degrees for Viewpoints 1 to 10 given turbine heights of 307m and 310m. Natural England has highlighted any figures above 0.4 degrees in bold within the table, as we consider apparent heights of above 0.4 degrees to be potentially significant.</p> <table border="1"> <thead> <tr> <th>Viewpoint</th> <th>Viewpoint height above sea level in meters</th> <th>Distance between viewpoint and North Falls OWF north array in meters</th> <th>NE estimated distance between viewpoint and North Falls OWF south array in meters</th> <th>Apparent height in degrees (northern array area)</th> <th>Apparent height in degrees (southern array area)</th> </tr> </thead> <tbody> <tr> <td colspan="6">Proposed turbine height to blade tip in meters – 307m</td> </tr> <tr> <td>1</td> <td>Coverthorpe</td> <td>4</td> <td>42700</td> <td>0.430</td> <td>0.140</td> </tr> <tr> <td>2</td> <td>Southwold Pier</td> <td>0</td> <td>38000</td> <td>0.454</td> <td>0.121</td> </tr> <tr> <td>3</td> <td>Dunwich Coastguard Cottages</td> <td>14</td> <td>32610</td> <td>0.699</td> <td>0.269</td> </tr> <tr> <td>4</td> <td>Sizewell Beach</td> <td>4</td> <td>29000</td> <td>0.725</td> <td>0.254</td> </tr> <tr> <td>5</td> <td>Cliffs above Thorpeness</td> <td>10</td> <td>27190</td> <td>0.809</td> <td>0.390</td> </tr> <tr> <td>6</td> <td>Aldburgh</td> <td>5</td> <td>25000</td> <td>0.850</td> <td>0.394</td> </tr> <tr> <td>7</td> <td>Orford Castle</td> <td>9</td> <td>25720</td> <td>0.855</td> <td>0.442</td> </tr> <tr> <td>8</td> <td>Orford Ness</td> <td>4</td> <td>22960</td> <td>0.952</td> <td>0.488</td> </tr> <tr> <td>9</td> <td>Shingle Street</td> <td>4</td> <td>28350</td> <td>0.748</td> <td>0.488</td> </tr> <tr> <td>10</td> <td>Puhamsie Cliffs (Bawdsey Manor)</td> <td>4</td> <td>31070</td> <td>0.665</td> <td>0.488</td> </tr> <tr> <td colspan="6">Proposed turbine height to blade tip in meters 310m</td> </tr> <tr> <td>1</td> <td>Coverthorpe</td> <td>4</td> <td>42700</td> <td>0.312</td> <td>0.065</td> </tr> <tr> <td>2</td> <td>Southwold Pier</td> <td>0</td> <td>38000</td> <td>0.322</td> <td>0.042</td> </tr> <tr> <td>3</td> <td>Dunwich Coastguard Cottages</td> <td>14</td> <td>32610</td> <td>0.568</td> <td>0.200</td> </tr> <tr> <td>4</td> <td>Sizewell Beach</td> <td>4</td> <td>29000</td> <td>0.553</td> <td>0.196</td> </tr> <tr> <td>5</td> <td>Cliffs above Thorpeness</td> <td>10</td> <td>27190</td> <td>0.622</td> <td>0.280</td> </tr> <tr> <td>6</td> <td>Aldburgh</td> <td>5</td> <td>25000</td> <td>0.654</td> <td>0.283</td> </tr> <tr> <td>7</td> <td>Orford Castle</td> <td>9</td> <td>25720</td> <td>0.661</td> <td>0.328</td> </tr> <tr> <td>8</td> <td>Orford Ness</td> <td>4</td> <td>22960</td> <td>0.735</td> <td>0.360</td> </tr> <tr> <td>9</td> <td>Shingle Street</td> <td>4</td> <td>28350</td> <td>0.569</td> <td>0.360</td> </tr> <tr> <td>10</td> <td>Puhamsie Cliffs (Bawdsey Manor)</td> <td>4</td> <td>31070</td> <td>0.595</td> <td>0.360</td> </tr> </tbody> </table>	Viewpoint	Viewpoint height above sea level in meters	Distance between viewpoint and North Falls OWF north array in meters	NE estimated distance between viewpoint and North Falls OWF south array in meters	Apparent height in degrees (northern array area)	Apparent height in degrees (southern array area)	Proposed turbine height to blade tip in meters – 307m						1	Coverthorpe	4	42700	0.430	0.140	2	Southwold Pier	0	38000	0.454	0.121	3	Dunwich Coastguard Cottages	14	32610	0.699	0.269	4	Sizewell Beach	4	29000	0.725	0.254	5	Cliffs above Thorpeness	10	27190	0.809	0.390	6	Aldburgh	5	25000	0.850	0.394	7	Orford Castle	9	25720	0.855	0.442	8	Orford Ness	4	22960	0.952	0.488	9	Shingle Street	4	28350	0.748	0.488	10	Puhamsie Cliffs (Bawdsey Manor)	4	31070	0.665	0.488	Proposed turbine height to blade tip in meters 310m						1	Coverthorpe	4	42700	0.312	0.065	2	Southwold Pier	0	38000	0.322	0.042	3	Dunwich Coastguard Cottages	14	32610	0.568	0.200	4	Sizewell Beach	4	29000	0.553	0.196	5	Cliffs above Thorpeness	10	27190	0.622	0.280	6	Aldburgh	5	25000	0.654	0.283	7	Orford Castle	9	25720	0.661	0.328	8	Orford Ness	4	22960	0.735	0.360	9	Shingle Street	4	28350	0.569	0.360	10	Puhamsie Cliffs (Bawdsey Manor)	4	31070	0.595	0.360	<p>Project Description</p>	<p>Seascape and Landscape Visual Impact Assessment</p>	<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_049_158_040723</p>	<p>Annex 8. Landscape and Visual Impact Assessment</p> <p>The advice contained within this response is focused solely on the Landscape and Visual Impacts of the North Falls Offshore Wind Farm (OWF) Nationally Significant Infrastructure Project (NSIP), and specifically the substation site. Our advice is focused on the potential for the project, including in-combination with other proposed onshore substation sites on the Tendring Peninsula, to affect the nationally designated landscapes of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) and Dedham Vale AONB.</p> <p>Our response is based on the information presented in Chapter 30 of the Preliminary Environmental Report (PEIR): Landscape and Visual Impact Assessment (LVIA), and the accompanying figures and photomontages.</p>	<p>Landscape and Visual Impact Assessment</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>The cumulative assessment (refer to Section 30.8 of Chapter 30, Landscape and Visual Impact Assessment) considers the above ground (operational stage) features including the proposed Five Estuaries and National Grid (Norwich to Tilbury Project) Substations, plus other relevant features in the LVIA study area. As more information on these projects is now available, a more detailed cumulative assessment</p>	<p>N</p>																																																																																																																																										

	<p>With regard to the North Falls substation as a standalone project, Natural England have taken a risk-based approach to assessing the landscape and visual impacts presented within the North Falls PEIR document. At this stage, we have concluded that the risk of significant adverse landscape and visual impacts occurring within both the Dedham Vale AONB and Suffolk Coast and Heaths AONB from the North Falls substation being delivered in isolation is low.</p> <p>We appreciate that there may be a lack of information to enable a fully informed assessment of potential cumulative landscape and visual impacts of the project in combination with other projects, such as Five Estuaries OWF and National Grid's East Anglia Green project. We note that these projects are also proposing substations within 2km of the North Falls study area on the Tendring Peninsula, with the Five Estuaries substation likely to be in the same general area as the North Falls substation. While we understand there may be limitations in the exact details of other projects at this stage, particularly in terms of exact location and design specifications; we advise that as information becomes available (such as the recent Five Estuaries PEIR), the North Falls LVIA is updated accordingly to ensure that the assessment presented in the Application Environmental Statement (ES) considers all relevant information.</p> <p>We advise that the Project makes all efforts to seek to share, and gain information from the other project teams for the Examining Authorities to thoroughly test conclusions drawn. We note that given these projects are in the pre-application phase, there is currently no certainty that they will all gain approval, but this may change between now and the end of Examination. Whilst we have highlighted the consideration of potential cumulative impacts as a concern, we understand that currently the possible cumulative effects may have only limited or no bearing on the formal decision regarding the North Falls substation, but recommend they are considered in order to future proof the project.</p> <p>In summary, as the ES is developed, we advise that:</p> <ul style="list-style-type: none"> • The potential cumulative impacts of all three projects on the Suffolk Coasts and Heaths and Dedham Vale AONBs are given further consideration and kept under review in anticipation of what could be a changed landscape and visual baseline by the time North Falls is examined. • As details of one or both of the other schemes emerge in time, the Project seeks an appropriate joined-up and strategic approach with those developers to mitigating any cumulative effects on the AONB. 			<p>is presented in Section 30.8 of Chapter 30.</p>	
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Consultee reference	Summary of comments	Theme/ code	Theme/ code	Applicant's response	Project change (Y / N)
NFWFS3_050_001_060723	<p>AONB Office Saxon House Whittle Road Hadleigh Road Industrial Estate Ipswich IP2 0UH 6 July 2023 By email only: contact@northfallsoffshore.com Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 The Suffolk Coast & Heaths Area of Outstanding Natural Beauty (AONB) Partnership thank the proposers of North Falls Offshore Wind Farm for the opportunity to comment on their proposals as described in the Statutory Consultation 16 May 2023 to 14 July 2023. The AONB partnership understands the proposals are for:</p> <ul style="list-style-type: none"> • An Offshore Wind Farm, with up to 72 turbines and • Up to 2 offshore substation platforms • Inter array cables • Three options for transmission infrastructure: <ul style="list-style-type: none"> o Option 1: Onshore electrical connection at a National Grid connection point within Tendring, Essex, with a project alone onshore cable route and onshore substation infrastructure. o Option 2: Onshore electrical connection at a National Grid connection point within Tendring, Essex, sharing all or part of an onshore cable route with separate onshore export cables with another project (such as Five Estuaries) where practicable. o Option 3: Offshore electrical connection supplied by a third-party electricity network provider. Such a connection will potentially be identified through the Offshore Transmission Network Review process. <p>The AONB Partnership acknowledges the important part that renewable energy can provide in the nation's energy mix and the aspiration to move to net zero.</p>	Introduction		Noted.	N

	<p>The AONB Partnership The Partnership was formed in 1993, it comprises public, private and voluntary organisations who are committed to conserving and enhancing the Natural Beauty of the AONB. The Partnership's role is to act as an advocate for the AONB and oversee the delivery of the AONB Management Plan.</p> <p>Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 2 of 9</p> <p>The AONB Partnership consists of: Babergh District Council, East Suffolk Council, Essex County Council, Ipswich Borough Council, Suffolk County Council, Tendring District Council, Community Action Suffolk, Country Land and Business Association, The Crown Estate, Defra, Environment Agency, Forest England, Historic England, National Farmers' Union, Natural England, National Trust, Royal Society for the Protection of Birds, Suffolk Association of Local Councils, Suffolk Coast Acting for Resilience, Suffolk Coast Ltd, Suffolk Farming & Wildlife Advisory Group, Suffolk Preservation Society, Suffolk Wildlife Trust.</p> <p>It should be noted that: Many of these partners are public bodies or statutory undertakers which have the duties to conserve and enhance the Natural Beauty of the AONB as set out in section 85 of the Countryside and Rights of Way Act (2000). It is anticipated that these partners, and other members of the Partnership, will provide separate consultation responses that reflect these and other interests and responsibilities. The AONB Partnership response will predominately confine itself to matters that have a direct impact on the nationally designated landscape, in line with its remit.</p> <p>Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 3 of 9</p> <p>Suffolk Coast & Heaths AONB Partnership response to North Falls Offshore Wind Farm Statutory Consultation May to July 2023:</p>				
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	<p>The AONB Partnership has formed its view on these proposals from information provided by North Falls Offshore Wind Farm Ltd from:</p> <ul style="list-style-type: none"> • The North Falls website on various occasions since autumn 2022 • Information shared by project proposer at working group meetings • Discussion with AONB partners and others with knowledge of the proposals • Attendance at public information events Summary Suffolk Coast & Heaths AONB Partnership response to North Falls Offshore Wind Farm Statutory Consultation May to July 2023 • National policy indicates proposers of such schemes need to pay regard to the statutory purpose of the AONB. • The AONB Partnership consider that the applicant's description of the implications of the Offshore Above-Sea Development for the Suffolk Coast & Heaths AONB (29.6.2.2.2, Offshore Seascape, Landscape and Visual Impact Assessment) refers to the baseline description in the 2013-2018 Suffolk Coast & Heaths AONB Management Plan and not the current 2018-2023 Suffolk Coast & Heaths AONB Management Plan. It considers that this is not a sufficiently robust enough approach to assessing potential impacts on the AONB. It suggests that the assessment should be made against the more recent Suffolk Coast & Heaths Area of Outstanding Natural Beauty Natural Beauty and Special Quality Indicators v1.8 November 2016 • The Seascape and Offshore elements of the proposals would have significant negative impacts on the statutory purpose of the AONB if built out as described. Impacts on the AONBs could be reduced if the proposals were altered. • The onshore elements, including cable routes, as proposed appear to have minimal negative impacts on the Suffolk Coast & Heaths AONB and no significant effects on the Dedham Vale AONB. • The offshore proposals as described are likely to have a negative impact on the AONBs tourism economy and quality of life for residents by impacting views from the nationally designated landscape. • The proposers of the scheme should listen, 				
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	<p>understand and act upon legitimate concerns of residents, interest groups and businesses outside the AONB, which this response does not cover.</p> <ul style="list-style-type: none"> • The AONB Partnership acknowledge the benefit that offshore wind generated electricity can bring to meeting the aspiration for net zero. <p>Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 4 of 9</p> <p>The Suffolk Coast & Heaths AONB Partnership considers that the proposals need to be determined against the relevant National Policy Statements, Legislation and other relevant policy, plans and guidelines. The AONB Partnership notes that:</p> <p>A) The Overarching National Policy Statement for Energy (EN1), paragraph 5.9.9, states: Development proposed within nationally designated landscapes</p> <p>National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC [Now Planning Inspectorate] should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC [Now Planning Inspectorate] in deciding on applications for development consent in these areas.</p> <p>B) The National Policy Statement for Renewable Energy Infrastructure (EN-3), paragraph 2.5.33 states: In sites with nationally recognised designations (Sites of Special Scientific Interest, National Nature Reserves, National Parks, the Broads, Areas of Outstanding Natural Beauty and Registered Parks and Gardens), consent for renewable energy projects should only be granted where it can be demonstrated that the objectives of designation of the area will not be compromised by the development, and any</p>				
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	<p>significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the environmental, social and economic benefits.</p> <p>C) The draft National Policy Statement EN-5 on Electricity Networks Infrastructure States in para 2.11.11: The Horlock Rules – guidelines for the design and siting of substations were established by National Grid in 2009 in pursuance of its duties under Schedule 9 of the Electricity Act 1989. These principles should be embodied in Applicants’ proposals for the infrastructure associated with new overhead lines. The AONB Partnership considers that to conform to EN1 that the proposed developments should not significantly negatively impact nationally designated landscape. The AONB Partnership considers that to conform to EN3 that the proposed developments should not have significantly negatively impact nationally designated landscape.</p> <p>Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 5 of 9 It then briefly references the Horlock rules including: seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections</p> <p>D) Section 85 of the Countryside and Rights of Way Act (2000) that states: General duty of public bodies etc (1) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty. (2) The following are relevant authorities for the purposes of this section— (a) any Minister of the Crown, (b) any public body, (c) any statutory undertaker [our emphasis] (d) any person holding public office.</p>				
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	<p>E) The statutory Suffolk Coast & Heaths AONB Management Plan 2018-23 outlines within its 25 year vision for the area that:</p> <p>Nationally Significant Infrastructure Projects such as energy production and its associated infrastructure should seek to avoid damage to the natural beauty of the AONB and where this cannot be achieved it should seek to minimise, mitigate and compensate for any residual damage.</p> <p>The AONB Partnership recognise three elements of the proposal from the consultation: The AONB Partnership considers that to conform to the draft EN5 that the proposed development should pay regard to AONB purpose.</p> <p>The AONB Partnership considers that North Falls Offshore Wind Farm Ltd is a statutory undertaker and as such is required to pay due regard to the purpose of the AONB when undertaking its operations and decision making. The AONB Partnership considers that the North Falls Offshore Wind Farm Ltd proposals for development require the proposals to meet the aims of the statutory AONB Management Plan. Suffolk Coast & Heaths AONB Partnership response to:</p> <p>North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 6 of 9</p>				
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<p>NFOWFS3_050_002_060723</p>	<p>The three elements of the proposals of interest to the AONB Partnership are:</p> <ul style="list-style-type: none"> i) Offshore Proposals ii) Onshore Proposals (Landfall and cable routes) iii) Socio-economic impacts <p>Each of the above is considered below:</p> <p>i) Offshore Proposals</p> <p>The AONB Partnership recognises that the offshore element is at least 22.5km from the nationally designated landscape across uninterrupted views.</p> <p>The proposed array, 40 turbines of 397m to tip (worst case for SLVIA), or 72 turbines at 310m to tip are proposed to be in front of the smaller turbines of the Greater Gabbard and Galloper arrays (when viewed from the AONB). Although the preliminary environmental information report indicates the impacts on the AONB are assessed as moderate (also significant in Environmental Impact Assessment terms) the Partnership considers that these impacts may be underrepresented and consider that the proposer of the scheme consider the findings of the Update Addendum of the seascape sensitivity to offshore wind farms commissioned by Suffolk County Council, east Suffolk Council and the AONB Partnership.¹</p> <p>As the proposed turbines will be larger and in front of (when viewed from the AONB) arrays, the negative impact of industrial infrastructure on the nationally designated landscape will be increased.</p> <p>It considers the northern array, despite being smaller in area and closer to the AONB, will have a disproportionately large impact on the nationally designated landscape.</p> <p>The extent of the proposed array, in particular the north-south extent, will increase the curtain effect of turbines across the views to the east from the AONB. This is a negative impact on the AONB. This proposal, existing arrays and proposed arrays will have a negative impact on the nationally designated landscape due to this expansion of the curtain effect. These impacts have been described as significant (major) in the preliminary environmental information report.</p>	<p>Seascape, Landscape and Visual Impact Assessment</p>		<p>A decision was made to remove the northern array from the Project and to refine the southern array (see Chapter 30 - Landscape and Visual Impact Assessment).</p>	<p>Y</p>
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	<p>The AONB Partnership consider that the applicant's description of the implications of the Offshore Above-Sea Development for the Suffolk Coast & Heaths AONB (29.6.2.2.2, Offshore Seascape, Landscape and Visual Impact Assessment) refers to the baseline description in the 2013-2018 Suffolk Coast & Heaths AONB Management Plan and not as stated the current 2018-2023 Suffolk Coast & Heaths AONB Management Plan.</p> <p>1 [REDACTED]</p> <p>Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 7 of 9</p> <p>It considers that this is not a sufficiently robust enough approach to assessing potential impacts on the AONB. It suggests that the assessment should be made against the more recent Suffolk Coast & Heaths Area of Outstanding Natural Beauty and Special Quality Indicators v1.8 November 2016. 2</p> <p>[REDACTED]</p> <p>The AONB Partnership considers that the proposals will have a significant adverse impact on the AONB. The AONB Partnership has considers that:</p>				
NFOWFS3_050_003_060723	<ul style="list-style-type: none"> An assessment of the offshore element of the proposals be undertaken against the defined natural beauty and special qualities of the Suffolk Coast & Heaths AONB and not the summary landscape character assessment as referenced in 29.6.2.2.2, Offshore Seascape, Landscape and Visual Impact Assessment. 	Seascape, Landscape and Visual Impact Assessment		The assessment of effects on the Suffolk & Essex Coast & Heaths National Landscape (an AONB) has been updated, with consideration given to the 'special qualities' as listed in the Natural Beauty and Special Qualities Indicators document (November 2016). See Section 29.6.3.2.2 in	N

				Chapter 29 (Seascape, Landscape and Visual Impact Assessment).	
NFOWFS3_050_004_060723	<ul style="list-style-type: none"> • The proposed turbines are proposed to be significantly larger (to tip) than the current turbines in this vicinity and closer to the AONB meaning that the impact of the industrialised development on the nationally designated landscape is greatly increased. • The larger turbines at the front of the arrays will cause a disproportionate negative impact on the AONB and that the array should be re-designed to remove the situation where larger turbines are located closer to the AONB. There is particular concern relating to the northern array. • The extension in the southern section of the proposals will greatly increase the curtain effect of development on those experiencing the AONB and the proposed England Coast Path and current Suffolk Coast Path. • The two 'triangles' in the northern array of the proposals will have a disproportionate negative impact on the AONB compared with the benefits accrued from generating more sustainable electricity from this section of the proposed development and should not be included in current proposals. • An assessment of impacts on the AONB should include assessments at different times of day, different times of the year and in different weather conditions. • Night-time tranquillity will be negatively impacted by the introduction of navigation/safety lights in night-time skies. • The introduction of two offshore substations will add to the industrialisation of the seascape when experienced from the AONB. <p>The Partnership considers that proposals as presented will have significant negative impacts on the AONB during operation and may have such an impact on it that they may undermine the reasons for designation. As no mitigation is</p>	Seascape, Landscape and Visual Impact Assessment		A decision was made to remove the northern array from the Project and to refine the southern array (see Chapter 30 - Landscape and Visual Impact Assessment).	Y

	<p>available, compensation for residual impacts should be made. Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 8 of 9</p>				
<p>NFOWFS3_050_005_060723</p>	<p>ii) Onshore Proposals (including landfall and cable routes) The AONB Partnership recognises that the proposals for landfall of the undersea cables is not within the nationally designated landscapes but considers that North Falls Offshore Wind Farm Ltd should listen, understand and act upon concerns of those impacted. The AONB Partnership recognises that the proposals for underground cables linking landfall to the site of the proposed substation avoid the nationally designated landscapes but considers that North Falls Offshore Wind Farm Ltd should listen, understand and act upon concerns of those impacted. It notes that routes should be identified that do the minimum of damage to sites important for nature, including woodlands and hedgerows and known archaeological sites. Likewise, given the considerable impacts of undergrounding cables, routes should be chosen to minimise impacts on dwellings and the best quality agricultural land.</p>	<p>Landscape and Visual Impact Assessment</p>		<p>Noted.</p>	<p>N</p>

	<p>The AONB Partnership recognises that the proposals for a substation are outside any nationally designated landscapes. It is proposed for being within 1km from the Dedham Vale AONB boundary and perhaps more than 3km from the Suffolk Coast & Heaths AONB boundary.</p> <p>It recognises that the site selection principles include seeking to minimise significant impacts on AONBs as well as other criteria including residential areas, woodland and important ecological and heritage designated areas. The AONB Partnership welcomes the avoidance of the nationally designated AONBs for its onshore proposals.</p> <p>Suffolk Coast & Heaths AONB Partnership response to: North Falls Offshore Wind Farm Statutory Consultation May to July 2023 Page 9 of 9</p>				
NFOWFS3_050_006_060723	<p>iii) Socio-economic impacts</p> <p>The AONB Partnership request that the proposer of the project considers the economic impacts of its project and on the tourism industry and residents' quality of life.</p> <p>The AONB has an important role to play in the tourism industry, that supports over 4,000 jobs and is worth over £250M pa. The natural beauty and special qualities of the AONB are a key driver for the tourism industry, in particular the relationship between seascape and setting of the AONB in horizon views from within the designated landscape.</p> <p>The AONB Partnership, Suffolk County Council and East Suffolk Council commissioned Update Addendum, Seascape Sensitivity to Offshore Wind Farms3 notes an additional paragraph in EN-3 that includes:</p> <p>seascape is an issue for consideration especially where it provides the setting for a nationally designated landscape and supports the delivery of the designated area's statutory purpose [Para 3.8.221 EN-3].</p> <p>The AONB's landscape quality, tranquillity and</p>	Tourism and Recreation		Noted. For more information, see Chapter 32 (Tourism and Recreation).	N

	<p>natural cultural heritage features are also drivers for the tourism industry. Furthermore, residents in the AONB enjoy benefits associated with AONB natural beauty and special quality indicators. Residents' quality of life is enhanced by the statutory purpose of the AONB.</p> <p>Yours sincerely, Simon Amstutz AONB Manager For and on behalf of the Suffolk Coast & Heaths</p> <p>[REDACTED] 07971 909 649 3 [REDACTED] [REDACTED]</p> <p>The AONB Partnership consider that the introduction of significant industrial development off the coast of the AONB will have an impact on the ability of the AONB to deliver statutory purpose. This impact will have a knock on effect on the viability of the tourism industry and residents' quality of life during operation and construction and should be avoided compensated for.</p>				
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Consultee reference	Summary of comments	Theme/ code	Applicant's response	Project change (Y / N)
NFOWFS3_051_001_140723	<p>To: contact@northfallsoffshore.com Date: 14th July 2023 Ref: NFU/Response/North Falls Circulation: Contact: Alice Sharlot Tel: [REDACTED] Fax: [REDACTED] Email: [REDACTED]</p> <p>National Farmers' Union Comments: North Falls Offshore Wind Farm Consultation – July 2023 The NFU represents 55,000 members across England and Wales. In addition, we have 20,000 NFU Countryside members with an interest in farming and rural life. The NFU would like to make the following points in regard to the North Falls Offshore Wind Farm on behalf of NFU members affected by the project.</p>	Introduction	See responses below.	N
NFOWFS3_051_002_140723	The NFU understands that the proposal is for a maximum of four electrical circuits along an approximately 24km corridor.	Project Description	<p>This was correct at the PEIR stage but the maximum number of electrical circuits has now been reduced to two.</p> <p>Further information can be found in Chapter 5 (Project Description).</p>	Y

NFOWFS3_051_003_140723	<p>1. Consultation with Landowners – The NFU strongly feels that RWE need to consult fully with landowners affected by any onshore apparatus and cable construction works. Section 22.6.1.1.3 within Chapter 22 of the PIER in relation to the temporary loss of agricultural land, states that the planning and timing of works will be discussed with landowners and private agreements are to be sought with the relevant landowners and occupiers. It is also stated that private agreements will help manage the short term loss (up to 2 years) of agricultural land and ensure full land recovery within 5 years post-construction.</p> <p>The NFU is pleased to see that the North Falls project intend to engage with landowners and occupiers to minimise the impact on their property and businesses. The NFU would like to see this begin in the early stages to understand the businesses that will be impacted and any mitigation measures or timings of the works being able to be incorporated into the scheme design and programme at the outset. The NFU would also like to see discussions regarding private agreements take place as early as possible to enable these discussions to progress ahead of the submission of the DCO.</p>	Technical Consultation	<p>The Applicant has undertaken negotiations with a group of land agents (“Land Agency Group”) to agree a precedent set of Heads of Terms in respect of an Option Agreement. The Land Agency Group currently represents [68]% of Category 1 Owners or Reputed Owners with a further [6]% represented by other land agents outside of the group. A summary of those negotiations undertaken can be found in the Statement of Reasons (document reference 6.5) with status of negotiations with each relevant land interest set out within the Compulsory Acquisition Schedule (document reference 6.6).</p> <p>The statutory consultation process and evidence of the Project’s consultation with stakeholders to date is captured in Chapter 7 Technical Consultation (Volume I).</p> <p>At PEIR, temporary loss of agricultural land was assessed as minor adverse, which is not significant in EIA terms. At ES, temporary loss of agricultural land is assessed as moderate adverse, which is significant in EIA terms. The change in likely significant effect is due to greater certainty regarding the location of the project infrastructure. At PEIR, uncertainty existed regarding the location of the onshore project area due to a wider project envelope being considered at the time. Now the location of the onshore cable route, TCCs, access points and onshore substation works area have been identified, greater certainty regarding the sensitivity of the receptor can be concluded. >20ha of the onshore project area is now confirmed as BMV, which is categorised as a receptor of ‘high’ sensitivity, which therefore results in an effect of moderate adverse significance. Full details of the updated assessment are provided in Section 22.6 of Chapter 22 Land Use and Agriculture.</p>	N
NFOWFS3_051_004_140723	<p>2. Substation Locations – It is noted in chapter 5, paragraph 56 of the PIER (Project Description) that the precise location of the onshore substation and grid connection is subject to ongoing consultation, however will be located within the onshore substation zone. The NFU would like to be kept informed in regard to the development of the substation.</p>	Site Selection and Assessment of Alternatives	<p>Chapter 4 Site Selection and Assessment of Alternatives (Volume I) set out the ongoing site selection process and consultation activities in relation to the identification of the onshore substation location.</p>	N

NFOWFS3_051_005_140723	<p>3. Cumulative Impact – Section 22.8.3 within Chapter 22 of the PIER, states that the Five Estuaries Wind Farm and that the Norwich to Tilbury project (formerly known as East Anglia GREEN) have potential direct cumulative impacts. It is stated that the applicant is in regular and ongoing dialogue with Five Estuaries Offshore Wind Farm Ltd. The NFU would like to see that the project is exploring options to work collaboratively with other infrastructure projects in the area, such as Five Estuaries and the Norwich to Tilbury project which will reduce the overall cumulative impact. The NFU would like to understand further how the projects are working together to reduce the overall impact of the projects in the area. Specifically, the NFU would like to understand how the Five Estuaries Wind Farm and the North Falls Wind Farm projects NFU Consultation Response are working collaboratively to reduce the cumulative impact of the construction of the projects in one area in terms of land requirements and construction timings.</p> <p>Page 2 Although every effort has been made to ensure accuracy, neither the NFU nor the author can accept liability for errors and or omissions. © NFU Department Name/NFU Consultation Response/April '19/draft The voice of British farming</p>	Site Selection and Assessment of Alternatives	<p>Although subject to separate DCOs, North Falls and Five Estuaries have undertaken activities to work collaboratively as far as possible. This has included co-design of the projects' onshore cable route and the co-location of both projects' onshore substation infrastructure, and including options in both projects' DCOs for a joint build-out of the two projects' cable ducting to minimise certain environmental effects, including a reduction in the working footprint required therefore reducing effects on land and agriculture. Co-ordination on assessment has also taken place to ensure alignment on mitigation can be delivered where practicable.</p> <p>Furthermore, North Falls, Five Estuaries and National Grid have also co-ordinated in sharing data and seeking to work together on a number of aspects of the projects' environmental assessment.</p> <p>Full details on co-ordination and collaboration can be found in the Co-ordination Report (document reference 2.5), submitted with the DCO application.</p> <p>As a result of ongoing collaboration, a detailed CEA for effects arising from the development of both North Falls and Five Estuaries has been undertaken for land use and agriculture in Section 22.8.3.1 of Chapter 22 Land Use and Agriculture.</p>	N
NFOWFS3_051_006_140723	<p>4. Easement – The PIER (Chapter 5, Project Description) outlines that the North Falls Offshore Wind Farm Project has an indicative operational life of 30 years. The NFU would therefore like confirmation of the length of easement being sought from landowners through voluntary agreements. The NFU strongly feels that the easement term should not exceed the operational lifetime of the scheme.</p>	Project Description	Noted.	N

NFOWFS3_051_007_140723	<p>5. Cable Depth – The NFU understands from the PIER (Chapter 5: Project Description – Table 5.21 Onshore export cables characteristics) that the minimum depth of burial for the cables will be 0.90m and the approximate depth of trench to the top of the protection tile is 0.85m-1.2m. The NFU would like clarity on the depth the cables will be laid through agricultural land. It is imperative that the cables are laid at a minimum depth of 1.2m to the top of the tile to ensure there is sufficient distance between the cables and farming operations i.e. field drainage is generally laid at 0.9m and mole drainage at 0.65m.</p>	Onshore Archaeology and Cultural Heritage	<p>The cables will generally be buried at a depth not shallower than 1.2 metres (m) below ground level depending on ground conditions. This is designed to take into consideration the requirements for drainage and deep ploughing.</p> <p>Where necessary, for example if there is rock, concrete or another obstacle close to the surface (such as existing services), the cables may need to be laid at a shallower depth. The Compensation Code exists to protect land interests who may incur a loss as a result of a shallower depth of the cables. Where there are issues with the ground conditions, the Applicant will still aim to bury the cable as deep as is reasonably practicable and ensure that no infrastructure is shallower than 0.9m, including marker tape.'</p>	Y
NFOWFS3_051_008_140723	<p>6. Surface Apparatus – It is noted in the PIER (Chapter 5: Project Description – Table 5.21 Onshore export cables characteristics) that joint bays will be located approximately every 500m with dimensions being 13mx5m. There will also be up to 196 link boxes. It is noted that where possible, the link boxes will be located adjacent to field boundaries. Section 22.6.3.2 states that the final design of the link boxes is yet to be completed, however they could be above ground structures up to 1.5m tall, 0.6m deep and 1m wide or they could be below ground and accessed via manhole covers at ground level. The NFU would like to see that landowners are consulted on the location of any surface apparatus to minimise the impact on agricultural operations. It is essential that any link boxes located within agricultural fields are at ground level and marked appropriately in consultation with the landowner/occupier to avoid further disruption to agricultural operations.</p>	Project Description	<p>The location of link boxes and associated joint bays is dictated by detailed design, which will seek to locate these as close to field boundaries and in accessible locations where possible. However, it may not be practicable to locate them in a location that is preferred by a landowner or occupier. The requirement for joint bays and associated link boxes is covered in sections 5.7.3.3.2-5.7.3.3.3 of Chapter 5 Project Description of the ES (document reference 3.1.7).</p> <p>Any proven losses arising out of the location of above ground apparatus can be claimed by a land interest under the Compensation Code.'</p>	N

NFOWFS3_051_009_140723	7. Cable Corridor – The NFU understands from the PIER that the working corridor is to be 60m wide and may be where trenchless techniques are used up to 122m wide. The NFU would like to understand further how construction for this will take place if there is co-ordination between the construction of the Five Estuaries project and the North Falls project including whether the circuits will be laid sequentially or in parallel to understand the impact on farming businesses.	Site Selection and Assessment of Alternatives	NFOW has worked with VE OWFL throughout the pre-application stage to develop co-ordinated proposals as discussed in Section 5.3.1 and Section 5.7 of Chapter 5 Project Description.	Y
NFOWFS3_051_010_140723	8. Heat Dissipation – Heat dissipation is a concern amongst farmers affected by the scheme, which can impact the land for the lifetime of the project. Heat dissipation has been seen on previous underground cable schemes and can have a significant impact on the crops growing in fields affected, causing crops to grow at different rates which leads to issues in carrying out agricultural operations at the best time to care for such crop effectively.	Land Use and Agriculture	Any effect on soil heating would be highly localised to the area immediately surrounding the cable system. Where laid in trenches, cables would be buried at a depth no shallower than 1.2m below ground level depending on ground conditions. Where necessary, for example if there is rock, concrete or another obstacle close to the surface, the cables may need to be laid at a shallower depth, with warning tape or tiles placed no less than 0.9m below the surface. In addition, the use of Cement Bound Sand (CBS) will remove any material heat transfer from the cables to the surrounding environment.	N
NFOWFS3_051_011_140723	Section 22.6.3.3 of the PIER (Land Use and Agriculture) states that the design of the onshore cable system would seek to minimise any energy losses. The NFU would like to further understand the measures taken to reduce the impact of heat dissipation on the scheme.	Onshore Archaeology and Cultural Heritage	See above.	N
NFOWFS3_051_012_140723	9. Biodiversity Net Gain – The NFU would like to understand further how RWE are intending to deliver Biodiversity Net Gain on the project. Chapter 5 of the PIER (Project Description), section 5.8.4.6 states that the project is exploring opportunities to deliver a minimum of 10% biodiversity net gain for the onshore elements of the project. The NFU does not support any agricultural land being acquired compulsorily for the purposes of delivering biodiversity net gain. If the project needs to acquire additional land to deliver such gain then this should be acquired through negotiation only.	Onshore Ecology	NFOW has provided an Initial Biodiversity Net Gain Assessment which describes potential opportunities for enhancement of terrestrial habitats. Areas identified as suitable for enhancement will be focused within the Project's onshore area boundary (on-site) in the first instance (Document Reference 7.22). Off-site (areas outside of the onshore Project area) habitat creation / enhancement as compensation will only be used if there is no suitable alternative on-site, in order to adhere to the mitigation hierarchy.	N

<p>NFOWFS3_051_013_140723</p>	<p>10. Impact on Agricultural Businesses – Section 22.5.2.2 of the PIER (Land Use and Agriculture) states that 9.84% of the onshore project area is Grade 1 agricultural land, whilst 20.21% is grade 2 and 54.80% is grade 3 (Table 22.13). Paragraph 76 also highlights that the offshore substation zone is located within Grade 1 agricultural land and therefore this area of land will be acquired permanently and removed from agricultural production. The NFU strongly feels that that the project should avoid best and most versatile land wherever possible, in particular where permanent acquisition is required.</p>	<p>Land Use and Agriculture</p>	<p>Where works are to take place within BMV / BMV is to be lost as part of the Project, this is only considered in situations where no reasonable alternative could be identified when balancing other project engineering and design feasibility, planning and environmental constraints.</p> <p>Description of the Project's site selection process is presented in Chapter 4 Site Selection and Assessment of Alternatives (Volume I), and assessment of the effects upon BMV is set out in Section 22.6 of Chapter 22 Land Use and Agriculture.</p> <p>Following a joint engineering exercise between North Falls and Five Estuaries, refinement of the 204m-wide onshore cable corridor(s), identified at PEIR, down to a single 90m-wide onshore cable route connection the North Falls and Five Estuaries' landfall and onshore substation. The refined onshore cable route has been designed to ensure capacity for the installation of up to four electrical circuits, to per project, installed in cable ducts, from landfall to the onshore substations. This approach has been undertaken to ensure that should commercial and regulatory constraints allow, the projects will have the option to undertake a single joint cable installation activity for the cable ducts for both projects, therefore realising efficiencies and minimise effects associated with two independent construction activities.</p> <p>Embedded mitigation for the permanent loss of agricultural land is discussed Section 22.3.3 of Chapter 22 Land Use and Agriculture.</p>	<p>N</p>
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NFOWFS3_051_014_140723	<p>NFU Consultation Response Page 3 Although every effort has been made to ensure accuracy, neither the NFU nor the author can accept liability for errors and or omissions. © NFU Department Name/NFU Consultation Response/April '19/draft The voice of British farming The NFU also feels strongly that the impact the project will have on agricultural businesses needs to be considered in the development of the project. Section 22.6.1.1.3 within chapter 5 of the PIER stated that the land temporarily taken out of production for the cable route, could be done so for a period of 18 months, which could be two growing seasons. The NFU is pleased to see that consideration has been given to the impact of the scheme on agricultural land and businesses, including access to severed land, discussing the timings of construction works with farmers to reduce the impact on agricultural productivity and avoiding land within environmental schemes wherever possible (Chapter 22 of the PIER, Land Use and Agriculture - Table 22.3). Although it is noted that the onshore substation zone and the some of the onshore cable route is proposed on land within environmental schemes. The construction and surface apparatus may cause significant disruption to agricultural land and businesses. The NFU would expect there to be consultation with farmers over practical matters including access, position of surface apparatus and accommodation works required to mitigate the impact on agricultural businesses.</p>	Socio-economics	See above.	N
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NFOWFS3_051_015_140723	<p>11. Outline Code of Construction – The NFU notes and is pleased to see that a draft Code of Construction Practice will be submitted with the DCO application (Chapter 22 of the PIER, Land Use and Agriculture - Table 22.3). The NFU is also pleased to see that RWE will appoint a local specialised land drainage consultant to develop both pre and post-construction drainage plans, as stated within section 22.6.1.1, Chapter 22 of the PIER. It is also noted that the outline Code of Construction Practice (CoCP) will include soil management measures. The NFU has specific wording that it would like to see included in an Outline Code of Construction Practice to cover how practical aspects of the construction should be dealt with in relation to agricultural land and would welcome the opportunity to engage with RWE on this. The NFU wording covers the following:</p> <ul style="list-style-type: none"> a) Role of an Agricultural Liaison Officer b) Records of Condition c) Biosecurity d) Irrigation e) Agricultural Land Drainage f) Treatment of Soils g) Agricultural Water Supplies 	Project Description	<p>This has been noted by the Applicant. The Applicant will consider the NFUs comments and proposed wording for inclusion and would be happy to discuss this with NFU following DCO application submission.</p> <p>A Construction Practice Addendum is being negotiated with the Land Agent Group. This is a document which would be an appendix to the agreed option agreements, addressing points a) to g) directly. The Construction Practice Addendum is not a DCO application document but is intended to provide additional detail to that contained within the outline Code of Construction Practice (document reference 7.13) and will serve as a legal commitment by North Falls as to how items a) to g) will be managed within the final Code of Construction Practice under requirement [8] of the [draft DCO (document reference 6.1)].</p>	N
NFOWFS3_051_016_140723	<p>12. NFU Engagement – The NFU would like to engage further with RWE on behalf of members that may be affected by the proposed scheme. The NFU would like to arrange a meeting with the project team as soon as possible to discuss and obtain further information on the points raised in this consultation response, specifically link boxes, the easement, construction width and construction programme.</p>	Technical Consultation	Noted.	N

Consultee reference	Comment	Theme / code	Theme / code	Applicant's response	Project change (Y / N)
NFOWFS3_052_001_100723	Executive Summary AECOM has prepared this Technical Note (TN01) to provide a response to the North Falls Offshore Wind Farm (North Falls) Preliminary Environmental Information Report (PEIR), prepared by North Falls Offshore Windfarm Limited and dated May 2023. AECOM have been commissioned by National Highways to document a review of the PEIR documents associated with the proposed North Falls development. Following this review, AECOM make the following recommendations:	Introduction		National Highway's comments reflect the stage of the Project's development. Following the submission of the PEIR, the Applicant has undertaken further consultation with National Highways and provided clarification on transport matters. This has included multiple ETG meetings (summarised further within Table 11 in Appendix 27.4, document reference 3.3.67).	Y
NFOWFS3_052_002_100723	Recommendations regarded as critical to the acceptability of this DCO application: 1. The transport study area should include the full section of the A120 from A12 Junction 29 to Harwich, including A12 Junction 29. (Paragraph 3.5)	Traffic and Transport		The boundaries of the TTSA have been extended to include the A120 and A120/A12 junction. Section 27.3.1 of the ES (Chapter 27 Traffic and Transport) details the extents of the TTSA and that the TTSA has been agreed with National Highways on 5 September 2023 (summarised further within Table 11 in Appendix 27.4, document reference 3.3.67).	Y
NFOWFS3_052_003_100723	2. Clarification should be provided to confirm that the junctions between links on the SRN (including all A120 junctions and A12 Junction 29) are included as part of the study area. (Paragraph 3.6)	Traffic and Transport		The Applicant has discussed this matter with National Highways at an ETYG meeting (5 September 2023) and where it was confirmed that all junctions are included in the TTSA.	N
NFOWFS3_052_004_100723	3. Detailed drawings of proposed construction accesses AC12a, AC12b, AC13 and AC14 should be provided to National Highways for review to determine whether the proximity of these accesses to the A120 will impact the SRN. (Paragraph 3.10)	Traffic and Transport		The Applicant has discussed this matter with National Highways at an ETG meeting (5 September 2023) (summarised further within this Table 11). During this meeting it was confirmed that National Highways were content with the location of the proposed accesses and there would not be an interaction with the Strategic Road Network (SRN).	N

NFOWFS3_052_005_100723	4. Any further details relating to the mitigation measures of relevance to the SRN (i.e. a OCTMP, details on delivery time restrictions, and a HGV access strategy) should be provided to National Highways for review as and when they are prepared. (Paragraph 3.14)	Traffic and Transport		An OCTMP (Document Reference 7.16) is submitted with the DCO application. The OCTMP includes details of mitigation measures, delivery time restrictions and the access strategy. The OCTMP would be developed further in consultation with Essex County Council and National Highways prior to the commencement of the Project.	N
NFOWFS3_052_006_100723	5. Confirmation should be provided of the suitability of the SRN construction access junctions (A120/ B1035 Clacton Road, A120/ Bentley Road and A120/ Colchester Road) to accommodate the physical swept paths of the types of vehicles envisaged, without over-running kerb lines and/or adjacent traffic lanes. This should be provided in the form of swept path analysis drawings. (Paragraph 3.17)	Traffic and Transport		The TA (Appendix 27.1 , document reference 3.3.64) includes copies of swept path analysis drawings showing vehicles travelling between the A120 and Bentley Road and the A120 and B1035. No HGV traffic is forecast to travel between the A120 and Colchester Road.	N
NFOWFS3_052_007_100723	6. With regard to traffic counts, a validation exercise is required given that National Highways guidance at the time of data collection in June 2022 required that the effect of Covid-19 is screened from traffic survey results. (Paragraph 3.23)	Traffic and Transport		The Applicant has discussed this matter with National Highways at an ETG meeting (5 September 2023) (summarised further within Table 11 in Appendix 27.4, document reference 3.3.67). During this meeting it was agreed the approach to data collection was acceptable. The approach to data gathering is outlined within Section 24.5.2 of the ES (Chapter 27 Traffic and Transport (Volume I)) and the accompanying TA (Appendix 27.1, document refernece 3.3.64).	N
NFOWFS3_052_008_100723	7. Manual classified turning counts should be undertaken at key A120 junctions. These should be scoped with ECC and NH, prior to being collected and presented within the Traffic and Transport ES Chapter and TA (Paragraph 3.25)	Traffic and Transport			N

NFOWFS3_052_009_100723	8. Justification for excluding the assessment of the traffic impact from the construction period of the offshore elements of the development should be provided, or the traffic impact of the construction of the offshore elements of the development should also be assessed. (Paragraph 3.28)	Traffic and Transport		<p>The preferred base port (or ports) for the offshore construction, operation and decommissioning of the Project is not known and any decision would not be expected until post-consent. Such facilities would be existing or would be provided or brought into operation by means of one or more planning applications or as port operations with permitted development rights. It has therefore been agreed with National Highways (at a meeting on the 7 June 2022) and Essex County Council (at a meeting on the 9 July 2021) to scope out of the assessment the onshore impacts of traffic and transport associated with offshore construction, operation and decommissioning activities.</p> <p>This approach has also been accepted by the Planning Inspectorate for other recently consented offshore wind farm projects, e.g. Norfolk Vanguard and Boreas, East Anglia Two, East Anglia One North and Hornsea Four.</p>	N
NFOWFS3_052_010_100723	9. Driver delay assessment should be re-considered for the A120 portions of the study area due to the high sensitivity to such delay. (Paragraph 3.32)	Traffic and Transport		<p>The Applicant has discussed this matter with National Highways at an ETG meeting (05 September 2023) summarised further within Table 11 in Appendix 27.4, document reference 3.3.67. During this meeting it was confirmed that National Highways do not require capacity assessments. Further details are provided within section 27.4.3 of the ES (Chapter 27 Traffic and Transport).</p>	N
NFOWFS3_052_011_100723	10. The TEMPro growth factors should be provided for both the AM and PM peak periods. Further clarification regarding the parameters used to obtain the growth factors should be provided, such as the geography and the road type. (Paragraph 3.42)	Traffic and Transport		<p>The TA (Appendix 27.1, document reference 3.3.64) includes details of the approach to forecasting future traffic flows using growth factors from the Department for Transport Trip End Model Presentation Programme software (known as TEMPro).</p>	N

NFOWFS3_052_012_100723	11. The link screening should be updated once the recommendations regarding the traffic flows and junction capacity in this TN have been addressed. (Paragraph 3.43)	Traffic and Transport		Noted.	N
NFOWFS3_052_013_100723	12. National Highways should take an ongoing role as a consultee regarding any potential measures, including within an OCTMP, that could have an impact on the use of the SRN. (Paragraph 3.45 and 3.48)	Traffic and Transport		An OCTMP (Document Reference 7.16) is submitted with the DCO application. The OCTMP is secured by DCO requirement, which requires that National Highways be consulted on the final CTMP prior to the commencement of the Project.	N
NFOWFS3_052_014_100723	13. The consented container terminal development at Bathside Bay should be included as a committed development in the study, or justification for excluding it should be provided. (Paragraph 3.54)	Traffic and Transport		Table 27-38 of the ES (Chapter 27 Traffic and Transport) considers the potential for cumulative effects with the Bathside Bay Container Terminal (BBCT) and concludes that there is no potential for cumulative effects to occur between BBCT and North Falls.	N
NFOWFS3_052_015_100723	14. The significant increases in HGV flows on the A120, for the cumulative scenario, of up to 70%, merit further consideration and assessment in more detail at ES stage. (Paragraph 3.55)	Traffic and Transport		This matter was discussed with National Highways at an ETG meeting on the 5 September 2023 (summarised further within Table 11 in Appendix 27.4, document reference 3.3.67). National Highways agreed to provide further explanation in regard to this comment if they considered further assessment (beyond that presented at PEIR) would be required. No further comments have been provided by National Highways.	N
NFOWFS3_052_016_100723	15. Turning movements for each SRN junction in the study area should be provided in order to determine where junction capacity assessments are required on the SRN, unless further justification is provided for not doing so. For example, details of individual turning movements at the junctions concerned. This should be undertaken for all SRN junctions in the study area, including A12 Junction 29. (Paragraph 4.2)	Traffic and Transport		The Applicant has discussed this matter with National Highways at an ETG meeting (05 September 2023) summarised further within this Table 11. During this meeting it was confirmed that National Highways do not require capacity assessments. The supporting TA (Appendix 27.1,	N

NFOWFS3_052_017_100723	16. The maximum peak hour trip generation for the SRN should be provided for both the AM and PM peak. (Paragraph 4.3)	Traffic and Transport		document refernece 3.3.54) provides details of hourly traffic flows in support of this agreed approach. Further details are provided within section 27.4.3 of the ES (Chapter 27 Traffic and Transport (Volume I)).	N
NFOWFS3_052_018_100723	17. The figures within the table for distribution of local accommodation should be revisited and evidenced. (Paragraph 4.11) Recommendations regarded as important but not critical to the acceptability of this DCO application:	Traffic and Transport			N
NFOWFS3_052_019_100723	18. Where possible, a collaborative approach with the Five Estuaries Offshore Wind Farm project should be undertaken to reduce any impacts on the SRN. (Paragraph 3.7)	Traffic and Transport		Noted.	N
NFOWFS3_052_020_100723	19. Reference should be made to the latest DfT Circular 01/2022, and also to Highway's England (now National Highways) 'The strategic road network: Planning for the future (A guide to working with Highways England on planning matters.' (Paragraph 3.19)	Traffic and Transport		Section 27.4.1 of the ES (Chapter 27 Traffic and Transport (Volume I)) includes a review of all legislation, policy and guidance applicable to the Project (including DfT Circular 01/2022).	N
NFOWFS3_052_021_100723	20. Clarification should be provided regarding the reasoning for only including 12 months of the construction programme in the highway assessment, when the construction period is stated to be 18-24 months in the PEIR. (Paragraph 3.28)	Traffic and Transport		The TA (Appendix 27.1, document reference 3.3.64) includes details of derivation of construction traffic demand for entire construction duration.	N
NFOWFS3_052_022_100723	21. An Abnormal and Indivisible Load report should be provided to National Highways for review. (Paragraph 3.35)	Traffic and Transport		An Abnormal Indivisible Load (AIL) study is provided as Appendix 27.2 (document reference 3.3.65) of the ES Chapter 27 Traffic and Transport. It can be noted from Appendix 27.2 (document reference 3.3.65) that National Highways have provided agreement in principle to this proposed route.	Y

NFOWFS3_052_023_100723	22. The five year period for collision analysis should exclude periods of COVID-19 restrictions, specifically the period between 1st March 2020 and 31st August 2021. (Paragraph 3.39) Page: 3 of 22	Traffic and Transport		The Applicant have discussed this matter with National Highways at an ETG meeting (05 September 2023) summarised further within Table 11 in Appendix 27.4, document reference 3.3.67). . During this meeting a revised approach to the collection of collision data (from that previously agreed with National Highways) was agreed. The approach to data gathering is outlined within Section 27.4.2 of the ES (Chapter 27 Traffic and Transport (Volume I)) and the accompanying TA (Appendix 27.1, document refernece 3.3.64).	N
NFOWFS3_052_024_100723	23. Sustainable travel measures should be explored and included within the OCTMP, such as promoting car sharing or the provision of staff minibuses. (Paragraph 4.7)	Traffic and Transport		Table 27-1 of the ES (Chapter 27 Traffic and Transport (Volume I)) outlines that the traffic forecasts presented within this chapter have applied an employee to vehicle ratio (car-share) of 1.5 persons per vehicle. An OCTMP (Document Reference 7.16) is submitted with the DCO application. The OCTMP includes outline travel plan measures, which would be developed further in consultation with Essex County Council and National Highways prior to the commencement of the Project.	N
NFOWFS3_052_025_100723	24. Within the distribution exercise, the proportion of traffic arriving from the A12 north of Junction 29 or west of Junction 29 should be defined, given the difference in potential final route to the site. (Paragraph 4.9)	Traffic and Transport		The TA (Appendix 27.1, document reference 3.3.64) includes further details of distribution of traffic at Junction 29 in the form of turning count diagrams.	N

NFOWFS3_052_026_100723	<p>25. Data sources in relation to accommodation per postcode should be stated and the percentage split between local and non-local workers should also be set out. (Paragraph 4.11)</p>	Socio-economic		<p>The Applicant have discussed this matter with National Highways at an ETG meeting (05 September 2023) summarised further within Table 11 in Appendix 27.4, document reference 3.3.67. National Highways agreed that they would defer agreement of the approach to Essex County Council. The Applicant and Essex County Council have subsequently agreed an approach to the distribution of employee traffic. The agreed approach is detailed in the TA (Appendix 27.1, document reference 3.3.64) includes further details of distribution of employee traffic.</p>	N
NFOWFS3_052_027_100723	<p>1. Introduction 1.1. AECOM has prepared this Technical Note (TN01) to document a review of the package of reports subject to Consultation under Section 42 of the Planning Act. The reports have been prepared in support of the proposed North Falls Offshore Windfarm, which is a joint venture between SSE Renewables and RWE. The Preliminary Environmental Information Report (PEIR) documents have been prepared by Royal HaskoningDHV and approved by North Falls Offshore Wind Farm Ltd. AECOM have been commissioned by National Highways to review the PEIR Consultation documents associated with North Falls Wind Farm.</p> <p>1.2. From the documents prepared for the Consultation, AECOM have identified the relevant PEIR documents to National Highways and therefore TN01 will document a review of the following:</p> <ul style="list-style-type: none"> ▪ Chapter 1: Introduction; ▪ Chapter 27: Traffic and Transport; ▪ Appendix 27.1: Transport Assessment; ▪ Appendix 27.2: Interrelationships; ▪ Chapter 27: Traffic and Transport Figures; and ▪ Annex 3.1: Cumulative Effects Assessment Methodology (Table 9). <p>1.3. The statutory consultation for the North Falls development is proposed to run from 16th May 2023 to 14th July 2023. A Statement of Community Consultation was published in Spring 2023 (as shown the North Falls Offshore Wind Farm website) in</p>	Policy and Legislative Context		Noted.	N

	<p>accordance with Section 47 (6) of the Planning Act 2008. The process for the current consultation is set out in the Notice served under Section 37 of the same Planning Act.</p> <p>1.4. The North Falls development is proposed to be an extension of the existing operational Greater Gabbard Offshore Wind Farm, which is a 504MW wind farm. The Wind Farm extension would be located off the coast of Essex and Suffolk. Due to the overall capacity of the project, it is considered a Nationally Significant Infrastructure Project (NSIP).</p>				
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<p>NFOWFS3_052_028_100723</p>	<p>1.5. The strategic road network (SRN) within the Traffic and Transport Study Area as established in the PEIR consists of the section of the A120 from the section immediately east of A12 Junction 29, north of Colchester, where the A120 meets the A12, to the A120 / Parkeston Road I Station Road junction (Parkeston Roundabout) in Harwich, Essex. The A120 is a key east to west route in the East of England, running between M11 Junction 8 in the west to Harwich to the east. It is noted that the SRN terminates at Parkeston Roundabout and therefore AECOM welcomes the inclusion of the full extent of the SRN route from Colchester towards Harwich International Port in the study area.</p> <p>1.6. The aim of TN01 is to enable National Highways to understand the impacts of the proposed development on the SRN, in order to inform the consultation ending on 14th July 2023. TN01 also intends to identify any further information/analysis that is recommended beyond the PEIR stage.</p> <p>1. 7. For ease of reference, AECOM's main comments and recommendations are presented in bold and underlined text throughout the note. Recommendations that are critical to the acceptability of the development consent order (DCO) application are highlighted red. Recommendations that are of concern but are unlikely to be critical to the acceptability of the DCO application are highlighted in amber.</p>	<p>Traffic and Transport</p>	<p>Policy and Legislative Context</p>	<p>Noted.</p>	<p>N</p>
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2. Review of PEIR: Chapter 1: Introduction
2.1. The introduction chapter of the PEIR provides background to the North Falls DCO application. The main information of relevance to the SRN within this chapter is the onshore red line boundary figure, which indicates the areas where there would be a direct interaction with the A120, which is shown in Figure 1. The red line boundary crosses the A120 to the east of the A120 / B1035 junction at Horsley Cross. The transport study area will be discussed in further detail later in this TN.



Introduction

Traffic and Transport

Noted.

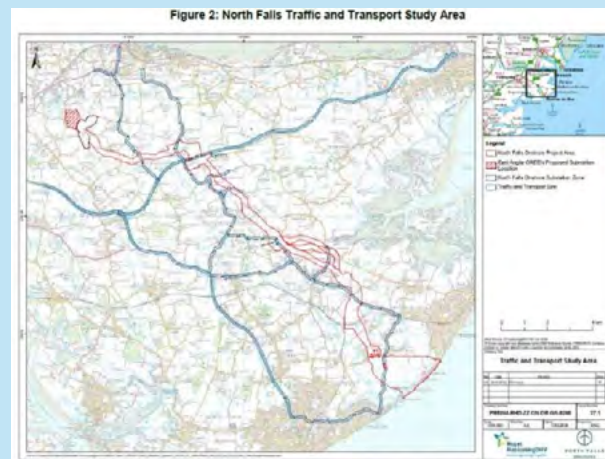
N

3. Review of PEIR: Chapter 27: Traffic and Transport

Scope - Study Area

3.1. This chapter of the PEIR discusses the potential for the construction and operation of the onshore elements of the proposed offshore wind farm to impact upon traffic and transport. The chapter identifies the scope, relevant legislation, assessment methodology, and the baseline conditions existing at the site and its surroundings.

3.2. The onshore highway study area is listed in this chapter (paragraph 27.3.1) and consists of a total of 42 separate highways sections, referred to as links. These are shown in Figure 27.1 of the PEIR (reproduced as Figure 2 below).



3.3. As shown in Figure 2, some of the links in the study area are sections of the SRN. The links along the A120 within the study area from west to east are as follows:

- Link 1;
- Link 2;
- Link 3;
- Link 15;
- Link 16;
- Link 18; and
- Link 19.

Traffic and Transport

Noted.

N

	<p>3.4. The following links have potential to interaction with the A120:</p> <ul style="list-style-type: none">▪ Link 20 (A133 junction with A120);▪ Link 4 (Bentley Road with left in left out junction with the A120);▪ Link 14 (B1035 Clacton Road north of roundabout junction with the A120);▪ Link 6 (B1035 Clacton Road north of roundabout junction with the A120); and▪ Link 17 (Colchester Road near Goose Green).				
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NFOWFS3_052_031_100723	<p>3.5. AECOM welcome the inclusion of the sections of the A120 east of A12 Junction 29 to Harwich in the transport study area. However, AECOM note that the study area does not include the A120 approximately to the west of Elmstead. This excludes A12 Junction 29 and a potential new junction on the A120 that could emerge as part of proposals detailed in the proposed Tendring Colchester Borders Garden Community (TCBGC). It is recommended that the transport study area include the full section of the A120 from A12 Junction 29 to Harwich including A12 Junction 29.</p> <p>3.6. AECOM note that from the inset maps at Figure 27.2 of the PEIR, the highlighted links provide significant offsets from each junction, i.e. the study area includes the road links but not the junctions. It is recommended that in addition to the Traffic and Transport Links, all SRN junctions along the A120 as well as A12 Junction 29 should also be included in the study area.</p>	Traffic and Transport		Noted.	N
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NFOWFS3_052_032_100723

3. 7. The proposed onshore cable routes and crossings as presented in the document are shown in Figure 3. It is noted that the cable crossing across the A120 involves a trenchless crossing, which is also applied to the crossing of the B1035 to the North West, and the crossing of Stones Green Road to the south. This approach to crossing of these sections of road is welcomed as it should prevent road closures on the SRN as a result of trenching. AECOM note that the proposed project study area is very similar to that of the proposed Five Estuaries Offshore Wind Farm, which also crosses the SRN immediately to the east of the A120 / B1035 junction. It is recommended that, where possible, a collaborative approach with the Five Estuaries Offshore Wind Farm project is undertaken to minimise any impacts on the SRN.



3.8. The proposed accesses and crossings are shown below in Figure 4. The accesses that relate to the A120 are as follows:

- AC12a (Colchester Road at Goose Green, south of the A120 on the west side)
- AC12b (From B1035 to the south of the A120, on the east side)
- AC13 (From B1035 to the north of the A120, on the east side)
- AC14 (From B1035 to the north of the A120, on the west side)

Traffic and Transport

Onshore Archaeology and Cultural Heritage

Noted.

N

3.9. Although the accesses are in proximity to the A120, particularly AC12a and AC12b, direct access from the A120 to the site boundary is not proposed. AECOM welcomes this aspect of the proposal.

3.10. Proposed accesses AC13 and AC14 are located some 850m north of the junction of the A120/ B1035. Proposed access AC12a is proposed to be taken from Colchester Road, adjacent south of the A120. It is recommended that detailed drawings of proposed construction accesses ~C12a, AC12b, AC13 and AC14 are provided to National Highways for review to determine whether the proximity of these accesses to the A120 will impact the SRN.

Figure 4: Proposed Accesses and Crossings



Consultation

3.11. Section 27.2 of the chapter sets out the consultation process carried out to date. This includes a meeting between the applicant and National Highways on 7th June 2022, and a follow up email of 8th November 2022. The summary of consultation is set out in Table 1 below.

Table 1: Consultation responses (extract from Table 27.1 of PEIR chapter)

Consultee	Date / Document	Summary of Comments	Response / where addressed in the PEIR
National Highways	7 June 2022 Traffic and Transport Meeting	<p>A meeting was held with National Highways to discuss:</p> <ul style="list-style-type: none"> The potential for access from the A120; The extent of the TTA; Approach to data collection; Impacts to be assessed; Proposed DCO documents. <p>Agreements were reached with regard to:</p> <ul style="list-style-type: none"> The approach to capturing baseline traffic flows; The approach to considering seasonality of baseline traffic; The approach to scoping out the assessment of operational traffic and transport impacts; The approach to scoping out the assessment of on-site traffic movements associated with the offshore construction and operational phases; The impacts to be assessed within the EIA; The approach to the assessment of highway safety; The proposed DCO documents; The Traffic and Transport EIA Chapter should be supported by a separate Transport Assessment; and The design of new accesses and crossings. 	<p>The approach to data gathering is outlined within Section 27.4.2 and the accompanying TA (Appendix 27.1, Volume III).</p> <p>The assessment methodology and agreed impacts to be assessed are outlined within Section 27.4.</p> <p>A TA is provided in Appendix 27.1 (Volume III). The TA includes details of the proposed access, strategy and approach to the design of new accesses and crossings.</p>
National Highways	8 November 2022, Email	<p>In response to consultation with National Highways upon a range of access options at the vicinity of the A120, National Highways advised that they wish to avoid any new access to the A120 and would prefer access to the project to be taken from the local highway network.</p> <p>National Highways also advised that where the project cables cross the A120, they would prefer that the project uses 'thrust bore' to install the cables under the carriageway, or to cross over at a suitable height.</p>	<p>A TA is provided in Appendix 27.1 (Volume III). The TA includes details of the proposed access strategy and approach to the design of new accesses and crossings. No access is proposed from the A120.</p> <p>Section 27.3.3 describes the mitigation measures that have been embedded into the design of the Project. These measures include a commitment to install the Project's cables under the A120 using trenchless techniques.</p>

3.12. It is noted that AECOM has not been involved in the consultation process to date on behalf of National Highways, and therefore the commitments within the summary table cannot be verified against the assessment methodology set out in the PEIR. It is however noted and welcomed that direct access would not be sought from the SRN. It is also welcomed that Table 27.2 of the PEIR sets out a set of development assumptions that will underpin assessments for North Falls, referred to as the 'Realistic worst case scenario'.

3.13. Section 27.3.3 of the PEIR chapter introduces Table 27.3 which sets out the mitigation measures that will be put in place as part of the design. The measures relevant to National Highways comprise the following:

- Outline Construction Traffic Management Plan (OCTMP);
- Delivery time restrictions; and
- An Access Strategy that seeks to reduce HGV

Technical Consultation

Traffic and Transport

Noted.

N

	<p>impacts, by implementing a haul road along the onshore cable route, the creation of vehicle crossovers, and controls on vehicle routing.</p> <p>3.14. These measures are considered reasonable by AECOM, subject to review of further and emerging detail. It is recommended that any further details relating to the mitigation measures of relevance to the SRN (i.e. a OCTMP details on delivery, time restrictions, and a HGV access strategy) are provided to National Highways for reviews as and when they are prepared.</p> <p>3.15. As set out in Table 27.3 in the chapter, the construction access strategy is designed to avoid sensitive communities and narrow roads. The access locations in the vicinity of the SRN are shown in Figure 27.2c of the chapter (Figure 4 above in this TN). None of the highway access locations fall on the SRN itself, although the access from the B1035 (Access 12b), is located immediately to the south of the A120/ B1035 junction. As discussed earlier in this TN, AECOM are recommending that detailed drawings of these accesses are provided to National Highways for review.</p> <p>3.16. It is anticipated that movements to and from the construction access and the A120 via the LRN will take place at the following SRN junctions:</p> <ul style="list-style-type: none"> ▪ A120 / B1035 Clacton Road 'Horsley Cross' (roundabout junction); ▪ A120 / Bentley Road, Little Bromley (priority junction) and ▪ A120 / Colchester Road, Goose Green (priority junction). <p>3.17. It is recommended that confirmation is provided as to the suitability of these junctions to accommodate the physical swept paths of the types of vehicles envisaged, without over-running kerb/lines and/or adjacent traffic lanes. This should be provided in the form of swept path analysis drawings.</p>				
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NFOWFS3_052_034_100723	<p>Legislation, guidance and policy</p> <p>3.18. Section 27.4.1 of the chapter includes a review of a range of national and local planning policy documents, including the following:</p> <ul style="list-style-type: none"> • National Policy Statements (NSIPs) (DECC 2011a-c); • Tendring District Local Plan (2013-2033 and beyond); • Essex Local Transport Plan (2011); • DfT Circular 02/2013 (2013); • Traffic Management Act (2004); • New Roads and Street Works Act (1991); • Road Traffic Regulation Act (1984); and • The Highways Act (1980). <p>3.19. AECOM welcome th is, and the inclusion of the DfT Circular 02/2013. However, this document has been replaced by the more recent DfT Circular 01/2022. AECOM recommends that reference to made to the latest Circular (01/2022). Reference should also be made to Highways England's (now National Highways) 'The Strategic road network: Planning for the future (A guide to working with Highways England on planning matters)'.</p> <p>3.20. The document also considered the following key guidance documents with regards to the scoping and methodology of the traffic and transport review:</p> <ul style="list-style-type: none"> ▪ Department of Levelling Up, Housing and Communities (DLUHC), Planning Practice Guidance – Overarching Principles on Travel Plans, Transport Assessments and Statements, (2014); ▪ Institute of Environmental Management and Assessment (IEMA), Guidelines for Environmental Assessment of Road Traffic (GEART) (1993); ▪ Design Manual for Roads and Bridges (DMRB) CD 123, Geometric design of at-grade priority and signal-controlled junctions; ▪ DMRB CD 109, Highway link design; ▪ DMRB LA 112 Population and Human Health; and ▪ Traffic Signs Manual Chapter 8 Traffic Safety Measures and Signs for Road Works and Temporary Situations Part 1: Design (Department for Transport, 2009). <p>3.21. AECOM welcome reference to these guidance documents.</p>	Policy and Legislative Context	Traffic and Transport	Noted.	N
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<p>NFOWFS3_052_035_100723</p>	<p>Data Sources</p> <p>3.22. The PEIR states that both existing and new data sources have been utilised to establish the baseline traffic data for the study area. Existing data has been obtained from the following sources:</p> <ul style="list-style-type: none"> ▪ Annual Average Daily Traffic (AADT) flows for the Local Road Network (LRN) and Strategic Road Network (SRN) within the study area (DfT National Road Statistics, 2019 counts); ▪ Traffic flows from permanent traffic counters on two links (Essex County Council); ▪ Collision data for the study area (Essex County Council); ▪ PRoW maps for the study area (Essex County Council); and ▪ STATS19 accident data for the LRN (Essex County Council). ▪ A120 to the west of the junction with the A133 (DfT 38246); ▪ A120 to the west of the junction with the B1035 (DfT 7938); and ▪ A120 to the east of the junction with the B1352 (DfT 47951). <p>AECOM</p> <p>3.23. New data has been obtained using Automatic Traffic Counters (ATCs), which were installed from 9th June 2022 to 15th June 2022 at 30 locations across the study area to collect traffic flow and speed data. AECOM note that in June 2022, special guidance (210803-RWS-Data Collection in Autumn 2021 Guidance-Issue 1_0) was still in place in relation to the impact of Covid on traffic flows. This guidance required practitioners to take a number of steps to ensure that data collected between 1st September 2021 and 31st August 2022 was carefully reviewed to screen out the effect of Covid-19 on the dataset. This guidance was not withdrawn until September 2022 and therefore its provisions should be taken into account in deriving base flows for the assessment.</p> <p>3.24. The study area for data collection is shown on a map in relation to the PEIR red line boundary in Figure 5 below. This shows the locations where there is existing data (obtained from the DfT Road Traffic Data website) or new data (ATCs). AECOM note that the data collection locations on the SRN consist of the following:</p>	<p>Traffic and Transport</p>		<p>Noted.</p>	<p>N</p>
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- A120 to the west of the junction with the A133 (DfT 38246);
- A120 to the west of the junction with the B1035 (DfT 7938); and
- A120 to the east of the junction with the B1352 (DfT 47951).

3.25. The PEIR and accompanying TA do not make reference to Manual Classified Count locations, which are likely to include junctions on the SRN. It is recommended that Manual Classified Turning Movement Counts are carried out on SRN junctions likely to be affected by the proposals. These should be scoped with Essex County Council and National Highways, prior to being collected and presented within the Traffic and Transport ES Chapter and TA.

Figure 5: Map of Baseline Traffic Data (Annex 27.1.14 Figures - TA)



NFOWFS3_052_036_100723	<p>Impact Assessment Methodology</p> <p>3.26. The assessment methodology section in the chapter identifies the approach to determining traffic impacts from the construction phase, which follows from meetings with ECC (9th July 2021), and National Highways (7th June 2022). The method follows the IEMA GEART (Guidance for the Environmental Assessment of Roads and Traffic) and is presented subsequent to the Traffic and Transport Method Statement (TTMS). Although AECOM did not review this document, the approach as set out in Section 27.4.3 of the PEIR chapter appears to be acceptable. AECOM also agree that, due to the nature of the proposals, it is appropriate that traffic impacts during the operational stage have been scoped out.</p> <p>3.27. The PEIR presents construction trip generation from the TA which has been calculated using a first principles approach. It states that the traffic impact has been determined based on the level of anticipated traffic in terms of personnel and materials for the onshore element during the construction period. AECOM note that this methodology therefore does not assess the impact of the construction of the offshore windfarm itself, but rather only the construction of onshore elements of the development. It is recommended that either justification for excluding the assessment of the traffic impact for the construction period of the offshore elements of the development, or that the traffic impact of the construction of the offshore elements of the development should also be assessed.</p>	Traffic and Transport		Noted.	N
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<p>NFOWFS3_052_037_100723</p>	<p>3.28. AECOM note that the PEIR (Table 27.2) states that the construction programme is anticipated to be approximately 18-24 months, however the maximum number of vehicle movements has been taken into account in the assessment over a period of 12 months. It is understood from paragraph 144 of the PEIR that National Highways agreed with an assessment year of 2026 at the transport Expert Topic Group on 7th June 2022. AECOM recommend that further clarification should be provided regarding the reasoning for only including 12 months of the construction programme in the highway assessment, when the construction period is stated to be 18-24 months in the PEIR.</p> <ul style="list-style-type: none"> ▪ Rule 1: Include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%); and ▪ Rule 2: Include any specifically sensitive areas where traffic flows are predicted to increase by 10% or more (or where the number of HGVs is predicted to increase by 10% or more). <p>3.29. The PEIR states that the traffic impact from the construction period has been compared to the baseline traffic in the study area.</p> <p>3.30. The PEIR identifies the traffic impact magnitude definitions, sensitivities, and the methodology to determine significance. In Section 27.4.3.1 .2, the magnitude is defined on the basis of two rules:</p> <ul style="list-style-type: none"> ▪ Rule 1: Include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%); and ▪ Rule 2: Include any specifically sensitive areas where traffic flows are predicted to increase by 10% or more (or where the number of HGVs is predicted to increase by 10% or more). 	<p>Traffic and Transport</p>		<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_052_038_100723</p>	<p>3.31. The sensitivity of receptors is set out and defined within Table 27.10. The SRN network is categorised as of negligible sensitivity. The justification for this is set out as follows: 'Links that fall below GEART Rule 1 and 2 screening thresholds (see below) and major 'A' roads with no pedestrian, cycle or equestrian environment; or highway environment that can accommodate changes in volumes of traffic '. It is accepted that the A120 does not provide an environment for non-motorised users, but the ability to accommodate changes in volumes of traffic is a matter that is not confirmed without assessment. At particular locations (such as low-standard or low-capacity junctions between the SRN and the local road network), increases of magnitudes below those listed above can be material in terms of the risk of a 'severe impact' on the SRN in terms of either traffic capacity and/or road safety. Notwithstanding this, it is noted that for the Five Estuaries Wind Farm proposals, on which AECOM has previously provided advice to National Highways, there is an overlapping study area and also screens all parts of the A120 as subject to negligible sensitivity.</p> <p>3.32. It is noted in Paragraph 62 of the PEIR chapter that the ECC Local Transport Plan reports that the A120 (comprising links 1, 2, 3, 15, 18 and 19) suffers from journey unreliability, and that the road is therefore subject to high sensitivity to changes in traffic flow. For the purpose of an assessment of Driver Delay, the route therefore merits further consideration. It is recommended that a more detailed assessment is made for the A120 within the study area (including its junctions – which should encompass A12 J29) based on it having high sensitivity to Driver Delay, as stated in the ECC Local Transport Plan.</p> <p>3.33. In terms of driver delay, the PEIR, in Table 27.11 defines negligible magnitude as 'no or single lane road closure required, or delays of less than two minutes'. Low magnitude is defined as 'delays of more than two to 10 minutes'. Delays above 10 minutes are subject to a review based on quantum of vehicles including buses and pedestrian and cycle traffic and are defined as of medium of high magnitude.</p>	<p>Traffic and Transport</p>		<p>Noted.</p>	<p>N</p>
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3.34. Section 27.4.3 Impact Assessment Methodology refers to the standard methodology in accordance with GEART and proposes to assess Severance, Amenity, Highway Safety, Driver Delay (for Capacity, Geometry and Road Closures), and abnormal loads. The methodology is accepted by AECOM.

3.35. With regard to Abnormal and Indivisible Loads (Alls), paragraph 25 of the PEIR chapter notes that DfT Circular 02/2013 states that swept path analysis is required for ALL movements to the site. This requirement is retained within Paragraph 68 of the latest Circular 01/2022. It is stated in Paragraph 50 of the PEIR chapter that ALL impacts were scoped in to the assessment at the Expert Topic Group (ETG) with National Highways on 7th June 2022. The inclusion and methodology is welcomed and accepted by AECOM, and it is noted that to date, no constraints have been identified in relation to ALL. It is nonetheless recommended that the abnormal load report is provided to National Highways once drafted.

3.36. Table 27.11 of the PEIR chapter sets out how magnitude of impact will be assessed for all impacts. Significance matrix is set out and accepted, which is shown in Table 2 below.

Table 2: Definition of magnitude of impact for all impacts (Table 27.11 of PEIR chapter)

Impacts	Magnitude of Impact			
	Negligible	Low	Medium	High
Severance	Change in total traffic flow of less than 30%	Change in total traffic flows of 30 to 60%	Change in total traffic flows of 60 to 90%	Change in total traffic flows of over 90%
Amenity	Change in traffic flow (or HGV composition) of less than 100%		Greater than 100% increase in traffic (or HGV composition) and a review based upon the quantum of vehicles, vehicle speed and pedestrian footfall	
Highway Safety	Informed by a review of existing collision records from within the TTSA and the forecast increase in traffic.			
Driver Delay (Capacity)	Informed by a review of the potential increase in peak hour traffic through sensitive junctions and links.			
Driver Delay (Highway Geometry)	Informed by a review of the potential increase in peak hour traffic through sensitive junctions and links.			
Driver Delay (Road Closures)	No or single lane road closure required, or delays of less than two minutes.	Delays of more two to 10 minutes	Delays over 10 minutes and a review based upon the quantum of vehicles, scheduled buses and pedestrian and cycle traffic.	

3.37. The criteria above, and the impact significance

Traffic and Transport

Noted.

N

	<p>matrix, is consistent with those reviewed as part of AECOM Task DN063 (Dudgeon and Sheringham Offshore Wind Farm Extensions) which was prepared by the same consultant and accepted as appropriate by AECOM for these proposals. The methodology for gathering schemes for cumulative effects assessment is also accepted by AECOM.</p>				
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NFOWFS3_052_040_100723	<p>Existing Environment</p> <p>3.38. It is recognised by AECOM that the criterion for assessing sensitivity is such that the A120 links are categorised as negligible due to a lack of a pedestrian and cyclist environment and their capacity to accommodate changes in traffic levels.</p> <p>3.39. With regard to highway safety, a series of collision clusters have been identified and set out in Table 27.15 of the PEIR chapter. The cluster that relates directly to the SRN is Cluster Site 6, which is the A120 / A133 grade separated junction. During the five-year study period (2017-2022), a total of 13 collisions were recorded, of which eight were classified as slight and four as serious. One fatal collision was recorded. Cluster site 5 would also be of interest, given that it is located at the end of a link road from the A120, and although within the local road network, collisions have the potential to cause congestion on the A120. It is recommended that the five year period for collision analysis is extended such that it does not include periods where COVID-19 restrictions were in place. This should therefore exclude the period from 1st March 2020 to 31st August 2021 inclusive.</p>	Traffic and Transport		Noted.	N
NFOWFS3_052_041_100723	<p>Future Trends in Baseline Conditions</p> <p>3.40. A construction start date of 2026 has been assumed for the traffic assessments. The assessment uses TEMPro growth factors to factor the 2019 baseline AADT data to the assessment base year of 2022. The growth factor that has been used for the conversion of 2019 data to 2022 is 1.0588 for the A120.</p> <p>3.41. For the future year baseline assessment flows, the AADT traffic flows on the construction route highway links have also been factored up using TEMPro growth factors. The factor to bring the traffic from 2022 to 2026 levels is 1.0588.</p> <p>3.42. AECOM note that the TEMPro growth factors are not differentiated between LRN and SRN routes, nor specified per peak hour. From the information provided, AECOM have been unable to replicate the growth factor figures presented in the Transport Assessment. It is recommended that the TEMPro</p>	Traffic and Transport		Noted.	N

	<p>growth factors are provided that are specific to SRN, using the NTEM growth model, and the AM and PM peak periods. Further clarification regarding the parameters used to obtain the growth factors should be provided, such as the geography and the road type.</p>				
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Assessment of Significance

3.43. Table 27.17 in the PEIR demonstrates the SRN links which have been marked as screened out. A copy of this is shown in Table 3 below. AECOM note that once the recommendations raised earlier in this TN have been addressed, this may change. It is recommended that the link screening is updated once the recommendations regarding traffic flows and junction capacity in this TN have been addressed. The table should also be revisited in order to ensure that the flows reflect the relationships between the A120, A133, B1035 and B1352, as the replication of base flows across is often not representative of expected conditions.

Table 3: Link screening for SRN (extract from Table 27.17 of PEIR chapter)

Link ID	Link Description	Link Sensitivity	Background AADT		Forecast construction vehicle trips				Percentage increase (peak trips)	
			All vehicles	HGV	All vehicles (peak)	HGVs (peak)	All vehicles (average)	HGVs (average)	All vehicles	HGVs
1	A120 from the A12 to the A133	Negligible	49,188	3,047	1,117	565	788	432	2%	19%
2	A120 from the A133 to Harwich Road	Negligible	49,188	3,047	873	565	825	432	2%	19%
3	A120 from Harwich Road to Bentley Road	Negligible	13,964	1,819	918	565	652	432	7%	31%
15	A120 from Bentley Road to the B1035	Negligible	13,964	1,819	723	565	539	432	5%	31%
16	A120 from the B1035 to Colchester Road	Negligible	13,964	1,819	785	665	579	432	6%	31%
18	A120 from Colchester Road to the B1352	Negligible	11,564	1,622	574	565	438	432	5%	35%
19	A120 from the B1352 to Parkston Road	Negligible	11,564	1,622	565	565	432	432	5%	35%

3.44. With regards to highway safety, a review has been set out in Table 27.23 of the PEIR chapter in relation to the six collision clusters and three local roads that merited further consideration. An extract from this table is set out below in Table 4.

Traffic and Transport

Noted.

N

Table 4. Magnitude of highway safety impact and sensitivity of receptors (extract from Table 27.23 of PEIR)

Receptors	Location	Summary of collisions and sensitivity	Links	Percentage change		Magnitude of impact
				All vehicles	HGVs	
Cluster Site 6	A120/A133 grade separated junction	During the five-year study period (2017-2022), a total of 13 collisions were recorded, of which eight were classified as slight and four as serious. One fatal collision was recorded where a pedestrian crossed the live lanes and was struck by a car. Of the 13 collisions at cluster site 6, eight were loss of control, four were rear-end collisions and one was a car colliding with a pedestrian. It can be concluded that there is an emerging pattern of collisions involving drivers losing control whilst negotiating the junction. Cluster site 6 is therefore assessed to be of high sensitivity.	2/20	1.2%	16.19%	Cluster site 6 is located at the intersection of links 2 and 30 that are projected to experience an increase in total traffic of up to 2% and HGV traffic of up to 10%. Whilst a cluster of collisions with an emerging pattern of loss of control is identified, the existing cause of collisions would not be disproportionately impacted by vehicle composition and therefore it is more appropriate to focus upon the total change in traffic rather than changes in HGVs. It is therefore assessed that a change in total traffic of up to 2% represents a negligible magnitude of impact.

3.45. Further to the assessment of a negligible magnitude of impact, but at a high sensitivity and the significance of effect being minor adverse. Paragraphs 184 and 185 consider the additional mitigation in the form of a future OCTMP to minimise potential risks Paragraph 186 states that the mitigation proposals will be discussed with ECC. As mentioned earlier in this TN, AECOM recommend that, once available, the OCTMP is provided to National Highways for review. It is also recommended that National Highways take an ongoing role as a consultee regarding any potential measures that could have an impact on the use of the SRN.

3.46. With regard to Driver Delay, this impact is divided into three impacts; capacity, highway geometry and road closures. Table 27.26 in the PEIR sets out the capacity impact and concludes a negligible magnitude for all A120 links, as well as all A133 links. This is on the basis that the percentage increase in traffic flows from peak construction period trips are calculated as within a range of 1% to 7% change, and as such within the observed daily fluctuations in traffic. The highway geometry and road closures would not affect the SRN so are not considered further by AECOM.

3.47. It is noted in Paragraph 216 of the PEIR chapter that no operational phase assessments would take place as agreed with National Highways at the ETG meeting on 7th June 2022.

NFOWFS3_052_043_100723	<p>Potential Monitoring Requirements</p> <p>3.48. As noted earlier with in this TN, the production of an OCTMP will be a key element of mitigation. This will also have an important role in terms of monitoring. As per the previous recommendation, National Highway should have a role in the agreement of the monitoring procedures.</p>	Traffic and Transport		Noted.	N
NFOWFS3_052_044_100723	<p>Cumulative Impacts</p> <p>3.49. Under the first step of the Cumulative Effects Assessment (CEA), a list of the potential cumulative impacts has been set out, consistent with the principal assessment. Only impacts greater than negligible have been taken forward to CEA stage, an approach considered appropriate by AECOM.</p> <p>3.50. The second step of the CEA is a longlist of relevant projects, plans and activities occurring within the study area, with proposals both emerging and consented included.</p> <p>3.51. The study includes a review of consented development proposals within the Tendring, East Suffolk and wider Essex vicinity, to identify schemes that would have an impact on permanent baseline traffic flows on the study's highway links. The review identified a total of 16 projects in the vicinity that are emerging or approved under the National Infrastructure Planning regime. A total of 29 projects within the remit of ECC decision making at county level have been included. A total of three projects for determination or approved by Tendring District Council have been set out. Further to the review of cumulative schemes; the following proposals are included in the study:</p> <ul style="list-style-type: none"> ▪ East Anglia GREEN (AECOM note that this is now called Norwich to Tilbury); and ▪ Five Estuaries Offshore Wind Farm. 	Traffic and Transport	Technical Consultation	Noted.	N

<p>NFOWFS3_052_045_100723</p>	<p>3.52. AECOM welcome the inclusion of these two development proposals.</p> <p>3.53. It is highlighted that AECOM has provided a series of reviews for National Highways on Five Estuaries Offshore Wind Farm. For the purpose of comparison with the two schemes above, the schemes below are those that were scoped in for CEA at PEIR stage.</p> <p>3.54. As AECOM stated in the PEIR stage review for Five Estuaries Offshore Wind Farm, it is also noted by AECOM in this TN that the consented development of Bathside Bay at Harwich International Port has not been included in either the primary or cumulative assessment for the assessment of North Falls Offshore Wind Farm. It is recommended that the consented container terminal development at Bathside Bay is included as a committed development in the study, or that justification for excluding it is provided.</p> <p>3.55. Notwithstanding the above, Table 27.33 of the PEIR chapter sets out the Indicative Cumulative Traffic Flows, which is for North Falls and Five Estuaries Wind Farms. It is noted that the table suggests some substantial increases in HGV percentages in the cumulative scenario, including up to 70% on the A120 between Colchester and Parkeston Road (Harwich). AECOM considers that such levels of change are significant and should be considered in further detail at ES stage.</p>	<p>Traffic and Transport</p>		<p>Noted.</p>	<p>N</p>
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<p>NFOWFS3_052_046_100723</p>	<p>4. Review of PEIR: Appendix 27.1 Transport Assessment</p> <p>4.1. Appendix 27.1 of the PEIR contains the Transport Assessment, which documents the baseline traffic conditions in the study area and sets out the assessment that is applied to the relevant PEIR chapter.</p> <p>Baseline Traffic Flows</p> <p>4.2. The baseline traffic flows that are set out within the PEIR chapter and the TA include identification of the AADT (Annual Average Daily Traffic) including for HGVs, AAWT (Annual Average Weekday Traffic), and the highway network peak hours. The SRN traffic flows have been obtained from 2019 DfT counts, whereas the local road network flows within the study area have been taken from ATCs in 2022. Junction turning counts have not been included. It is recommended by AECOM that peak period junction turning counts are surveyed for the junctions which are part of the SRN. The commissioning of surveys would assist in developing both a more detailed and up to date understanding of the performance of junctions on the A120. This would inform a review on whether junction assessments should be carried out. This should be undertaken for all SRN junctions in the study area, including A12 Junction 29.</p> <p>4.3. The approach to traffic growth is discussed within the TA. AECOM's review of this has been addressed within the review of the PEIR chapter documented in this TN. It is also noted that the peak hours that are referred to in Paragraph 16 of the TA are not defined, nor are they considered further. It is recommended that assessment peak hours are agreed and considered for any future assessments.</p>	<p>Traffic and Transport</p>		<p>Noted.</p>	<p>N</p>
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NFOWFS3_052_047_100723	<p>Baseline Highway Safety</p> <p>4.4. The TA states that it was agreed between the Applicant and National Highways at the meeting on 7th June 2022 that a cluster is location where there are more than four collisions in four years. Data was collected for the five year period from 2017 to 2022. As recommended earlier in this TN whilst reviewing the PEIR chapter, AECOM recommend that the collision analysis should exclude the time period in which COVID-19 restrictions were in place. As referred to earlier within this TN, there is a collision cluster on the SRN in the vicinity of the grade separated junction between the A120 and A133. Paragraph 91 of the TA summarises that "there have been a total of 13 collisions at cluster site 6, of which, eight were loss of control, four were rear-end shunts and one was a car colliding with a pedestrian. It can be concluded that there is an emerging pattern of collisions involving drivers losing control whilst negotiating the junction". AECOM agree, that from the data including the COVID- 19 restriction period, there appears to be a collision cluster in this location.</p>	Traffic and Transport		Noted.	N
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<p>NFOWFS3_052_048_100723</p>	<p>Construction Trip Generation and Assignment</p> <p>Material and Personnel Demand</p> <p>4.5. This chapter of the TA discusses the trip generation methodology and outputs, which are based on a worst-case scenario. The trip generation in the TA has been calculated by applying the following four parameters:</p> <ul style="list-style-type: none"> • The likely minimum construction programme duration (and therefore maximum activity intensity); • Peak demand for materials and personnel; • Like mode share; and • The assignment of traffic. <p>4.6. A first principles approach has been used to determine the trip generation, which has been based on the developer's experience of constructing similar projects. The first principles approach generates traffic volumes from an understanding of material quantities and personnel numbers required for North Falls Wind Farm and converts these metrics into vehicle trips. The data that informs this approach is contained within Annexes 27.1 .5 and 27. 1.6 of the TA, and it is accepted by AECOM that this overall approach is the most appropriate means of deriving trip generation.</p> <p>4.7. The TA also makes note that light vehicle movements, which are attributed to staff, have been based upon a ratio of one employee to one vehicle, whereas in reality car sharing may take place or use minibuses provided by the contractor. It is noted that no factors have been applied to reduce the trip generation, and that the assertion is made that the trip generation could represent the worst-case scenario for flows on the A120. It is acknowledged by AECOM that the peak construction activity for HGVs and light vehicles has been taken forward for assessment within the PEIR assessment. Further to this, AECOM recommend that sustainable travel measures are included within the OCTMP, as a mitigation measure in order to promote car sharing and the use of staff minibuses, in accordance with guidance in the latest DfT Circular 01/2022.</p> <p>4.8. The total traffic demand has been distributed onto five sections along the cable route corridors based upon the maximum length of onshore cable</p>	<p>Traffic and Transport</p>		<p>Noted.</p>	<p>N</p>
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	corridors that can be served from each access. The total traffic demand for each peak month is stated as 770 light vehicle trips and 427 HGVs.				
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Construction Traffic Assignment

4.9. The TA states that all HGVs are assigned to the A120 east towards Harwich Port and A120 west towards an origin outside of the study area. Proportions of 100% of HGVs are applied in each direction as a sensitivity test. Therefore, it has been assumed that for the purpose of a worst-case HGV assessment, traffic flow data presented for the A120 links is the maximum flow that could occur from either east or west. AECOM welcomes this approach. However, it has not been made clear whether, or what proportion, of traffic would travel using the A12 west of Junction 29 or north of Junction 29. It is recommended that the proportion of trips made from different directions on the A12 towards the site is clarified.

The TA states that light vehicle trips, which will relate to staff, will either be drawn from the local labour force or a significant proportion will be brought in from other areas in the country. These people are assumed to stay locally whilst they are on the job. The TA states that trips from further than a 90-minute drive will not likely be daily and therefore a gravity model has been prepared for when these personnel stay in nearby hotels to commute to the site. A gravity model has also been created to factor in local employees.

4.10. Table 5 shows local hotel accommodation per post code cluster which is also located in Annex 27.1.8 in the TA.

Table 5: Distribution of local accommodation (extract from Annex 27.1.8 of TA)

Postcode	Entry Link	No of rooms per postcode	Journey time (minutes)	Factor*	% Distribution	Entry Link	% distribution by point of entry		
IP11	Link 10	94	37	0.4	4%	Link 10	69%		
IP3	Link 10	60	29	0.5	4%				
IP2	Link 10	254	32	0.1	1%				
IP1	Link 10	28	32	1.1	10%				
IP13	Link 10	32	43	1.3	11%				
IP12	Link 10	22	43	1.9	17%				
IP8	Link 10	108	27	0.3	2%				
IP14	Link 10	25	43	1.7	15%				
IP6	Link 10	48	32	0.7	6%				
CO10	Link 1	18	45	2.5	21%			Link 1	23%
CO6	Link 1	367	35	0.1	1%				
CO4	Link 1	367	20	0.1	0%				
CO1	Link 3	145	36	0.2	2%	Link 3	2%		
CO16	Link 34	89	19	0.2	2%	Link 34	2%		
CO15	Link 24	50	27	0.5	5%	Link 24	5%		

*Factor equates to number of rooms per minute of journey time

Traffic and Transport

Noted.

N

	<p>4.11. Whilst the distribution in relation to non-local, temporary accommodation based journeys is understood in principle, it is recommended that sources for the data, most notably in relation to accommodation per postcode, are stated, and that the percentage split between local and non-local workers should be set out. In addition, AECOM have carried out a sense-check on the numbers in the table above and consider the allocation of hotel rooms to postcodes to be counterintuitive in relation to the towns with in each postcode, and the allocation of the percentage distribution also appears not to reflect the numbers of rooms or the stated journey times. The numbers in this table should be re-visited and the evidence supporting them provided.</p> <p>4.12. The distribution for trips made by the local labour force has been determined using 2011 Census workplace statistics and assigned to the network using the same gravity model. The approach to determine and assign the distribution of light vehicle trips is accepted by AECOM. It is forecast that some 87% of local labour force trips would be made using the A120, of which 85% would travel from the west, and 2% from the east towards site.</p>				
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NFOWFS3_052_050_100723	<p>Access Strategy</p> <p>Construction Access</p> <p>4.13. Section 5.1 of the TA states that there could be up to 16 points of access from the public highway, and 22 haul road crossings, allowing traffic to cross the highway. The locations of the proposed accesses and crossings are shown on Figure 27.1.2 of the TA.</p> <p>4.14. It is proposed that all construction accesses and crossings would be temporary and, following completion of construction works, would be removed. Whilst the accesses are not directly onto the SRN, the commitment to providing a Stage 1 Road Safety Audit in the DCO is welcomed by AECOM.</p>	Traffic and Transport		Noted.	N
NFOWFS3_052_051_100723	<p>Operational Access</p> <p>4.15. Although the accesses are proposed to be removed following the construction phase, a new permanent access would be provided at Ardleigh Road, Little Bromley for maintenance purposes that will typically attract light vehicle trips. Given that the operational phase will not be assessed, and the proposed access will be at some distance from the SRN, the operational requirements have not been considered further by AECOM.</p>	Traffic and Transport		Noted.	N
NFOWFS3_052_052_100723	<p>5. Conclusion</p> <p>5.1. Upon reviewing the PEIR consultation documents provided in association with the proposed North Falls Wind Farm, AECOM have made a number of recommendations throughout this TN.</p> <p>5.2. For ease of reference, AECOM's main comments and recommendations are presented in bold and underlined text throughout the note. Recommendations likely to be critical to the acceptance of the DCO application are highlighted red. Recommendations that are important but are unlikely to be critical to the acceptance of the DCO application are highlighted in amber.</p>	N/A		Noted.	N

Consultee reference	Summary of comments	Theme/code	Theme/code	Applicant's response	Project change (Y / N)
NFOWFS3_053_001_140723	<p>Dear Mr Harper,</p> <p>Proposed application by North Falls Wind Farm Limited (the Applicant) for an Order granting Development Consent for the proposed North Falls Offshore Wind Farm, which is a proposed extension to the operational Greater Gabbard Offshore Wind Farm, located off the Tendring/Essex coast.</p> <p>Statutory Consultation Q2 2023.</p> <p>Response from Essex County Council.</p> <p>Thank you for consulting Essex County Council (ECC) on the above. Our comments on the same have been requested by the 18 July 2023, this response meets this deadline.</p> <p>I would also ask you to note that, and for the purpose of clarity, this response on the consultation comes from ECC and Tendring District Council, the authorities having in place a Memorandum of Understanding to work in co-operation in submitting this response.</p> <p>It is also correct that Tendring Council will make their own additional response in the form of a returned response to this consultation.</p> <p>ECC have seen in draft and endorse the comments as are made by Tendring in that response.</p> <p>North Falls (NF) comes in the form of a proposed extension of the now operational Greater Gabbard offshore wind farm. It would be located approximately 22km off the East Anglian coast in two separate seabed areas adjacent to the existing Greater Gabbard wind farm, which is currently operational.</p> <p>The proposals are comprehensive and include the following elements:</p> <p>Offshore</p> <ol style="list-style-type: none"> 1. An offshore wind turbine generating station with a generating capacity of over 100 megawatts, comprising up to 72 wind turbine generators with associated foundations and a maximum tip height of 397m above sea level. It is anticipated that the "Rochdale Envelope" will be used. 2. Up to two offshore substation platforms with associated foundations. 	Introduction		<p>Essex County Council's comments reflect the stage of the Project's development. Following the submission of the PEIR, the Applicant has undertaken further consultation with Essex County Council and provided clarification on transport matters. This has included multiple ETG meetings (summarised further within Table 11 in Appendix 27.4, document reference 3.3.67).</p>	N

	<p>3. A network of subsea inter-array cables including cable protection, connecting the wind turbines to each other and to the offshore substation platforms including cable crossings.</p> <p>4. Up to four subsea export cable circuits including cable crossings, cable protection, sheet piled intertidal exit pits and trenchless installation works from the offshore substation platforms to shore, with an offshore cable route length of up to 57km.</p> <p>5. Scour protection, as required, for foundations and cables.</p> <p>Onshore</p> <p>1. Transition joint bays likely to be located between Frinton-on-Sea and Clacton-on-Sea to connect the offshore cables and the onshore cables.</p> <p>2. Up to four buried export cable circuits from the transition joint bays at landfall along an approximately 24km route to a new electrical substation at a location subject to ongoing consultation near Lawford and Ardleigh, including cable ducts, jointing and trenchless installation works together with associated equipment, accesses, landscaping and a temporary construction compound. This route passes under the A120.</p> <p>.</p> <p>3. Current review of three options for connection to national grid and which are subject to this consultation are:</p> <ul style="list-style-type: none"> • Option 1: Onshore electrical connection at a connection point within Tendring, Essex, with a project alone onshore cable route and onshore substation infrastructure; • Option 2: : Onshore electrical connection at a National Grid connection point within Tendring, Essex, sharing an onshore cable route with separate onshore export cables with other another project (such as Five Estuaries) where practicable, or • Option 3: Offshore electrical connection supplied by a third-party electricity network provider. Such a connection will potentially be identified through the OTNR process <p>4. Temporary construction areas and haul roads together with works to secure vehicular and/or pedestrian means of access for the Project.</p> <p>5. Associated and/or ancillary works including</p>				
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	<p>archaeological and ground investigations, drainage works, highway improvements, works to alter the position of existing utilities, works to watercourses, landscaping and other mitigation and monitoring works.</p> <p>6. Such other works as may be necessary or expedient for the purposes of or in connection with the construction, operation, maintenance or decommissioning of the Project.</p> <p>7. If required, temporary stopping up, diversion or alteration of streets, roads and Public Rights of Way.</p> <p>8. If required, the permanent and compulsory acquisition of land and rights for the Project.</p> <p>9. If required, overriding of easements and other rights over or affecting land for the Project.</p> <p>10. If required, the application and/or disapplication of legislation relevant to the Project including inter alia legislation relating to compulsory acquisition.</p> <p>11. Such ancillary, incidental and consequential provisions, permits and consents as are necessary and/or convenient.</p> <p>It is stated that the Project has a generating capacity sufficient to provide power for up to 400,000 dwellings, will generate in excess of 50MW and therefore is a Nationally Significant Infrastructure Project under s15(3) Planning Act 2008.</p>				
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NFOWFS3_053_002_100723	<p>The consultation mentions that this proposal will come together at around the same time with a separate proposal, Five Estuaries, which would also propose in its own DCO submission to extend Greater Gabbard, as an independent but linked proposal, which will come with an indicated, but not specified in detail at this time, level of co-operation between the two. Although the developments will be submitted separately, they are similar in terms of their intent, and impact, both taking landfall in Tendring before undergrounding to a substation in a position close to Lawford.</p> <p>At this time there has been limited but some co-operation between the two proposals, nevertheless the similarity of the proposals and location of same are distinct, hence this current proposal needs to take into account the in-combination effects of the two to ensure that the impact of the same is appropriately mitigated and controlled in the interest of amenity and proper planning for the Tendring area.</p>	Site Selection and Assessment of Alternatives		Noted.	N
NFOWFS3_053_003_100723	<p>It is also correct that the in combinations effects of the two proposals would, in terms of for example socio economic impact, be more significant when looked at together rather than individually.</p>	Socio-economics	Site Selection and Assessment of Alternatives	Noted.	N
NFOWFS3_053_004_100723	<p>The proposal comes to consultation now more developed than the previous scoping submission to the Planning Inspectorate, and the later non stat consultation which took place in Q3 & 4 2022 and for which ECC provided a consultation response in December 2022. Since that time amendments to the as proposed on land route has been developed following detailed additional engagement meetings with ECC and a variety of other stakeholders.</p> <p>This project is considered a Nationally Significant Infrastructure Project (NSIP) by virtue of there being a proposed an offshore generating station with a capacity greater than 100 megawatts (MW). At 300 MW, the promoter estimates this to be equivalent to the power needs of 380,000 homes.</p> <p>The wind farm itself will feature up to 72 turbines, each measuring up to 397 metres high, fixed to the seabed, covering a total 150</p>	Technical Consultation	Project Description	Noted.	N

	<p>square kilometres in area. North Falls will be located at its closest point approximately 22KM off the Tendring shore.</p> <p>Power from the offshore wind farm will be taken by seabed link to the Tendring coast, with this anticipated at being at a point between Clacton-on-Sea and Frinton, where a connection point will be made following a link being horizontally drilled under the sea wall/defences, before being transported underground to a substation site at a location subject to ongoing consultation close to the existing Lawford Sub Station.</p>				
NFOWFS3_053_005_100723	<p>On the landward side the as proposed infrastructure, substation, cable laying, and associated development will arrive at the site by vehicle. The underground link is at an anticipated distance of 24km from the sea wall to the substation at Lawford, where it will be connected to the wider grid network. The impact of much of the work will be localised and temporary, save for the substation which will remain a permanent feature. However, the Tendring peninsular is dotted with residential settlements, business premises and farms. The topography is formed largely of a flat open rural landscape dominated by arable farmland, hedgerows, trees, and watercourses, hence the impacts of the development are significant, potentially hugely injurious to the communities it would affect, and should not be underestimated.</p>	Land Use and Agriculture	Onshore Ecology	Noted.	N
NFOWFS3_053_006_100723	<p>The infrastructure necessary to implement the development should Consent be granted would be delivered either in part form or as whole parts to a nearby muster port and shipped to site offshore. It is anticipated that the onshore development will take approximately 3 years to complete.</p> <p>Up to date plans are submitted with the statutory consultation to show the extent of the on and offshore proposals and the landfall cable route.</p> <p>In particular this consualtion also includes a Preliminary Environmental Information Report (PEIR) which sets out the current environmental</p>	Onshore Archaeology and Cultural Heritage		Noted.	N

	baseline, and based on the applicant's initial assessments, the Project's potential benefits and impacts, and our proposals to mitigate those impacts. The PEIR is a key part of the consultation.				
NFOWFS3_053_007_100723	The landfall site has been chosen being mindful of the existing development along the Tendring coast, with a number of alternative locations being ruled out. At this stage two potential landfall connections are proposed in the gap between the developed areas of Clacton -on-Sea and Frinton-on-Sea. Both these points avoid residential dwellings but this in itself is not short of both technical challenge nor potential for significant impact, particularly on ecology and the Holland Haven Marshes Site of Special Scientific Interest (SSSI). This part of the proposal will have to be properly considered and managed, with all impacts being mitigated and a legacy provided going forward.	Site Selection and Assessment of Alternatives		Noted.	N
NFOWFS3_053_008_100723	The onshore cable route has been refined down following the initial Scoping Submission, and again following the previous non-stat consultation. The current route is wide enough to incorporate potential change within this area but is by its nature involves a wide tract of land which is capable of variation depending on detailed land use constraints. It is at this time unknown if the cable route will be similar to that as proposed by the comparable Five Estuaries development.	Site Selection and Assessment of Alternatives	Onshore Archaeology and Cultural Heritage	Noted. The route has been further refined since that presented in PEIR, from 204m (and wider in places) down to 90m (up to 130m at complex trenchless crossings). The cable swathe required during construction is also narrower – 72m – in areas of open cut trenching, therefore allowing some room for micrositing within the 90m-wide route presented in the DCO Application. See Chapter 5 Project Description (Volume I) for further details.	Y
NFOWFS3_053_009_100723	The consultation also shows that a link to the Grid is still to be decided subject to ongoing consultation, a position as set by National Grid and as shown in the recent non statutory consultation on Norwich to Tilbury (N2T), itself a separate Nationally Strategic Infrastructure Project (NSIP). Due to this connection point, it is therefore necessary to look at, by association linked, cumulative impacts between Norwich to Tilbury and the North Falls proposal.	Need for the Project	Site Selection and Assessment of Alternatives	Cumulative effects between North Falls and Norwich to Tilbury (and other schemes) has been considered each technical chapter of this ES.	Y

<p>NFOWFS3_053_010_100723</p>	<p>As a matter of public record ECC have responded raising strong objection to the Norwich to Tilbury (N2T) proposal, itself a DCO proposal that will link Norfolk to Tilbury and will run overground across Norfolk, Suffolk and Essex, save for an area of undergrounding within the Stour Valley Area of Outstanding Natural Beauty (AoNB). ECC commented on non-statutory consultation in 2022.</p> <p>It is also proposed that N2T will re-consult on the as proposed scheme with changes in June 2023, however precise details of this are not known at this time, nor are the level of changes as may be within the same.</p> <p>ECC recognise that North Falls , along with Five Estuaries , will both come to Lawford to link up with N2T for wider distribution within the network, are both actively engaged in the Offshore Transmission Network Review (OTNR), a government-led initiative looking at the opportunities to streamline the way in which offshore wind farms are able to connect to the network. The trade body Renewable-UK is leading the current phase of work on behalf of the Department of Business, Energy and Industrial Strategy (“BEIS”). The intent is for Five Estuaries to work with and review the outputs of the OTNR and potential for the project to adopt an alternative grid solution. It has also been stated that Five Estuaries and North Falls together are committed to exploring alternative grid connections in addition to that as presented in this non stat consultation.</p> <p>However, both the Government’s recent Energy Security Strategy and Net Zero goals demonstrate the importance of bringing new offshore renewable generation of 50GW by 2030. Therefore, North Falls will continue to develop on the basis of a radial connection for which the regulatory framework exists to ensure no delay in its planned grid connection date and supporting the UK Governments’ target.</p>	<p>Need for the Project</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Noted.</p>	<p>N</p>
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NFOWFS3_053_011_100723	ECC's clear preference is for a coordinated, offshore centred approach, delivered at pace, to minimise onshore infrastructure in Essex. In our response to the recent N2T non-statutory consultation, ECC concluded that National Grid Electricity Transmission (NGET) had not presented a comprehensive and conclusive set of evidence that the transmission objectives of this project cannot be met using the alternative of an offshore link or links. We reasonably concluded that with this there would clearly be significantly less harmful impacts on the terrestrial environment in Essex and the wider region as well as the numerous communities affected by N2T . ECC raised significant objection to N2T for numerous reasons, including but not limited to, it's intent to come overland into Lawford and then out of the same overland towards the north of Colchester.	Need for the Project	Site Selection and Assessment of Alternatives	NFOW is committed to exploring the potential for an offshore connection, however the feasibility of an offshore connection is subject to the outcomes of the OCSS which is expected to conclude in March 2025. Therefore, radial transmission to an onshore connection location must be included in the North Falls DCO application.	N
NFOWFS3_053_012_100723	ECC encourages North Falls to commit to its as stated intent to explore alternative solutions to provide offshore connection options other than by taking a landward route to Lawford. The benefits of this would be significant for North Falls and the Tendring peninsular, it would reduce significantly the projects own impact and the in-combination effects when considered alongside Five Estauries and negate the need for N2T to enter Tendring to provide a substation connection.	Need for the Project	Site Selection and Assessment of Alternatives	NFOW is committed to exploring the potential for an offshore connection, however the feasibility of this option is subject to the outcomes of the OCSS which is expected to conclude in March 2025. Therefore radial transmission to an onshore connection location must be included in the North Falls DCO application.	N
NFOWFS3_053_013_100723	Also, it is currently unclear as to what the impacts of North Falls would be in conjunction with Five Estuaries . These are two alike developments and whilst they would have some impact on views of the Windfarm array in combination from the Clacton coast, the main impact of the same would come in the construction of the landward side of the developments. With two connection points, cable runs, construction works, haul roads, compounds and works proposed in connection with both developments it is not possible to assess what the in-combination effects of the same would be as the consultation documents fall short of making this clear.	Site Selection and Assessment of Alternatives	Seascape, Landscape and Visual Assessment (SLVIA)	At the time of drafting the PEIR, limited information was available regarding the development of the Five Estuaries project. Since then both projects have both undertaken joint studies to identify co-located infrastructure and shared detailed project design information. A detailed CEA with Five Estuaries has been undertaken within each technical chapter of this ES.	Y

NFOWFS3_053_014_100723	ECC has long made the point that the developments as proposed on the Tendring peninsular are similar in type and extent, hence co-operation between the developments needs to be considered. The current draft National Policy Statement EN5, which is likely to be fully in place when NF is at Hearing, plays significant importance on the close co-ordination of onshore projects, in particular section 2.5 of the same which promotes co-ordination between applicants, particularly where the sensitivities of the landfall sites is sufficient, which is clearly the case with NF and the Tendring coast.	Site Selection and Assessment of Alternatives	Seascape, Landscape and Visual Assessment (SLVIA)	NFOW and VEOWL have listened to ECCs view on this matter and to the requirements of the revised EN-5, and have sought to co-ordinate where possible. Both projects have both undertaken joint studies to identify co-located infrastructure and have shared detailed project design information and project data in order to ensure co-ordination as far as possible, and to minimise effects during onshore construction.	Y
NFOWFS3_053_015_100723	As North Falls has received a connection offer from NGET at Lawford via N2T as a grid connection point, ECC considers it reasonable that at the present time North Falls have not presented evidence or assessment of alternative grid connection proposals, should N2T not be implemented as currently proposed. Until this work is completed, evidenced, and evaluated by ECC, our position on North Falls and this consultation, is one of a holding objection, due to lack of assessment of alternatives to a connection at Lawford.	Site Selection and Assessment of Alternatives		<p>It is noted the site selection process to identify the location of the Project's grid connection is undertaken by National Grid through their Connection and Infrastructure Options Note (CION) process. NFOW have inputted into this process, but it is wholly administered by National Grid, with decisions made by National Grid alone. All the information on this pertaining to National Grid's selection of the East Anglia Connection Node (EACN) onshore substation for the location of its grid connection offer to NFOW can be found in the following documents prepared by National Grid:</p> <p>Design Development Report 2023 (NGET, 2023)</p> <p>Strategic Options Backcheck and Review 2023 (NGET, 2023a)</p> <p>Further details on the Project's connection to the National Grid is detailed in Section 4.5 of Chapter 4 (Site Selection and Assessment of Alternatives)</p> <p>This chapter sets out site selection information pertaining to the infrastructure which has been within NFOW's control and for which NFOW is seeking consent.</p>	N

NFOWFS3_053_016_100723	As a Nationally Significant Infrastructure Project (NSIP), this proposal has the potential to significantly benefit the economy and labour market in Essex through direct investment involved in building the substation, the construction facilities necessary to support the offshore wind farms in Harwich and Bathside Bay, and for indirect economic benefits through local supply chains.	Socio-economics		Noted.	N
NFOWFS3_053_017_100723	Wind generated power is acknowledged to be a renewable source of electricity generation, and therefore this project could help in addressing the County Council's carbon reduction ambitions. ECC acknowledges the need to increase renewable energy generation, the increasing demand for new additional generation and the UK Government's legal obligation to achieve Net Zero Emissions by 2050, as supported by research and publications by the Committee for Climate Change.	Need for the Project	Climate Change	Noted.	N
NFOWFS3_053_018_100723	However, and importantly, without appropriate mitigation measures and compensation agreements, the project could significantly impact the amenity, health and wellbeing of some people in Tendring, Essex and the wider region.	Human Health		Noted.	N
NFOWFS3_053_019_100723	ECC note that post the recent Covid-19 pandemic, consultation has taken place both at in person events and online. This is welcomed as it gives interested parties a choice on how to engage. The details as viewed by the Council at both in person and online are considered both intuitive and informative.	Technical Consultation		Noted.	N
NFOWFS3_053_020_100723	In terms of project co-ordination, it is important to stress that the Five Estuaries Offshore Wind Farm proposal is mentioned, and that co-ordination with many aspects of that proposal is being or will be undertaken including stakeholder construction, infrastructure and operational plans. There are many aspects where a collaborative approach between the 2 projects would be extremely beneficial to minimise disruption/visual impact especially if they work together and at the same time in the same area, including the new project onshore	Site Selection and Assessment of Alternatives		A detailed CEA of the effects of developing both North Falls and Five Estuaries has been undertaken and is presented within each technical chapter of this ES.	N

	<p>substation and cabling. The benefits of this are significant and the impact could potentially be lessened. However, any collaboration may represent additional harm and the impacts of this remain unproven at this time.</p>				
NFOWFS3_053_021_100723	<p>National Planning Policy ECC acknowledges the need to increase renewable energy generation, the increasing demand for new additional generation and the UK Government's legal obligation to achieve Net Zero Emissions by 2050, as supported by research and publications by the Committee for Climate Change.</p> <p>National Policy Statement (EN-1) is the overarching national policy statement for energy and was published in July 2011. This sets out the UK Government's commitment to increasing renewable generation capacity and recognises that, in the short to medium term, much of the new capacity is likely to come from onshore and offshore wind. Essex, Suffolk and Norfolk's coast is well placed for the location of offshore wind and is known colloquially as the "Energy Coast" and has been the subject of a number of development proposals for the same over recent times.</p> <p>National Policy Statement (EN-3) is the UK Government's strategy for renewable energy infrastructure. This statement states that, through the Offshore Energy Strategic Environmental Assessment 2009 (SEA) process, the Government have concluded that there are no overriding environmental considerations to prevent the achievement of the planned 25GW capacity. However, this is subject to mitigation measures being implemented to prevent, reduce and offset significant adverse effects, which are relevant to the development as here proposed.</p> <p>National Policy Statement (EN-5) is the UK Government's strategy for electricity network infrastructure. This policy statement applies to not only transmission systems but also associated infrastructure such as substations and converter stations. This policy statement sets out the general principles that should be</p>	Policy and Legislative Context	Need for the Project	Noted.	N

	<p>applied in the assessment of development consent application across the range of energy technologies.</p> <p>ECC is of the view that the scheme promoters should use this policy statement effectively to influence their site selection for their onshore substation in Essex.</p> <p>The Government consulted on changes to the suite of Energy National Policy Statements in 2021 (including revised versions on EN-1, EN-3 and EN-5). The revised versions of this policy guidance may be published later this year, before any NSIP application has been submitted and are likely to be in place when this DCO is considered. If so, the new guidance will need to be considered during the Examination process. However, and at the time of writing, the existing policy framework remains in place.</p>				
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<p>NFOWFS3_053_022_100723</p>	<p>Essex County Council Policy The County Council, as with other Authorities in the region, has declared a climate emergency and is therefore predisposed to supporting projects that are necessary to deliver Net-Zero Carbon for the UK. The Essex Climate Action Commission was set up to advise us about tackling climate change. It was launched in May 2020 for an initial term of two years and has since been extended for a further three years. The commission will run until 2025. The initial purpose of the Essex Climate Action Commission was to set out recommendations on tackling the climate crisis. This included devising a roadmap to get Essex to net zero by 2050. These recommendations were set out in the commission's report Net Zero: Making Essex Carbon Neutral report (PDF, 5.33MB), published in July 2021. The report put forwards a comprehensive plan to:</p> <ul style="list-style-type: none"> • reduce the county's greenhouse gas emissions to net zero by 2050, in line with UK statutory commitments • make Essex more resilient to climate impacts such as flooding, water shortages and overheating <p>The recommendations of the commission were accepted in full by Essex County Council. They form the basis of our Climate Action Plan, produced in November 2021. The policy also sets out how, in principle, ECC will engage and influence other parties to ensure adverse impacts to our communities are understood and addressed by future decisions and expects to have comprehensive and effective engagement with developers and their supply chain partners to maximise the local business opportunity, skills aspiration, and employment benefits. Where appropriate, ECC and developers should promote synergies between projects that enhance these benefits, deliver growth, and attract inward investment. ECC will expect projects to deliver appropriate community benefit schemes in addition to the necessary compensation and mitigation, including schemes that support the decarbonisation of heat and transport, reduce</p>	<p>Climate Change</p>		<p>Noted.</p>	<p>N</p>
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	energy poverty, and improve the climate adaptive resilience of both the natural environment and communities.				
NFOWFS3_053_023_100723	<p>Tendring Council Policy</p> <p>The Tendring Local Plan was formally adopted in January 2021 (part 1) and January 2022 (part 2) and forms the local plan by which development proposals are considered. The Plan was formally adopted in January 2021 and whilst recognising the need to promote sustainable development to allow for growth, it is equally seen as important to contribute to economic regeneration, jobs and housing growth. This has to be offset with the need to conserve and where possible enhance the historic and natural environment including landscape and habitat creation and promote net environmental gains.</p> <p>The area of land around Lawford and its rural farmland environment is sensitive to change and, when looked at in combination with the aforementioned developments, the impact of a quasi-industrial development of the scale as proposed would be injurious to the local area and its surroundings, when considering in combination effects. It is noted that within the</p>	Socio-economics	Land Use and Agriculture	Noted.	N

	consultation it makes it clear that this route will be refined down with the collection of evidence to refine the same. Additional statutory consultation will take place after further engagement.				
NFOWFS3_053_024_100723	Response to the Preliminary Environmental Impact Assessment consultation ECC, as well as other consulted Authorities affected by this proposal, has a clear preference for a coordinated approach between the different proposed offshore windfarm extension projects and multi-purpose interconnector projects within the vicinity of this project.	Site Selection and Assessment of Alternatives	Project Description	Noted.	N
NFOWFS3_053_025_100723	ECC acknowledges that North Falls have identified their project, together with the promoters of Five Estuaries , Nautilus and Eurolink, as being within the Early Opportunities workstream of the Offshore Transmission Network Review, and that there are ongoing discussions between these parties and National Grid Electricity Transmission (NGET), under the auspices of the Department for Business, Energy and Industrial Strategy and Renewables UK. However, it is considered, and on balance, that the developers of these separate projects have not presented a comprehensive and conclusive set of evidence that the transmission objectives of this project cannot be met using alternative link(s) to reduce the impact of onshore infrastructure on the terrestrial environment in Essex or Suffolk. If an alternative offshore solution with reduced impacts was to be delivered, in a timely manner, without risking wider Net Zero and decarbonisation targets, it would be welcomed by the County Council. Such a proposal would negate the need for this project to landfall in Tendring, to access a length of undisturbed land, and remove the	Site Selection and Assessment of Alternatives	Need for the Project	Noted.	N

	requirement to provide an on-land substation, as is here proposed in one of two locations.				
NFOWFS3_053_026_100723	As is mentioned earlier in this response ECC has separately made strong objections to the recent N2T DCO project on the basis that it does not adequately demonstrate why greater offshore co-ordination would not be feasible, which would avoid or significantly reduce the need for that project and the connection to North Falls at or around Lawford	Site Selection and Assessment of Alternatives		Noted.	N
NFOWFS3_053_027_100723	It is also noted that whilst the landward development rests in Essex, the socio-economic and highway impacts of that inshore development are more widely spread and will also affect the local road network and communities within the wider region. Hence whilst it is correct to respond to this consultation on its merits it is also necessary to comment on in combination effects.	Socio-economics	Traffic and Transport	Socio-economic effects are assessed in Chapter 31 (Socio-Economic). Effects in combination with traffic and transport are considered as part of the assessment. Section 27.3.1 of the ES (Chapter 27 Traffic and Transport (Volume I)) details the extents of the TTSA and that the TTSA has been agreed with Essex County Council at a meeting on 5 September 2023.	N

<p>NFOWFS3_053_028_100723</p>	<p>As the consultation clearly states NGET made clear its plans in Q2 2022 for N2T. Such plans included confirmation of it seeking consent for an overhead link from Norfolk to Tilbury, apart from an area within the Stour Valley AONB where undergrounding is proposed, including looping into Tendring to a point at Lawford and providing a substation where Five Estuaries would link to the Grid. This connection point has been set by Grid.</p> <p>As is mentioned above ECC has raised serious objection to this proposal, part of which is of particular reference to NF, in that the proposed connection point would be in Lawford. There are clear and demonstrable reasons why this location is completely unacceptable. By NF constructing its own independent substation linking to the Grid connection point at Lawford it would contribute to the in-combination effects. NF as a project seeks consent for its own substation before connection to the Grid substation, this will result in the provision of significantly harmful industrial type infrastructure in an open, tranquil rural area from the proposal as submitted, from N2T, NF and FE . This means the area around Lawford, where one substation already exists, could result in four independent sub stations in close proximity to each other.</p> <p>The area of land around Lawford and its rural farmland environment is sensitive to change and, when looked at in combination with the aforementioned developments, the impact of a quasi-industrial development of the scale as proposed would be injurious to the local area and its surroundings, when taking into account in combination effects. It is noted that within the consultation it makes it clear that this route will be refined down with the collection of evidence to refine the same. Additional statutory consultation will take place after further engagement.</p> <p>Also it is currently unclear as to what the impacts of NF would be in conjunction with Five Estuaries . These are two alike developments and whilst they would have some impact on views of the Windfarm array in combination from the Clacton coast, the main impact of the same would come in the construction of the</p>	<p>Site Selection and Assessment of Alternatives</p>		<p>Noted.</p>	<p>N</p>
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	<p>landward side of the developments. With two connection points, cable runs, construction works, haul roads, compounds and works proposed in connection with both developments it is not possible to assess what the in-combination effects of the same would be as the consultation documents fall short of making this clear.</p> <p>ECC has long made the point that the developments as proposed on the Tendring peninsular are similar in type and extent, hence co-operation between the developments needs to be considered. The current draft National Policy Statement EN5, which is likely to be fully in place when NF is at Hearing, plays significant importance on the close co-ordination of onshore projects, in particular section 2.5 of the same which promotes co-ordination between applicants, particularly where the sensitivities of the landfall sites is sufficient, which is clearly the case with NF and the Tendring coast.</p>				
NFOWFS3_053_029_100723	<p>Going forward it will be necessary for NF to demonstrate how it meets the overarching principles within the current and draft EN5, something that is lacking at this time. In addition to our statutory role, ECC has a wider leadership role in protecting and promoting the interests of the county's communities, businesses and environment, all of which are of significance. We also recognise the contribution ECC makes to the unique character and quality of Essex as a place within the wider eastern region. Whilst acknowledging the Government's net zero objectives, ECC are mindful of energy security, carbon reduction and energy poverty issues related to the delivery of energy development schemes and offer this response in the context of how these issues affect the County and the wider region.</p>	Need for the Project	Socio-economics	Noted.	N

NFOWFS3_053_030_100723	<p>Although ECC recognises the challenge of achieving net zero as set out by Government, to meet ongoing energy security concerns, it also recognises its role in contributing to the government's climate change objectives. The NF proposal would, by means of its cumulative impact on the landward side of the proposal have a substantial, lasting and potentially seriously detrimental impacts on the residents of the local area, the landscape and environment, at its interface in Lawford in particular. ECC recognises that the impact of the cable laying operations are temporary, can be flexible to move away from historic assets, sensitive areas, areas of population and reduce ecological impacts, never the less the impact of the substation would be both significant and profound on the local area to its detriment.</p>	Need for the Project	Onshore Ecology	<p>Noted. The effects associated with the onshore substation have been assessed in detail within the technical chapters of this ES. Where significant effects have been predicted, mitigation has been proposed to reduce these effects as far as practicable.</p>	N
NFOWFS3_053_031_100723	<p>When considering the statutory consultation, ECC are of the considered view that any consultation periods last for an eight-week period. This allows for a consistent approach to be adopted and would align the project to that of the N2T proposals which set an eight-week period for comments.</p> <p>It is noted that the intent of this consultation was to set out in a public forum what the proposals were, and canvas for opinions on the same. However, a significant amount of background information remains to be presented and there are a number of gaps in knowledge within the consultation. Whilst these have at least in part been shared with ECC and stakeholder prior to consultation this is missing from the public facing consultation. It is expected that further adjustments to the proposals are likely to be required as greater knowledge is gained of the potential environmental impacts. As this evidence is not presented in this consultation ECC is not in a position to comments on the route choice within the submission nor on the options for substation location and the necessary details are not submitted.</p> <p>What follows in the following Appendixes are the comments as received covering a wide range of our statutory functions.</p> <p>If you require further information or clarification on any points raised in this response please</p>	Technical Consultation		<p>Noted. Options for the location of the onshore substation were presented within Chapter 4 Site Selection and Assessment of Alternatives of the PEIR document, which was available on the project website during statutory consultation in summer 2023.</p>	N

	contact the case officer, their details are set out below.				
NFOWFS3_053_032_100723	<p>Appendix One Community benefits</p> <p>ECC notes the government's intention to consult on the delivery of community benefits from energy developments and encourage North Falls (NF) to engage with officers to provide a proactive position in respect of community benefits. ECC believe that the potential impacts and disturbance placed on local communities by the construction and operation of onshore transmission networks cannot be adequately dealt with through the planning system and it is necessary for NF to provide a voluntary Community Benefit Contribution (CBC) package to host local communities.</p> <p>The CBC package would recognise the role of local communities that are being asked to host nationally significant infrastructure projects that will contribute significantly to the government's commitment to Net Zero and energy security. ECC would welcome the opportunity to work with NF to establish a CBC package, which:</p> <ul style="list-style-type: none"> • Provides a clear and transparent framework which formally commits to the concept of a CBC package as part of the NF project. • Addresses the inherent inconsistency between renewable and low carbon energy generation with onshore transmission network projects for host communities. • Reflects the overall scale, nature and national significance of the NF project and the particular 	Technical Consultation	Socio-economics	The Applicant has on previous schemes supported the communities in which it operates and has committed to work with communities to develop its approach to supporting the local area. At this stage, the details of any community benefit package associated with the Project have not been finalised. The Applicant will engage with local people and groups prior to construction commencing to help shape how the Project can best support the community.	N

	<p>local needs and circumstances of the host communities.</p> <ul style="list-style-type: none"> • Provides short and long-term benefits to host communities, reflecting the longevity of onshore transmission networks. <p>Such an Environmental Improvement Fund could be used to support local initiatives including, but not limited to, the provision of community woodlands, tree and hedgerow planting, the establishment of traditional orchards and the enhancement of wildlife habitats. Local community groups, parish councils and voluntary sector organisations would be encouraged to make applications to this fund.</p>				
NFOWFS3_053_033_100723	<p>ECC would welcome further discussions to explore opportunities to secure benefits for the host communities arising from the development. ECC considers that, notwithstanding embedded mitigation and potential modifications to the scheme as proposed above, it is unavoidable for the development to result in serious and lasting negative residual impacts on the community and locality, including on amenity, loss/reduced quality of recreational opportunity for the community, tourism, culture and heritage, and health and wellbeing. ECC expects appropriate and robust mitigation for such residual impacts, which could, for example, include but not be limited to, funding for alternative outdoor recreational offers, access and amenity improvements, green space, cultural and heritage enhancements.</p>	Socio-economics		<p>Embedded mitigation relevant to socio-economics is set out within Section 31.3.2 of Chapter 31 (Socio-Economics).</p> <p>The assessment in Section 0 finds that there are no significant socio-economic effects and therefore no requirement for additional mitigation over and above what is detailed as embedded mitigation set out within Section 31.3.2 of Chapter 31.</p> <p>Potential impacts on human health are assessed in Chapter 28 (Human Health).</p> <p>Potential impacts on tourism are assessed in Chapter 32 (Tourism and Recreation).</p> <p>Potential visual impacts are assessed in Chapter 30 (Landscape and Visual Impact Assessment).</p>	N

NFOWFS3_053_034_100723	<p>Health and Wellbeing</p> <p>ECC is working in close partnership with the NHS, CCG and the Blue Light Emergency Services on all NSIPs and therefore supports the comments as are made by the same on this consultation.</p> <p>ECC consider it necessary that the NF project includes the submission of a detailed Construction Management Plan (CMP) to mitigate and compensate against any as proposed construction impact on health and wellbeing. The CMP should have regard to BS 5228:2009 Code of Practice of Noise and Vibration Control on Construction and Open Sites.</p>	Human Health		<p>An outline Code of Construction Practice (CoCP) have been submitted with the DCO application (document reference 7.13). As discussed in Section 26.3.3 of Chapter 26 (Noise and Vibration), measures to mitigate construction noise impacts will be detailed in the final CoCP, as secured by a DCO Requirement.</p>	N
NFOWFS3_053_035_100723	<p>It is necessary that an appropriate noise assessment is undertaken and this will need to address the construction phases of the proposal and the operational noise. Methodology of the aforementioned assessment shall be agreed once specific details of the proposal are known. A lighting assessment will also be necessary.</p>	Noise and Vibration		<p>Construction noise and traffic noise impacts have been assessed, as reported in Section 26.6.1 of Chapter 26 (Noise and Vibration). Operational noise impacts have been assessed, as reported in Section 26.6.2 of Chapter 26. Cumulative impacts have also been assessed, as reported in Section 26.8 of Chapter 26. Residual effects on residents are considered to be not significant.</p>	N
NFOWFS3_053_036_100723	<p>It is noted that the assessment of effects on healthcare services is the subject of ongoing data collection and will be addressed in full in the ES submitted with the DCO. It is welcomed that the consultation documents include a specific chapter (Chapter 28) on Health Impacts of the development.</p>	Human Health		<p>Effects on local onshore infrastructure and services (housing and health) are considered in Chapter 31 Socio-economics (Volume I) and Chapter 28 Traffic and Transport (Volume I). Effects on health services are presented in Section 28.6.1.5 of Chapter 28.</p>	N
NFOWFS3_053_037_100723	<p>Highways and Transportation</p> <p>Transport Assessment: - Review of Appendix 27.1 and Accompanying Documents:</p> <p>North Falls Offshore (NF) Traffic flows and vehicle speeds were obtained for 24 hours a day for seven days between the 9 June 2022 and 15 June 2022. NF state that previous traffic flows were obtained for 2019 and more recent 2020 data which were discounted due to the impact from the pandemic. It is currently estimated that the earliest date that construction could commence would be 2026. To consider a worst-case scenario, a reference year for background traffic of 2026 has been</p>	Traffic and Transport		<p>Noted. The Transport Assessment (Appendix 27.1, document reference 3.3.64) includes further details of the approach to deriving baseline traffic flows.</p>	N

	<p>derived. ECC normally require traffic to be assessed based on application year and 5 years post application, however, this is not a permanent site, so this will be acceptable. The report states that:</p> <p>'To take account of sub-regional growth in housing and employment, a proportionate approach to forecasting future traffic growth for the 2026 reference year has been agreed with National Highways (at a meeting on the 7 July 2022). To date, Essex County Council have not provided feedback upon the approach to forecasting future year traffic flows. TEMPro 7.2c has been used'.</p>				
NFOWFS3_053_038_100723	<p>The use of TEMPro 7.2 is acceptable, however, Dataset af15 has been used, which has been superseded by RTF018. It appears that average weekday and average day growth factors have been provided for the whole of Essex. This scheme is in Tendring so the Tendring district growth factors would be more specific or an average of the MSOA areas that the scheme is to be located. ECC also look at the peak hour derived from traffic counts, rather than average weekday or average day figures, to assess impact on the network. ECC have derived their own growth rates for the specified periods for Tendring and this results in lower growth from 2019 to 2022 but higher growth for 2022 to 2026 than that detailed in Appendix 27.1.2, Appendix 27.1.3 tabulates the application of the growth rate to the traffic counts for Average Daily traffic flows and Average weekday traffic flows. When looking at the peak hour, this growth should be based on AM and PM growth factors for the Tendring District.</p>	Traffic and Transport		<p>The Transport Assessment (Appendix 27.1, document reference 3.3.64) includes details of the approach to forecasting these flows using growth factors from the Department for Transport Trip End Model Presentation Programme software (known as TEMPro).</p>	N
NFOWFS3_053_039_100723	<p>No committed development in the area has been included, it may be necessary to assess the impact of specific sites if being constructed within the same time scale.</p>	Traffic and Transport		<p>Section 27.8 of the ES (Chapter 27 Traffic and Transport (Volume I)) includes a detailed assessment of the potential for cumulative effects.</p>	N
NFOWFS3_053_040_100723	<p>There is detailed information provided in the Transport Assessment and accompanying documents which clearly demonstrates how the indicative HGV and LGV trips have been derived for the North Falls construction. This is results in a clear methodology to show how</p>	Traffic and Transport		<p>The Applicant has discussed this matter with Essex County Council at an ETG meeting (05 September 2023) summarised further within Table 11 in Appendix 27.4, document reference 3.3.67. During this meeting it was</p>	N

	indicative trip generation figures have been arrived at.			confirmed that Essex County Council do not require capacity assessments. Further details are provided within section 27.4.3 of the ES (Chapter 27 Traffic and Transport (Volume I)). Notwithstanding, the supporting Transport Assessment (Appendix 27.1, document reference 3.3.64) provides details of hourly traffic flows in support of this agreed approach.	
NFOWFS3_053_041_100723	It should be noted that 'peak demand' as referred to in this document is the month in which there is peak demand for materials and employment. This is not peak demand in term of network capacity assessment.	Traffic and Transport			N
NFOWFS3_053_042_100723	The HGV and LGV trips have not provided at in a format to assess the impact on the highway network and to determine the junctions affected. This only demonstrates the total number of movements generated by the site and the access point to which they are assigned. The information detailed for the trip generation for the construction is in a daily format. Annual average Daily traffic flows should not be used to calculate daily flows as this is based on a 7-day average. Annual average weekday traffic flows based on a 5-day average, as presented in the document, can be used to calculate weekday flows.	Traffic and Transport			N
NFOWFS3_053_043_100723	Peak network hours are not identified of either for the local road network or the site trip generation. Hours of operation for the site are not detailed in the document and there is no indication of peak network operation for the site.	Traffic and Transport			N
NFOWFS3_053_044_100723	All counts are link flows not junction counts, there are no junction counts. These link counts are traffic volumes but do not assess current network conditions. Therefore, no junctions have been assessed or the impact of the proposed flows on the routes identified. To understand existing network conditions and identify potential impacts caused by the development on the surrounding and wider road network is essential.	Traffic and Transport			N
NFOWFS3_053_045_100723	Identification of the proposed traffic-related study area including any key junctions on the existing road network that may be affected by traffic generated by the development. Consideration should be given to any deficiencies in the local highway network, existing access arrangements, existing road layout, existing carriageway widths, weight restrictions and existing speed limits.	Traffic and Transport			N

<p>NFOWFS3_053_046_100723</p>	<p>Existing traffic flows into, out of, and around the site, and for the agreed junctions within the study area should be shown in traffic flow diagrams. All traffic surveys should be:</p> <ul style="list-style-type: none"> ▪ Undertaken in neutral months during normal traffic flow and usage conditions ▪ In non-school holiday periods ▪ In typical weather conditions ▪ Based on data that is no more than three years old. <p>A description of the operation of the local network noting any junctions and links that experience congestion. Where junction modelling is to be undertaken, ECC recommends that junction models are validated against queue length observations to demonstrate their robustness. The methodology for the collection of queue length data should be agreed with ECC.</p> <p>Daily profile of HGV trips and employee trip generation will be needed to assess impact on peak hour on corridors and junctions identified as being affected. There has been no comparison with actual flows and proposed trips to derive percentage impact on links for either daily flows or peak hours. HGV's have a considerably higher impact on capacity per vehicle than a car, this is why the increase in traffic modelling is assessed in PCU's</p> <p>There is no breakdown of the how the daily trips will be assigned to the network over the day. The peak hours for the local network and the development operation in a minimum of hourly format should be provided to that is possible to see how the development traffic corresponds to the current network and peak hour. This could be demonstrated as staff shift times, of which there may be more than one e.g., early shift 7:00 to 16:00, main shift 8:00-17:00 etc. for both arrivals and departures. The same can be applied to construction traffic times. It is also possible that this may differ depending on the specific section of the site.</p> <p>This will demonstrate whether there are any key periods on the network where the development interacts with the existing peak times. If this demonstrates that there is interaction at specific times, then the junctions will need to be assessed.</p>	<p>Traffic and Transport</p>			<p>N</p>
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	<p>In addition to this, there is significant seasonality in this area with traffic increases during the holiday periods and the summer months.</p> <p>Annex 27.1.12 Summary of HGV and LV assignment per link details in tabular format the average and peak flows per link based on 24HR AADT and 18Hr AAWT both for the construction peak and average. However, these trips should be based on the days and hours of operation of the site and not averaged over 24 hours or 18 hours for the purposes of assigning the indicative trips to a daily profile both for staff and construction traffic. This has not been presented on flow diagram format.</p>				
NFOWFS3_053_047_100723	<p>It should be noted that key links such as the A133 Main Road Frating and the B1027 St John's Road have not been identified in this document. These are important local corridors and routes both for gravel extraction sites e.g., TARS, Brett, Anglian and for key routes for staff from these areas. The A133 Main Road also forms the main diversion route for HGVs as an alternative route for the weak bridge on the B1027 at Alresford that has had a 7.5 tonne weight restriction introduced on it earlier this year.</p>	Traffic and Transport		<p>The boundaries of the TTSA have been extended to include the A133 and B1027. Section 27.3.1 of the ES (Chapter 27 Traffic and Transport (Volume I)) details the extents of the TTSA and that the TTSA has been agreed with Essex County Council at a meeting on 5 September 2023.</p>	Y

NFOWFS3_053_048_100723	<p>This is also shown on the Link Based Sensitive Receptors Drawing figure number 27.5, shown below. in Volume 2. However, we have no assessment to show how these sensitive links will interact with the existing traffic conditions, whether it can be accommodated within the present infrastructure or what mitigation may be required.</p> <p>The existing capacity of the network has not been assessed or any key junctions. Capacity issues at Frating are important to understand due to the limited capacity on the non-dual section of the A133 between Frating and Weeley, the increases during holiday period that cause extensive queues back to the A120. This is important in terms of capacity and in respect of efficiency of construction traffic.</p>	Traffic and Transport		<p>The Applicant has discussed this matter with Essex County Council at an ETG meeting (05 September 2023) summarised further within Table 11 in Appendix 27.4, document reference 3.3.67. During this meeting it was confirmed that Essex County Council do not require capacity assessments. Further details are provided within section 27.4.3 of the ES (Chapter 27 Traffic and Transport (Volume I)). Notwithstanding, the supporting Transport Assessment (Appendix 27.1, document reference 3.3.64) provides details of hourly traffic flows in support of this agreed approach.</p>	N
NFOWFS3_053_049_100723	<p>Impact of transporting unusual loads and higher levels of HGV movements has not been detailed or how these would be accommodated on routes particularly via Clacton on the B1027 and B1032 or via Kirby Cross and Thorpe Le Soken.</p> <p>The report states that: 'Bulk materials such as concrete and stone aggregate would make up the majority of the total HGV trips for North Falls. A review of the potential supply chain within the TTSA area indicates that while there are several local suppliers that may meet some of the demand for North Falls, they are unlikely to meet the substantive material demands required of North Falls. It has therefore been assumed that for the purpose of a worst-case HGV assessment, HGVs have been distributed to the A120 east towards Harwich Port (100%) and the A120 west (100%) towards an origin outside the TTSA'. However, this then does not consider local routes and the impact on key junctions and specific movements e.g., St Johns Road.</p>	Traffic and Transport		<p>Section 27.4.3.1 of the ES (Chapter 27 Traffic and Transport (Volume I)) includes details of the approach to the consideration of abnormal loads.</p>	N

<p>NFOWFS3_053_050_100723</p>	<p>Distribution methodology is not accepted by ECC. This is based on: To inform the potential distribution of construction employees for North Falls, the availability of local labour and rented accommodation has been reviewed as part of the socio economics study to inform the potential employee distribution. The gravity model provided for distribution does not appear to be representative of the current patterns of employment that we would expect to see, there is a concern that this is not based on Census travel to work data that would normal data used. Distribution should be based on Census Journey to work to here from home. The site is located across several MSOA's Tending including 003, 005, 007, 008. It is also likely that different areas may have different workforce catchments – with the north being more accessible directly from the A12, Horsley Cross from the A120 and the south directly from Clacton. Normally Census journey to work for the area in which the development is located is used to gain an understanding of where trips to the proposed development are to come from and go to. However, there are sites like this that may not fit with the normal process. It is also possible to use Census data from an alternative location that may be more appropriate for determining distribution patterns if the local area is not representative with local adjustment or a gravity model predicting origins based on population and proximity to the site or a hybrid methodology that combines approaches. Based on the information provided it is indicated that specific routes origins and destinations can be derived for the construction aspect. For the employment distribution this needs to be looked at in more detail in conjunction with the local MSOA data to capture the location specific characteristics combined with another dataset to represent the more strategic employment characteristics. Different parts of the site may be more accessible by public transport and sustainable modes than others, this should be considered for employment.</p>	<p>Traffic and Transport</p>		<p>The Applicant have discussed this matter with Essex County Council at an ETG meeting (05 September 2023). The Applicant and Essex County Council have subsequently agreed an approach to the distribution of employee traffic. The agreed approach is detailed in the Transport Assessment (Appendix 27.1, document reference 3.3.64) includes further details of distribution of employee traffic.</p>	<p>N</p>
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<p>NFOWFS3_053_051_100723</p>	<p>It should be noted that the rented accommodation assumed to be available has not been detailed. As an observation, any long-term occupation of accommodation which is currently used by the Tourist trade may not be acceptable in terms of local policy if it were to use accommodation on 'safeguarded sites' as these are protected from alternative use that could materially harm the provision of tourist accommodation in the district. There is also no guarantee that this will be available, currently there are significant numbers of asylum seekers housed in hotels in both Colchester and Ipswich meaning that this accommodation is not available. Accommodation for workers will therefore need to be considered in more detail.</p> <p>Highways Impact:</p> <p>Onshore substation access 16, vehicle routeing strategy: there are separate ongoing discussions regarding this aspect of the project, and these are at an early stage and include National Grid, the Highway Authority and National Highways and this requires further work.</p> <p>Temporary Construction Accesses: For each temporary construction access joining the public highway it will be necessary to demonstrate that sufficient visibility would be provided within highway and/or land under the control of the applicant. The applicant will need to provide:</p> <ol style="list-style-type: none"> 1. A scale drawing showing the full extent of the visibility splays proposed. The splays should be based on the posted speed limit or the 85th percentile vehicle speed ascertained from a speed survey. Extent of highway should be coloured (see item 3 below) 2. The results of a speed survey if one is conducted to establish the required visibility 3. The results of a formal extent of highway search (including the covering letter and/or email) as sourced from https://www.essexhighways.org/transport-and-roads/highway-schemes-and-developments/adoption-and-land/highway-status-enquiries.aspx (any problems with online payment/filling in the form the applicant should email highway.status@essexhighways.org who process the requests)* 	<p>Traffic and Transport</p>		<p>Section 31.5 of ES Chapter 31 Socio-economics analyses the availability of a range of residential accommodation types, including private rented and owner occupied accommodation. This focuses on availability within a 45 minute drive time of the development site.</p> <p>Following the ETG, ECC confirmed that 'safeguarded sites' should be substituted with 'retained sites' and noted Policy PP 9 of Tendring District Local Plan. This policy is considered in further detail within Chapter 32 Tourism and Recreation.</p> <p>Chapter 31 Socio-Economics analyses the availability of a range of residential accommodation types, including private rented and owner occupied. This focuses on availability within a 45 minute drive time of the development site, more detail on the study area is provided within Section 32.3.1 of Chapter 32.</p> <p>Following the ETG ECC confirmed that 'safeguarded sites' should be substituted with 'retained sites' and noted Policy PP 9 of Tendring District Local Plan. This has been considered within Section 32.4.1.2 of Chapter 32.</p> <p>It should be noted that the demand for accommodation resulting from North Falls will be modest, and it is expected that there will be sufficient capacity in visitor accommodation, even in peak periods.</p> <p>The Transport Assessment (Appendix 27.1, document reference 3.3.64) submitted with the DCO application includes details of the outline access designs (detailing visibility splays, measured speeds, highway boundary and signage) and copies of a Stage 1 Road Safety Audit.</p>	<p>N</p>
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	<p>4. A stage 1 Road Safety Audit shall be provided for each access.</p> <p>5. Any temporary traffic management and/or temporary construction access signage on the approach shall be submitted on a separate drawing.</p> <p>*Where there is a roadside ditch or pond, that ditch or pond (even if it has been piped or infilled) would not in the majority of circumstances form part of the highway. Often, roadside ditches, which are apparent on the ground are not indicated on the Ordnance Survey Mapping. The same applies to historic ditches. Therefore, any ditches (including historical) and ponds should also be marked on the drawing.</p> <p>Abnormal indivisible loads (AIL): It is noted from information in Table 3.30 that an assessment of the suitability of access routes to accommodate abnormal loads will be undertaken. This assessment should consider the worst-case number of abnormal loads and types of vehicles required. The outcome of this assessment should be reported in the local Highway Authority (HA), together with confirmation of any measures required to mitigate significant adverse effects arising from these movements, it would be necessary pick up any structures along a designated route, possibly low structures/ routes with weight/ width restrictions in advance. The Applicant should also explore alternative options to minimise the impact these movements will have on the local highway network. Ideally, these movements should be restricted to the Strategic Route network within the County's Route Hierarchy.</p> <p>Key Construction Routes: It is noted that in Chapter 27 Traffic and Transport report, any existing highway safety issues on designated construction routes will be discussed with Essex County Council to understand if, the HA have planned improvement works which may help to address inherent highway safety issues at key junctions, direct mitigation may be required in the form of a S278 Agreement or Minor Works Authorisation as a result of the significant uplift in vehicle movements as a result of this project at specific sites identified prior to commencement of these works.</p>			<p>Section 27.4.3.1 of the ES (Chapter 27 Traffic and Transport (Volume I)) includes details of the approach to the consideration of abnormal loads.</p> <p>Section 27.6.1.4 of the ES (Chapter 27 Traffic and Transport (Volume I)) provides a detailed assessment of the highway safety effects of North Falls and also includes details of conversations with Essex County Council's Road Safety Team in regard to potential mitigation measures.</p> <p>Following the publication of the PEIR access via these roads has been discounted. The supporting Transport Assessment (Appendix 27.1, document reference 3.3.64) provides details of proposed access strategy to avoid traffic travelling via these roads.</p> <p>An OCTMP (Application ref: 7.16) is submitted with the DCO application. The OCTMP includes outline travel plan measures, which would be developed further in consultation with Essex County Council and National Highways prior to the commencement of the Project.</p> <p>The OCTMP (Application ref: 7.16) outlines that all highway works would be delivered using a Section 278 agreement and Street Works would use the Essex Permitting Scheme (unless agreed otherwise with Essex County Council).</p>	
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	<p>Minor Road Network: Under 27.8.3 Assessment of cumulative effects in the Traffic and Transport it is noted that there is a requirement to use Parsonage Lane and Wolves Hall Lane east of the B1035 (Tendring Green), Stones Green Road and Tendring Road (Tendring Green) plus Little Clacton Road these roads are not suitable to cater for a significant uplift in two-way vehicle movements, HGVs, in particular, as identified in the report. For example, Parsonage Lane is a narrow lane, no footways and is predominately a residential road serving several properties. Is there scope to use an internal haul road accessed via another temporary construction access point? The Highway Authority have not been able to undertake site visits of all roads that are proposed to access the works compounds and there are specific concerns regarding use of some minor routes. It is likely that if it is not possible to avoid use of the minor/rural road network by utilising internal haul roads then further mitigation should be investigated on roads where two HGVs cannot pass each by possible road widening or provision of passing bays.</p> <p>Construction Management Plan: It is noted that this is referred to in Chapter 27 Traffic and Transport report. No construction work shall take place, including any ground works or demolition, until a Construction Management Plan has been submitted to, and approved in writing by, the local planning authority. The approved plan shall be adhered to throughout the construction period. The Plan shall provide for but not restricted to:</p> <ul style="list-style-type: none"> I. vehicle routing, II. the parking of vehicles of site operatives and visitors, III. loading and unloading of plant and materials, IV. storage of plant and materials used in constructing the development, V. wheel and underbody washing facilities. VI. Before and after condition survey to identify defects to highway in the vicinity of the access to the site and where necessary ensure repairs are undertaken at the developer expense when caused by developer. <p>Workplace Travel Plan: It is noted that this is</p>				
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	<p>referred to in Chapter 27 Traffic and Transport report. Due to the scale of the project and prior to first occupation of the site, the applicant shall submit a workplace travel plan to the Local Planning Authority for approval in consultation with Essex County Council. Such approved travel plan shall be actively implemented for the duration of the project.</p> <p>The Transport Assessment doesn't provide any detail on sustainable modes in the document other than a reference to car sharing and possible employees arriving in shuttle buses. However, walk, cycle, bus and train links do not appear to have been considered. This could vary depending on the construction site access the employees will access.</p> <p>With other schemes I have seen minibuses being provided to pick up groups of workers staying in local accommodation. Whilst I understand that this scheme covers a large geographic area, I would have thought that some kind of shuttle bus service could work (e.g., Could the Colchester Park & Ride be utilised, subject to capacity) and reduce workers vehicles using the local road network, more information/further discussion regarding this would be welcomed.</p> <p>Car sharing is an obvious measure, and it is important that this is encouraged positively by reducing on site car parking and to support the assumption of 1.5 people car occupancy. Any advice or guidance on the format of the plan, the Travel Plan team can be contacted by email: Travel.PlanTeam@essex.gov.uk</p> <p>Public Rights of Way network: The Public Right of Way network is protected by the Highways Act 1980. Any unauthorised interference with any route noted on the Definitive Map of PROW is considered a breach of this legislation. The public's rights and ease of passage over public footpath/bridleway/byway shall be maintained free and unobstructed at all times to ensure the continued safe passage of the public on the definitive right of way. A separate consultation would need to be planned with the PROW Planning team once the scale and number of definitive routes affected by the scheme are known.</p> <p>The granting of planning permission does not</p>				
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	<p>automatically allow development to commence. In the event of works affecting the highway, none shall be permitted to commence until such time as they have been fully agreed with this Authority. In the interests of highway user safety this may involve the applicant requesting a temporary closure of the definitive route using powers included in the aforementioned Act. All costs associated with this shall be borne by the applicant and any damage caused to the route shall be rectified by the applicant within the timescale of the closure. Normally the lead-in time for a temporary Traffic Regulation closure (TTRO) is 12 weeks but may be longer for a project on this scale. My main concerns are that where temporary diversion is required this can usually only occur for 6 months, I suspect the DCO may have additional powers in this regard, but I would recommend further discussion with the rights of way team takes place regarding diversions and the proposed temporary public rights of way management. Email: PROWPlanning@essexhighways.org</p> <p>General Note: All work within or affecting the highway is to be laid out and constructed by prior arrangement with and to the requirements and specifications of the Highway Authority; all details shall be agreed before the commencement of works.</p> <p>The applicants should be advised to contact the Development Management Team by email at development.management@essexhighways.org</p> <p>Whilst the DCO provides powers in respect of highway works the Highway Authority would wish all highway works to be delivered using its standard S278 Highways Act 1980 process and would seek early agreement from North Falls regarding this point. Additionally, the DCO provides powers regarding Streetworks and again the Highway Authority would wish to seek assurance that the Essex Permitting Scheme is used so that Essex County Council can properly manage North Falls proposed Streetworks in addition to that of other statutory undertakers/Highway Authority/developers, as well as Section 50 (Highways Act 1980) licences for private apparatus under the highway.</p> <p>It is noted that cumulative development has</p>				
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	<p>been addressed but will be subject to further assessment within the DCO submission. The Highway Authority obviously have concerns over similar offshore schemes occurring in the local area and every effort should be made for the schemes to work together to reduce impact and disruption to local communities.</p>				
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NFOWFS3_053_052_100723	<p>Lead Local Flood Authority ECC as the LLFA have reviewed the consultation documents for the North Falls Wind Farm, further information will be required to cover drainage concerns and drainage elements onsite.</p> <p>It is our wish that the future consultation takes place with more information for specific areas under concern.</p> <p>Essex County Council as LLFA is consulted on the areas that are proposed for underground cable installation and compound construction sites.</p> <p>The LLFA recommends that the drainage proposal for the areas under Essex should comply with SuDS Design Guide, a link to the same being here: suds Essex Design Guide .</p> <p>The proposal should assess the areas susceptible to surface water flooding and requires appropriate measures to mitigate any adverse impacts during the construction phase and any implication associated with existing drainage interruption/blockage or temporary diversions.</p>	Water Resources and Flood Risk		<p>Details of the temporary (construction) and operational drainage strategy is described in detail in the Outline Operational Drainage Plan (document reference 7.19), which includes SuDS. Details of the drainage strategy are included in the assessment in Section 21.6.1.3, Section 21.6.1.4 and Section 21.6.2 of Chapter 21 (Water Resources and Flood Risk). The drainage strategy will be submitted as part of the DCO application.</p>	Y
NFOWFS3_053_053_100723	<p>Details should include any temporary works (culverts) to ordinary water courses, drainage channels for the purpose to give access to the project location. The surface water management during the construction of office, storage compounds. The proposal should enlist the required mitigation to prevent onsite/offsite flooding. Measures taken to prevent any pollutants entering surface water or ground water. Appropriate measures to deal with spills and leakages onsite.</p> <p>Proposal for surface runoff disposal during construction phase and from the built area's (offices, storage compounds) in accordance with SuDS Design Guide.</p>	Water Resources and Flood Risk		<p>Section 21.6.1.1 of Chapter 21 (Water Resources and Flood Risk) assesses the direct disturbance of surface water bodies, including trenched and temporary crossings (e.g. culverts and bailey bridges). Mitigation measures for all impacts are set out in Section 21.3.3 of Chapter 21, including measures to manage sediment, pollutants and surface water runoff. Details of the temporary and operational drainage strategy are presented in the Outline Operational Drainage Plan and summarised (where relevant) in Section 21.6.1.4 and Section 21.6.2.2 of Chapter 21.</p>	N
NFOWFS3_053_054_100723	<p>Consultation with the LLFA is required to have section 23 consent for the areas where the project will have direct or indirect effect on drainage channels, or ordinary water courses</p>	Water Resources and Flood Risk		<p>Both projects will discuss a common approach to Section 23 consents and stakeholders will be informed once a decision has been reached.</p>	N

NFOWFS3_053_055_100723	Green Infrastructure (GI) ECC currently provides advice on green infrastructure schemes (GI) for major developments. Whilst there are no statutory requirements for GI, the 25 Year Environment Plan and Environment Act (2021) place significant importance on protecting and enhancing GI, accessibility and biodiversity net gain. Having reviewed this statutory consultation, ECC raise the following points.	Introduction		This is addressed in the Biodiversity Net Gain Strategy (Document Reference 7.22).	N
NFOWFS3_053_056_100723	Biodiversity Net Gain (BNG) ECC welcomes the proposed minimum 10% BNG for this development as stated in Table 23.1. We also note and welcome the proposed use of the updated Biodiversity Metric 4.0 and production of a BNG Statement to accompany the DCO submission. We welcome reference to the Essex Green Infrastructure Strategy (2020) but would also highlight the need to take account of the Essex Green Infrastructure Standards (2022) which provide clear guidance on the requirements on both planning policy and planning application and processes.	Onshore Ecology		Noted.	N
NFOWFS3_053_057_100723	GI Audit and Strategy As stated in Table 23.1, we would welcome the proposed further engagement on GI to maximise opportunities for GI delivery alongside BNG through this development. Moving forward, ECC would ask for the production of a Green Infrastructure Strategy for the route, based on the Essex Green Infrastructure Strategy (2020) and Essex Green Infrastructure Standards (2022) to provide a more detailed an assessment of the ecological context of the development. The scheme should include but not be limited to: <ul style="list-style-type: none"> • The design of the development to deliver Biodiversity Net Gain and wider environmental net gain. This forms an important component of nature recovery networks and the wider landscape scale GI network. • A Green Infrastructure Plan outline the implementation of green infrastructure across the proposed preferred option corridor, the timescale for the implementation of each aspect and, the details of the quality standard of construction, management and maintenance that will occur. 	Onshore Ecology	Technical Consultation	This is addressed in the Biodiversity Net Gain Strategy (Document Reference 7.22).	N

NFOWFS3_053_058_100723	<p>Essex Local Nature Partnership ECC has now established a Local Nature Partnership (LNP) covering Greater Essex. The LNP contains three working groups – a community engagement group, a planning and biodiversity net gain working group and, a Local Nature Recovery Strategy (LNRS) group. The works of this group, including the upcoming LNRS, will need to be supported and acknowledged moving forward.</p> <p>Outline Landscape and Ecological Management Strategy (OLEMS) We welcome the proposed 10-year planting aftercare as stated in Table 23.1 and note the OLEMS will contain all ecological mitigation measures proposed within the ES (Table 23.5). However, we would also highlight that the OLEMS should include who is responsible for GI assets (including any surface water drainage system) and the maintenance activities/frequencies. We would also expect details on how management company services for the maintenance of GI assets and green spaces shall be funded and managed for the lifetime of the development to be included. This is to ensure appropriate management and maintenance arrangements and funding mechanisms are put in place to maintain high-quality value and benefits of the GI assets.</p>	Onshore Ecology	Technical Consultation	<p>Noted.</p> <p>The OLEMS (document reference 7.14) and GI Plan (document reference 3.3.39) includes details of management of GI assets.</p>	N
NFOWFS3_053_059_100723	<p>Climate Focus Area (CFA). The proposed development is situated within the Essex Climate Action Commission's (ECAC) recommended Climate Focus Area (CFA), which is formed of the Blackwater and Colne River catchment areas (please see Figure 1 on the following page for further details). The objective of this recommendation is for the CFA to "accelerate [climate] action and provide exemplars, for learning and innovation: adopting Sustainable Land stewardship practices: 100% by 2030 and Natural Green Infrastructure: 30% by 2030" (ECAC, 2021). Among the objectives of the CFA are to achieve net zero carbon, biodiversity net gain, improve soil health and air quality, reduce flooding and urban heat island effect, and enhance amenity, liveability and wellbeing of Essex communities. It will achieve</p>	Water Resources and Flood Risk	Onshore Ecology	<p>Noted. This Project will enable to provision of renewable energy to the UK electricity grid and contribute positively to the UK's progress in meeting its net zero targets, as well as furthering the objectives of the CFA to achieve net zero carbon.</p> <p>This is addressed in Chapter 33 Climate Change (Volume I) and in the Biodiversity Net Gain Strategy (Document Reference 7.22).</p>	N

	<p>this by wholesale landscape change in rural areas and urban areas and it will look to developments to contribute to these targets. Figure 1: Map of ECACs Climate Focus Area</p>				
NFOWFS3_053_060_100723	<p>The CFA require developments to consider the following requirements in line with meeting the requirements outlined in NPPF:</p> <ul style="list-style-type: none"> a) biodiversity net gain to enhance biodiversity and the natural environment by creating Natural Green Infrastructure contributing to the CFA 30% by 2030 target and the wider Local Nature Recovery Network/Strategy. b) flood and water management, for those properties at risk of flooding to include Integrated Water Management and Natural Flood Management techniques. c) New developments to improve urban greening of our towns, and villages through the provision of street trees for example. New developments are necessary in terms of increasing greenspace creation, naturalizing existing green spaces, greening the public realm, and implementing sustainable drainage systems (SuDS). <p>This proposed development has the opportunity through the development of an effective GI Strategy to also contribute towards meeting the CFA targets and in promoting nature recovery and habitat connectivity.</p>	Water Resources and Flood Risk	Onshore Ecology	This is addressed in Chapter 33 Climate Change (Volume I) and in the Biodiversity Net Gain Strategy (Document Reference 7.22).	N

<p>NFOWFS3_053_061_100723</p>	<p>Shoreline Management In our previous response to the EIA Scoping Report we took the opportunity to highlight a number of points relating to the Essex and South Suffolk Shoreline Management Plan (SMP) which is the SMP of relevance for the proposed onshoring location. Whilst our comments are reflected in the table 8.1 in Chapter 8, it is not felt that the references to the SMP cited in your response have not adequately acknowledged the particular constraints affecting the section proposed for the landfall. We highlighted previously that the preferred policy for this section of coast for Epoch 3 (2055 to 2105) is for Hold the Line / Managed Realignment ie a dual policy, which gives no certainty that this section of frontage will be managed in the same way as currently into the future. We also highlighted that the SMP states that, for the earlier periods (present day to 2055), where the preferred policy is for Hold the Line, that this will only be possible if there is sufficient funding available to undertake the required works. The SMP also highlights that “in the long term, holding the line at this location will be challenging and that funding may have to come from a variety of sources”. The SMP also states on p 89 section 3.3 that a defence that is economic to maintain (i.e. benefits:costs ratio greater than 1) may not also be afforded from finite public finances, and this should be considered by the proposed developer. Essex County Council also highlighted that when the major coast protection scheme along the Clacton to Holland on Sea frontage was undertaken, that it would be reliant on undertaking ongoing maintenance at an estimated cost of £1.2million every 10 years and we highlighted that this might also be challenging to secure. In table 8.1 you respond to Essex County Council’s comments with references to several pages where the SMP is referenced in your report, however the information presented at these points 8.5.9, 8.5.10 and 8.6.1.1 do not always reflect the text in the SMP accurately. In 8.5.9 it is stated that “The Shoreline</p>	<p>Onshore Ecology</p>	<p>Marine Geology Oceanography and Physical Processes</p>	<p>The SMP is discussed in Sections 8.5.9, 8.5.10 and 8.6.1.1 of Chapter 8 Marine Geology, Oceanography and Physical Processes. Impacts on the coast are assessed in Sections 8.6.2.9 and 8.6.3.6 of Chapter 8.</p> <p>Text has been changed to reflect the potential long-term policy.</p>	<p>N</p>
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	<p>Management Plan (SMP) (EACT, 2010) states that the intended management along this frontage is 'hold the line' and would 'sustain and support its viability of the seaside towns and their communities, tourism and commercial activities'. This point suggests that this is the sole intent of management for this frontage, and should be corrected to specify that the intended of management in future epochs could change to include managed realignment as without doing so you are creating a false sense of security that this line will be held into the longer term. It is not clear that any scoping or potential impacts that could relate to a change of policy has been undertaken by the developer.</p>				
NFOWFS3_053_062_100723	<p>In 8.5.10 it is stated that trends in coastal erosion will be driven by the shoreline management plan which is currently to hold the line ... it should be noted that no natural processes that cause coastal erosion will be driven by a plan. Whilst it is accepted that you have referenced Essex County Council's comments relating to the SMP in this section regarding the potential for a change in policy and the need for ongoing maintenance funding (outlined in the Project Appraisal Report for the Clacton to Holland-on-Sea coast protection scheme), the potential impacts of a change in management at the landfall location or the inability to undertaken the regular and costly maintenance, on the proposed development have not been adequately addressed. It is suggested that the applicant fully considers the implications of a managed realignment on the siting of the onshoring of the cabling and associated infrastructure, as well as the access and egress for construction and any</p>	Onshore Ecology	Marine Geology Oceanography and Physical Processes	Section 8.5.10 of Chapter 8 Marine Geology, Oceanography and Physical Processes has been revised and considers the implications of a managed realignment at the landfall.	N

	<p>ongoing maintenance. Essex Local Nature Partnership ECC has now established a Local Nature Partnership (LNP) covering Greater Essex. The LNP contains three working groups – a community engagement group, a planning and biodiversity net gain working group and, a Local Nature Recovery Strategy (LNRS) group. The works of this group, including the upcoming LNRS, will need to be supported and acknowledged moving forward.</p>				
NFOWFS3_053_063_100723	<p>Energy & Low Carbon ECC welcomes the support the Government's Energy Security Strategy gives for offshore wind expansion and goal of 50 GW of offshore wind production by 2030. The Essex Sector Development Strategy advocates offshore wind through recognising clean energy as a key growth area for Essex with a key role for offshore wind in that as part of the outcomes being delivered from the strategy. The ECAC report also recognises the need to embrace large-scale renewable energy installations, such as solar and wind farms. And the recommendations also include: - Essex to produce enough renewable energy within the county to meet its own needs by 2040. - All large-scale renewable developments to have an element of community ownership from 2021. Everyone's Essex also supports the acceleration of growth in sustainable energy through its environment commitments. As such the proposed development will contribute to meeting the above targets and commitments for offshore wind. ECC recognises and welcomes the identified opportunities for employment, local skills development and local supply chains, but would welcome further details of community benefits of the scheme. For example, whether there is the opportunity for part-community ownership, a community benefit fund, etc.</p>	Need for the Project	Climate Change	<p>Noted. The Applicant welcomes the advocacy of offshore wind and embracement of large-scale renewable energy installations in the ECAC report. Further details on the energy generation by the Project are described in Chapter 2 Need for the Project (Volume I), and details of the Project's ownership structure can be found in the Funding Statement (document reference: 6.4).</p>	N

NFOWFS3_053_064_100723	<p>We would welcome details on how Green House Gas (GHG) emissions of associated infrastructure i.e. the substation, and throughout the lifetime of the development will be minimised including embodied and operational carbon. Whilst the overall project is likely to be considered net zero due to the net positive impact of the generation of renewable energy- it is also important that emissions reduction measures are sought at each stage of the project. The aim should be for a net zero development at all stages/ within each element of infrastructure of the project and reliance on the positive impact of renewable energy production should not be relied upon to mitigate those. The potential impact on not just the UK to meet its climate</p> <p>GHG reduction commitments and wind energy targets, but the impact on Essex and the various commitments by ECC and its boroughs/districts should also be considered within the PEIR and future assessments/reports.</p>	Climate Change		<p>The Project will be seeking to minimise, where practicable, GHG emissions during construction, operation and decommissioning (including embodied carbon) through the use of best available techniques (i.e., materials, technologies and methodologies). The extent of the Project design has been reduced since PEIR stage, with the number of export cables reducing from 4 to 2, onshore substation footprint reducing from 8 ha to 6 ha, number of wind turbine generators (WTGs) reducing from 72 to a maximum of 57 and maximum turbine height reducing by 20m. Plans will seek to further minimise GHG emissions through efficient design, e.g. offshore vessel and onshore traffic management plans.</p> <p>A summary of mitigation measures recommended to reduce GHG emissions throughout the lifetime of the Project is provided in Sections 33.3.4 and 33.6.1 of Chapter 33 (Climate Change).</p>	N
NFOWFS3_053_065_100723	<p>Additionally, BEIS analysis has identified the incredible need for energy storage, in a decarbonised net zero energy system. This is due to the intermittent nature of renewable energy technologies such as offshore wind. Hence it is asked for confirmation as to the plans for the NF project also include battery storage or more innovative solutions such as green hydrogen production.</p>	Climate Change		<p>The Project will not include battery storage, as this has been discounted as an option. The Project will not directly generate hydrogen; however, it is anticipated that the electricity generated could end up in the electrolysis supply chain.</p>	N

<p>NFOWFS3_053_066_100723</p>	<p>Minerals and Waste Mineral Matters Safeguarding Mineral Resources The total project area is 1057 hectares, of which 346.4 hectares is designated as a Mineral Safeguarding Area (MSA) for sand and gravel. As such, the application is subject to Policy S8 of the Essex Minerals Local Plan 2014 (MLP). The MLP can be viewed on the County Council's website via the following link: https://www.essex.gov.uk/minerals-waste-planning-policy/minerals-local-plan Policy S8 of the MLP requires that a non-mineral proposal located within an MSA which exceeds defined thresholds must be supported by a Minerals Resource Assessment to establish the existence, or otherwise, of a mineral resource capable of having economic importance. This will ascertain whether there is an opportunity for the prior extraction of that mineral to avoid the sterilisation of the resource, as required by the National Planning Policy Framework (Paragraph 210). The NPPF requires policies that encourage the prior extraction of mineral where it is practical and environmentally feasible.</p> <p>The threshold set out in Policy S8 of the MLP for sand and gravel is 5ha, and the policy therefore applies if the proposed non-mineral development covers 5ha or more of land covered by a MSA designation. Policy S8 states that "... Proposals which would unnecessarily sterilise mineral resources or conflict with the effective workings of permitted minerals development or Preferred Mineral site allocation shall be opposed." Where non-mineral development proposals are made which intersect with 5ha or more of sand and gravel, a Minerals Resource Assessment (MRA) is required as part of the planning application to establish the practicality and environmental feasibility of the prior extraction of mineral such that the resource is not sterilised where this can be avoided. If found to be practical and environmentally feasible, prior extraction is expected to take place ahead of sterilisation by non-mineral development.</p>	<p>Ground Conditions and Contamination</p>		<p>Details of the mineral resources present within the onshore project area are outlined in Table 19.10 in Chapter 19 (Ground Conditions and Contamination) with additional detail provided in Appendix 19.1, document reference 3.3.20). Potential impacts to identified resources during construction and operation are provided in Sections 19.6.1.4 and 19.6.2.3 of Chapter 19 respectively.</p> <p>A Mineral Resource Assessment (Five Estuaries Offshore Wind) has been completed and will be submitted as part of the DCO application and forms Appendix 19.2 (document reference 3.3.21). The Mineral Resource Assessment identifies that an area >5ha will be impacted as a result of the construction and operation of North Falls and/or Five Estuaries with specific reference made to Policy S8 in Appendix 19.2.</p>	<p>N</p>
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	<p>The relationship between the sand and gravel MSA and the project area is shown in Appendix One.</p> <p>The scope and level of detail of a Minerals Resource Assessment will be influenced by the specific characteristics of the site's location, its geology, and the nature of the development being applied for. However, several key requirements can be identified which are likely to satisfy the MWPA that the practicality and environmental feasibility of prior extraction have been suitably assessed in the MRA. The detail to be provided should be in proportion to the nature of the proposed application. The MWPA welcomes early engagement to clarify the requirements of MRA.</p> <p>MRA Section Matters to Cover Site location, relevant boundaries, timescale for development Application area in relation to MSA/MCA Description of development including layout & phasing Timescale for development Whether there is any previous relevant site history – this could include previous consideration of site or adjacent land in preparation of Minerals Local Plan, any previous mineral assessments and market appraisals, boreholes, site investigations, technical reports and applications to the MWPA for extraction. Nature of the existing mineral resource Type of mineral Existing mineral exploration data (e.g. previous boreholes in area) Results of further intrusive investigation if undertaken Extent of mineral – depth & variability Overburden – depth & variability, overburden:mineral ratio. To be expressed as both actual depths and ratio of overburden to deposit, as well as variation across the site. Mineral quality – including silt %/content and how processing may impact on quality. Consideration should give given to the extent to which the material available on site would meet the specifications for construction. An assessment of the amount of material that would be sterilised (whole site area) and could</p>				
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	<p>be extracted (following application of any required buffer zones).</p> <p>Estimated economic/market value of resource affected across whole site and that which could be extracted.</p> <p>Constraints impacting on the practicality of mineral extraction (distinct from those that would arise from the primary development)</p> <p>Ecology designations, Landscape character, Heritage designations, Proximity to existing dwellings, Highways infrastructure, Proximal waterbodies, Hydrology, Land stability, Restoration requirements, Effect on viability of non-minerals development including through delays and changes to landform and character, Utilities present etc.</p> <p>Constraints should be assessed in light of the fact that construction of the non-minerals development would be taking place e.g. landscape issues are to be presented in light of the final landscape likely to be permanent built development. It is held that mitigation methods employed as part of the construction of the non-minerals development may also facilitate prior extraction at that locality.</p> <p>Potential opportunities for mineral extraction at location</p> <p>Ability of site to incorporate temporary mineral processing plant, Proximity to existing mineral sites or processing plant, Context of site and mineral within wider mineral resource area, Proximity to viable transport links for mineral haulage, The potential for indigenous material to be used in the construction of the proposed development, thereby reducing/removing the need for import, Potential benefits through mineral restoration e.g. land reclamation, landscape enhancement, Any opportunities for ancillary extraction as part of the primary development of the site such as foundations, footings, landscaping, sustainable drainage systems,</p>				
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	<p>Evidence or otherwise of interested operators/local market demand.</p> <p>Conclusion (as relevant to the findings)</p> <p>Whether mineral extraction at the site would be practical, based on conclusions of a competent person,</p> <p>Whether prior extraction is practical at the site in the context of the non-mineral development, taking into account the estimated value of the mineral, restoration and the viability of the proposed development,</p> <p>How the MRA has informed the proposed non-mineral development,</p> <p>If prior extraction is not practical, the justification for sterilising the mineral,</p> <p>If prior extraction is practical, how this will be phased as part of, or preceding, the non-mineral development,</p> <p>Whether prior extraction is environmentally feasible,</p> <p>Whether the site has the potential to be worked for mineral in the future.</p> <p>An MRA is expected to be evidence based and informed by quantified information.</p> <p>To ensure that a comprehensive assessment of the mineral resource at risk of sterilisation is undertaken, it is recommended that:</p> <ul style="list-style-type: none"> • Any questions regarding the scope of an MRA are discussed with the MWPA as early as possible; • a draft borehole location plan is agreed prior to commencement, and preferably as part of pre-application; • the borehole depths should be sufficient to prove the depth of the safeguarded deposit; • borehole analysis must note the depth of the water table; • a non-stratified sampling technique is applied. <p>An initial spacing of approximately 100m-150m centre to centre should be considered, with additional locations if required to determine the extent of deposits on site; and</p> <ul style="list-style-type: none"> • The MRA provides documented evidence confirming any commercial interest in working the resource at risk of sterilisation based on its quality, quantity, and viability of prior extraction. <p>The MRA should be prepared using the Pan-European Standard for Reporting of Exploration Results, Mineral Resources and Reserves (PERC) Standard, which was revised and</p>				
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	<p>published on 23 May 2013. Any application, through a MRA or otherwise, is required to be submitted with sufficient information such that the issues raised through Policy S8 of the MLP can be appropriately considered.</p> <p>Mineral Infrastructure Matters</p> <p>With regard to Mineral Consultation Areas, Policy S8 of the MLP seeks to ensure that existing and allocated mineral sites and infrastructure are protected from inappropriate neighbouring developments that may prejudice their continuing efficient operation or ability to carry out their allocated function in the future. Policy S8 of the MLP defines Mineral Consultation Areas as extending up to 250m from the boundary of an infrastructure site or allocation for the same.</p> <p>The application site does not pass through a Mineral Consultation Area (MCA) and therefore, a Mineral Infrastructure Impact Assessment (MIIA) would not be required as part of a planning application on this site.</p>				
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<p>NFOWFS3_053_067_100723</p>	<p>Waste Matters Safeguarding Waste Infrastructure Policy 2 of the WLP seeks to ensure that existing and allocated waste sites and infrastructure are protected from inappropriate neighbouring developments that may prejudice their continuing efficient operation or ability to carry out their allocated function in the future. Policy 2 defines Waste Consultation Areas as extending up to 250m from the boundary of existing or allocated waste infrastructure, unless they are Water Recycling Centres, where the distance increases to 400m. The WLP can be viewed on the County Council's website via the following link: https://www.essex.gov.uk/minerals-waste-planning-policy/waste-local-plan The application site does not pass through a Waste Consultation Area (WCA) and therefore, a Waste Infrastructure Impact Assessment (WIIA) is not required as part of the planning application. Appendix One – Location of Mineral Safeguarding Areas in Relation to the Project Area Map 1 – Minerals and Waste Safeguarding Screening – Full Extent of Project Area Appendix Two – Schedule of Safeguarding Designations and Safeguarded Minerals and Waste Infrastructure relevant to the Project Area Schedule of mineral designations within the project area Site Type Site Name Planning Application number Further Details Mineral Safeguarding Areas Policy implications set out under 'Mineral Matters – Safeguarding Mineral Resources'. Subject to MSA designation – Policy 8 of the Essex Minerals Local Plan 2014 Sand and gravel N/A Spatial extent shown in Appendix One.</p>	<p>Ground Conditions and Contamination</p>		<p>A waste assessment for the construction phase of North Falls can be found in Appendix 19.3 (document reference 3.3.22)</p>	<p>N</p>
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NFOWFS3_053_068_100723	<p>Offshore Seascape, Landscape and Visual Impact Assessment - PEIR Chapter 29: Suffolk Landscape Character Assessment - Table 29.4:</p> <ul style="list-style-type: none"> - The table states, 'Estate sandlands': There are no key characteristics for this LCT in which the relationship/ influence of the sea is recognised. This LCT is not carried forward for further assessment'. There are points where the estate sandlands adjoin the coast so they should be scoped in as there will likely be a visual relationship at points with the proposed development. I note there is assessment as part of that on the AONB but this needs to be clarified in relationship to the standalone statement above. - Regarding the Tendring Landscape Character Assessment, specifically open estuarine/ coastal marsh; this adjoins the coast so should be scoped in as there may be likely effects. Demonstration that these are not 'significant' will be needed. - Regarding drained estuarine/ coastal marsh – e.g., Holland Haven, it is stated that there are 'long views over the landscape from the coastal sea wall and from Great Holland.' It is considered therefore that this visual relationship therefore should be scoped in. - Regarding coastal slopes 3D – e.g., Holland Coastal Slopes it is stated that "there are no key characteristics for this LCT in which the relationship/ influence of the sea is recognised.' This character area has a visual relationship with the sea and potential impacts from the proposed development. - These (above) character areas should be scoped back in, their characteristics summarised - including visibility with the coast, and an assessment carried out. 	Seascape, Landscape and Visual Impact Assessment		<p>The detailed assessment in the SLVIA has sought to focus on seascape/ landscape and visual receptors likely to be subject to significant effects.</p> <p>Potential for significant effects on Landscape Character Types (LCT) have been reviewed in light of these comments. It has also taken account of the revised DCO application design which increases the distance between the coastal edge and the array area. Additional LCTs have only been scoped in where there is a reasonable likelihood of significant effects on landscape character.</p> <p>Those coastal LCTs carried forward for detailed assessment are listed in Table 29.4 of Chapter 29 (Seascape, Landscape and Visual Impact), and the assessment is presented in Section 29.6.3.2.1 of Chapter 29.</p>	N
NFOWFS3_053_069_100723	<p>Paragraph 59:</p> <ul style="list-style-type: none"> - It is stated that 'there are no relevant local landscape designations in East Suffolk, Tendring or Thanet which require detailed assessment'. Please see the previous comments re: local landscape designations no longer being promoted at a national policy level. 	Seascape, Landscape and Visual Impact Assessment		Noted.	N

NFOWFS3_053_070_100723	<p>Table 29.14 Viewpoint assessment:</p> <ul style="list-style-type: none"> - VP1 states 'Recreational users of the coastline are considered to be of medium susceptibility. The viewpoint is located in the Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, indicating a higher value. On balance, taking account of the judgements of susceptibility and value, the overall sensitivity is judged to be medium-high'. - The methodology (Page 14 of PEIR Appendix 29.1 Seascape, Landscape and Visual Impact Assessment and Visualisation Methodology) states that 'People engaged in outdoor recreation including users of cycle routes, footpaths and public rights of way...' are of 'High' susceptibility not 'medium'. The AONB I would judge is of 'High' value. Therefore, the overall sensitivity should be 'High'. - This should apply to all VPs in the AONB (VP1-10 and 17) in relation to outdoor recreational receptors and therefore likely increases the level of effect at each of the relevant viewpoints. At several VPs this increases the significance of effects to Major-Moderate. 	Seascape, Landscape and Visual Impact Assessment		Noted.	N
NFOWFS3_053_071_100723	<p>Mitigation:</p> <ul style="list-style-type: none"> - As there are no landscape mitigation actions that can reasonably be undertaken to mitigate the potential effects of the development on the coast landscapes and users should the development go ahead, there is an argument that a substantial compensation fund should be provided to conserve, restore and enhance the landscapes affected to improve their future resilience. 	Seascape, Landscape and Visual Impact Assessment		Noted.	N
NFOWFS3_053_072_100723	<p>Cumulative effects:</p> <ul style="list-style-type: none"> - The cumulative visual effects of North Falls and potential Five Estuaries projects from several viewpoints is particularly worrying especially where the inshore seascape and views currently appear unspoiled. This is particularly the case at VPs 4, 5, 6, 8,9 ,10 and 17. The perception of wildness along this coast risks being permanently changed in an adverse way. 	Seascape, Landscape and Visual Impact Assessment	Site Selection and Assessment of Alternatives	Noted.	N

NFOWFS3_053_073_100723	<p>Preliminary Environmental Information Report Chapter 30 Landscape and Visual Impact Assessment</p> <p>- It is stated that, 'Hedgerows will be replanted following construction but note that canopy Chapter 30 Landscape and Visual Impact Assessment Page 20 of 73 Parameter Mitigation measures embedded into North Falls design tree species cannot be replanted within 5m of the buried cables, which will restrict canopy tree planting for a 37m swathe during hedgerow reinstatement.' In response to this statement, it is important to know whether trees that cannot be replanted due to constraints will be planted elsewhere in the vicinity?</p>	Landscape and Visual Impact Assessment		Noted.	N
NFOWFS3_053_074_100723	<p>Biodiversity Net Gain</p> <p>- Any enhancements for biodiversity should aim to strengthen landscape character as part of that process.</p>	Landscape and Visual Impact Assessment	Onshore Ecology	Noted.	N
NFOWFS3_053_075_100723	<p>Paragraph 55 re: Impact on AONB</p> <p>- It is stated that 'the ZTV (refer to Figure 30.1.2, Volume II) identifies a small area of theoretical visibility from the southern edge of the AONB (within 2km) along Harwich Road. Intervening woodland cover and built form, including large poly tunnels to the east of Foxash Estate, will largely screen views towards the proposed substation from here.' The polytunnels could well be transitory in the current economic climate and ZTV does show theoretical visibility beyond the 2km marker, therefore it is suggested that the AONB is scoped in.</p>	Landscape and Visual Impact Assessment		Effects on the National Landscape have been reconsidered against the current substation proposals (refer to Section 30.5.3 of Chapter 30 Landscape and Visual Impact Assessment).	N
NFOWFS3_053_076_100723	<p>Paragraph 63</p> <p>- It is stated that 'there are no footpaths across the indicative substation operational footprint.' However, there is a bridleway running along the northern boundary of the Onshore sub-station zone.</p>	Tourism and Recreation		Noted.	N
NFOWFS3_053_077_100723	<p>Paragraph 64</p> <p>- It is stated that 'in terms of wider views, the onshore substation zone is generally flat. Hedgerows and areas of woodland will help to filter and screen middle to longer distance views.' There are areas of hedgerow and trees but there has also been an amount of loss due to Dutch elm disease in the 1980s and</p>	Landscape and Visual Impact Assessment		Noted.	N

	agricultural intensification, therefore the remaining network cannot be relied upon to screen or substantially soften the adverse effects.				
NFOWFS3_053_078_100723	<p>Paragraph 65</p> <p>- It is stated that 'potential visual receptors (including visual receptors along the cable corridor(s))...' However, the only visual impact assessment viewpoints are close to the substation zone not the cable corridor. Will the cabling works have such a small impact on the visual amenity of the cable corridor? I would suggest some indicative VPs are needed along the cabling route especially where the cable comes ashore and where it runs through more sensitive landscapes such as Holland Haven and if crossing any water bodies/systems.</p>	Landscape and Visual Impact Assessment		<p>Viewpoints along the onshore cable route have not been included in the LVIA. Landscape and visual impacts along the onshore cable route will only arise from construction works, which are transitory in nature and localised in extent. Effects are discussed in relation to receptor groups along the onshore cable route, but without reference to fixed viewpoints. Refer to Section 30.6.5 of Chapter 30 Landscape and Visual Impact Assessment.</p> <p>The onshore cable route will be re-instated following construction (hedgerows will be reinstated). The project is seeking to minimise removal of mature trees / woodland.</p> <p>Effects relating to smaller pieces of above ground infrastructure (link boxes) present during operation will be very localised so that no likely significant effects would occur.</p>	N
NFOWFS3_053_079_100723	<p>Paragraph 78</p> <p>- It is stated that 'the operational lifespan of the Project is estimated to be 30 years for the purposes of the EIA. The main effects of the onshore components of the Project on landscape and visual amenity once operational will arise from the presence of the onshore substation and other above ground structures, as described in Chapter 5 Project Description (Volume I). Effects occurring during the operational phase are considered to be long-term and permanent unless otherwise stated.' Permanent effects will include the removal and non-replacement of hedgerow trees along the cable route.</p>	Landscape and Visual Impact Assessment		Noted.	N

NFOWFS3_053_080_100723	<p>Table 30.7 - Landscape effects on sub-station zone</p> <p>- ECC suggest the landscape effects from the sub-station zone are likely to be 'major' not 'moderate' as the scale and size and nature of the sub-station inserts a wholly incongruous structure into a rural landscape. This is particularly the case when looking at in combination effects with potentially 3 or 4 separate sub stations in combination within the same location</p>	Landscape and Visual Impact Assessment		Noted.	N
NFOWFS3_053_081_100723	<p>Table 30.8 - Landscape character effects</p> <p>- Regarding sensitivity - Reduced susceptibility should not be assumed for landscape character areas where landscapes are larger scale and flat. The character of this landscape is of a plateau landscape and flatness is an essential part of its character. It is also large scale because of the high quality of the soil for agricultural purposes resulting in hedgerow removal in the mid C20Th. The hedgerows are gappy and trees intermittent due to Dutch Elm Disease and arable intensification which makes this landscape more susceptible to large-scale change not less. ECC would suggest it is of medium sensitivity due to its openness.</p> <p>- It is stated that 'the magnitude of landscape change during construction for the LCA will be medium-low locally (outside the onshore substation zone and within 1km approximately – the magnitude of change within the substation zone has been considered in Table 30.7), and barely perceptible for the LCA as a whole. Effects will be short-term and localised within the LCA.' The underlined text is contradicted by the images in VP montages 2,3,4,5 and 7 which are all within 1KM of the substation zone but not directly in it. Landscape characterisation also includes visual elements and perceptions as part of criteria.</p> <p>- ECC would not judge the magnitude of change as 'medium-low' but more like 'medium – high' over an area of 1Km radius. The landscape effects overall are more like 'moderate-minor'.</p>	Landscape and Visual Impact Assessment		Noted.	N

NFOWFS3_053_082_100723	<p>Tables 30.10- 30.14</p> <p>- It is stated that 'beyond the temporary direct landscape changes arising from the construction of the onshore export cables, no further direct landscape effects on this LCA will occur. Temporary disturbance farmland and hedgerows/ field boundaries will not extend beyond the cable corridor(s), to the wider extents of the LCA'.</p> <p>However:</p> <ul style="list-style-type: none"> o The cable construction corridors are extensive in width. o Hedgerow trees will not be replaced where they need to be removed. o The PRoW may need diversion. o The overall effects on the individual landscape character areas may not be significant but the localised impact is 'Major' and some effects are permanent i.e. loss of hedgerow trees, or long-lasting (soil compaction, ecological disturbance). 	Landscape and Visual Impact Assessment		Noted.	N
NFOWFS3_053_083_100723	<p>Paragraph 90</p> <p>- It is stated that 'all operational effects associated with the onshore substation are considered to be long-term, reversible and adverse, unless stated otherwise.' It is difficult to accept that the visual impact for the substation could be considered reversible. The facility will most likely be superseded by another structure. The likelihood of the landscape returning to agricultural are vanishingly small.</p>	Landscape and Visual Impact Assessment		Noted.	N
NFOWFS3_053_084_100723	<p>Table 30.15 Visual Impact Assessment</p> <p>- Regarding VP2, VP5, VP6, and VP7 it is stated that 'recreational users of the bridleway are considered to be of medium-high susceptibility.' However, Table 1.5 in the PEIR Appendix 29.1 Seascape, Landscape and Visual Impact Assessment and Visualisation Methodology identifies that 'people engaged in outdoor recreation (including users of cycle routes footpaths and public rights of way...)' are of high susceptibility, not medium-high.</p> <p>Table 30.23 Operational Cumulative Landscape and Visual Effects</p> <p>- There is considered a worrying level of predicted cumulative impacts due to East</p>	Landscape and Visual Impact Assessment		Noted.	N

	Anglian Green (N2T) and Five Estuaries projects.				
NFOWFS3_053_085_100723	<p>Substation Location</p> <p>The proposed substation search area is located to the south of the Dedham Vale AONB and therefore may contribute towards its setting. For this reason, the proposed substation design and location need to be carefully considered. We also note that the landscape around Lawford and the proposed substation location is an open and exposed plateau with a low density and rural settlement pattern, therefore any changes to the landscape will undoubtedly have an adverse impact on visual amenity and landscape character. Therefore, mitigation measures and landscape enhancements must be appropriately considered to ensure these are minimised considerably.</p>	Landscape and Visual Impact Assessment	Site Selection and Assessment of Alternatives	Noted.	N
NFOWFS3_053_086_100723	<p>Landscape Character</p> <p>The scheme falls within multiple national / landscape character assessments. The LVIA (Chapter 30 of the submission) has made reference to the National Character Areas, the Tendring District Landscape Character Assessment, the Joint Babergh and Mid Suffolk District Council Landscape Guidance and the Colchester Borough Landscape Character Assessment as part of the landscape baseline. However, limited reference has been made to the Essex Landscape Character Assessment. In line with our previous comments, we would advise that the Essex Landscape Character Assessment should provide the overarching framework for the baseline study, with further reference to the Tendring Landscape Character Assessment and Landscape Character Assessment of the Essex Coast for additional local landscape characteristics and qualities. We also note that the scheme falls within the East of England Landscape Framework We would also expect localised landscape studies (1:2500 scale) to be undertaken for</p>	Landscape and Visual Impact Assessment		Noted.	N

	areas surrounding the proposed substation to ensure the baseline and potential impacts are accurate.				
NFOWFS3_053_087_100723	<p>Assessment of Sequential Impacts on the England Coast Path</p> <p>The Jaywick to Harwich stretch of the England Coast Path was approved by the Secretary of State July 2021. Work is now underway to prepare the new stretch of coast path for public use and therefore the LVIA should consider the cumulative sequential visual effects on users of the England coast path along this stretch and in turn, additional viewpoints along this stretch of coast will be necessary to ensure this assessment can be undertaken.</p>	Landscape and Visual Impact Assessment	Tourism and Recreation	Noted.	N
NFOWFS3_053_088_100723	<p>Trees and Hedgerows</p> <p>We note that hedgerows within the survey area are considered to meet the definition of important hedgerows' in relation to wildlife and landscape criteria under the Hedgerow Regulations 1997. In line with our previous comments, we would advise that both trees and hedgerows are assessed in detail:</p> <p>A detailed hedgerow assessment (in accordance with the Hedgerow Regulations 1997) to be undertaken to assess the value and health of the hedgerows impacted. This should account for wildlife and landscape, as well as Archaeology and History. Details of both are shown below:</p> <p>a. Wildlife and Landscape</p> <p>i. The hedgerows should be fully assessed according to a standard methodology, with their woody species recorded, as set out in the Hedgerows Regulations 1997.</p> <p>b. Archaeology and History</p> <p>i. Assessment against the criteria set out in the</p>	Onshore Ecology	Landscape and Visual Impact Assessment	<p>The project is seeking to minimise removal of mature trees / woodland where practicable. There is a commitment to microsite the cable trenches around mature trees where practicable to avoid the need for replacement tree planting along the onshore cable route. Hedgerows affected by the onshore cable will also be replanted.</p> <p>The detailed design will be informed by an arboricultural survey to be carried out post-consent, as set out in the OLEMS (document reference 7.14).</p>	Y

	<p>Hedgerows Regulations 1997 for archaeology and history should be based on an assessment utilising information from National Heritage List or England for information on Scheduled Ancient Monuments and the Suffolk Historic Environment Record (SHER) for non-designated heritage assets.</p> <p>As per our previous comments, we would advise that an Arboricultural survey and impact assessment should be undertaken to understand the quality of trees in the study area and proposed impacts on them. The assessment should also identify any ancient woodland or veteran trees that could pose a constraint on the scheme. This assessment should be undertaken in accordance with British Standard 5837:2012 'Trees in relation to design demolition and construction – Recommendations' and should provide details on trees and shrubs to be retained and/or removed, the impact on them and any constraints.</p>				
NFOWFS3_053_089_100723	<p>Archaeology Historic Environment</p> <p>The proposed offshore windfarm is likely to have considerable impact on the historic environment and especially the archaeological deposits, both onshore and offshore. The proposed cable route/s passes through extensive areas of known archaeological deposits many recorded from aerial photographic research. To date, little archaeological fieldwork has taken place within the area of the proposed development to inform on the nature, extent and significance of the known heritage assets. The proposed cable route will run across 24km of land (with a disturbed area 60m in width) within the Tendring District and c.80km of seabed. There is a high potential for previously unidentified archaeological remains and geoarchaeological deposits to be located within the areas of the cable route and associated works.</p>	Onshore Archaeology and Cultural Heritage		<p>Noted. The baseline environment is presented in Section 25.5 of Chapter 25 (Onshore Archaeology and Cultural Heritage).</p> <p>Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available. In addition, two phases of evaluation trenching have since been carried out at the onshore substation works area, these are summarised in Section 25.5.4 of Chapter 25 with the full reporting included in Appendices 25.10 (document reference 3.3.57) and 25.11 (document refernece 3.3.58). This work has informed the assessment presented in section 25.6 of Chapter 25.</p>	N

NFOWFS3_053_090_100723	<p>Following consultations and discussions with the Applicant a number of desk-based reports have been completed. A walkover survey and a programme of geophysical survey(s) has been undertaken on targeted areas of the development area, both onshore and offshore. The reports submitted in relation to onshore archaeology include:</p> <ul style="list-style-type: none"> • Cable Landfall Search Area: Historic Environment Desk-Based (Baseline) Assessment (25.1); • Onshore Cable Corridor(s) and onshore Substation Zone. Historic Environment Desk-Based (Baseline) Assessment (25.2); • Heritage Walkover Survey (25.5); • Geoarchaeological Desk Based Assessment (25.6); • Onshore Historic Environment Gazetteers (25.7); • Archaeological Geophysical Survey Report (25.80) and; • Five Estuaries Archaeological and Geoarchaeological Monitoring of Ground Investigation Works report (25.9). <p>Supporting documents for offshore archaeology include North falls Offshore Wind Farm and Offshore cable Corridor Archaeological Assessment of Geophysical Data (16.1) The results of the preliminary environmental information report with regard to archaeology are presented in Chapter 25: Onshore Archaeology and Cultural Heritage (Volume I and II) and, for offshore archaeology, in Chapter 16: Offshore Archaeology and Cultural Heritage (Volume I and II)</p>	Onshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_053_091_100723	<p>The work carried out so far has provided a reasonable account of the known archaeological and geoarchaeological remains within the proposed development area. Aerial photographic assessment and geophysical survey have identified further archaeological features and sites. This includes potential prehistoric ritual and settlement evidence, Roman roads and associated activity and later activity. The geoarchaeological desk-based assessment has also identified the potential for the presence of deposits which may contain Palaeolithic archaeological and geoarchaeological evidence that would</p>	Onshore Archaeology and Cultural Heritage		Noted.	N

	contribute to national and regional research themes and priorities due to their rarity. The geoarchaeological DBA also includes an archaeological assessment of marine geophysical data. This identifies potential for the presence of offshore submerged prehistoric landsurfaces and relict channels which may contain archaeological and palaeoenvironmental evidence.				
NFOWFS3_053_092_100723	The Phase 1 onshore geophysical survey is ongoing and therefore the information presented as part of the PEIR is incomplete. Further Phase 1 onshore geophysical survey is proposed prior to the submission of a DCO. The combination of geophysics and aerial photography allow a greater understanding of the nature and significance of any potential archaeological remains, however, these methods, by their nature, can only provide confidence in larger and long-lived archaeological features and the proportion of unidentified archaeological remains within the area could be significant. These methods are also not suitable on all soils and areas where cropmarks may not be visible due to the nature of the vegetation cover.	Onshore Archaeology and Cultural Heritage		Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available. In addition, two phases of evaluation trenching have since been carried out at the onshore substation works area, these are summarised in Section 25.5.4 of Chapter 25 with the full reporting included in Appendices 25.10 (document reference 3.3.57) and 25.11 (document referenece 3.3.58). This work has informed the assessment presented in section 25.6 of Chapter 25.	N
NFOWFS3_053_093_100723	Geophysical survey across the whole development area and a programme of targeted archaeological trial trenching has been previously recommended to be completed in advance of the DCO application to inform on the extent, complexity and significance of any archaeological deposits and to allow for appropriate consideration to be given to the impact of the scheme on the historic environment. An archaeological trial trench evaluation has recently been completed across part of the proposed substation site, the results of the which will need to be included in the DCO application. Geophysical survey across the whole development site has not been completed and is not proposed to be completed prior to the DCO application.	Onshore Archaeology and Cultural Heritage		The results of the geophysical survey undertaken to date is reported in Appendix 25.8 (document reference 3.3.55). Two phases of evaluation trenching evaluation have since been carried out at the onshore substation works area, these are summarised in Section 25.5.4 of Chapter 25 (Onshore Archaeology and Cultural Heritage) with the full reporting included in Appendices 25.10 (document reference 3.3.57) and 25.11 (document referenece 3.3.58).	N

<p>NFOWFS3_053_094_100723</p>	<p>In relation to both onshore and offshore archaeology, the assessment of significance is largely based on desk-based research and non-intrusive evaluation survey, and therefore the potential adverse effect remains difficult to state with confidence. Direct effects to archaeological remains from physical damage or disturbance will be incurred within the footprint of the proposed development and associated enabling works. Any adverse impact to buried archaeological features as a result of the implementation of the project would be permanent and irreversible in nature. An assessment of effects on any heritage asset involves an understanding of the heritage significance of an asset, with regard to subsurface archaeological remains this can only be confidently achieved through intrusive investigation such as the programme of trial trenching recommended.</p> <p>The offshore cable corridor will run through an area of seabed that was a large swathe of dryland during the Pleistocene and early Holocene period. The potential for submerged landscapes with evidence for archaeological and geoarchaeological remains within this area is considered high, especially for Palaeolithic and Mesolithic archaeological remains. The significance of this is illustrated through the discoveries at Happisburgh and Pakefield, off the Norfolk and Suffolk coast, where the earliest evidence of hominin occupation of northern Europe (c. 900 ka to 800 ka) was found.</p>	<p>Onshore Archaeology and Cultural Heritage</p>		<p>Noted (see Section 16.5.1 of Chapter 16 Offshore and Intertidal Archaeology and Cultural Heritage.</p> <p>Two phases of evaluation trenching have since been carried out at the onshore substation works area, these are summarised in Section 25.5.4 of Chapter 25 (Onshore Archaeology and Cultural Heritage with the full reporting included in Appendices 25.10 (document reference 3.3.57) and 25.11 (document reference 3.3.58).</p>	<p>N</p>
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<p>NFOWFS3_053_095_100723</p>	<p>The Archaeological Assessment of Geophysical data (Chapter 16.1) states “The rarity of in situ prehistoric sites in offshore contexts means that, should such sites be encountered within the offshore sites, these will be of national, or possibly international interest, with significant potential to contribute to acknowledged international and national research objectives”. The geophysical data for the most inshore section of the cable route did not fully extend across the whole survey area, within the cable route corridor a number of features of palaeogeographic interest have been interpreted from geophysical data, including the location of former shore-lines and possible extension of the Thames-Medway channel. Submerged terrestrial landscapes have high potential for associated archaeological remains and preservation of organic remains, specifically in the nearshore and intertidal zone. The assessment has identified 56 AEZs within the study area however these largely focus on the sites of wrecks and debris fields and no palaeogeographic landscapes have been identified as being archaeologically sensitive at this time.</p> <p>At present the details of the proposed development retain a degree of flexibility within the Rochdale Envelope approach and will not be finalised until the detailed design phase, post consent. The primary mitigation approach, both onshore and offshore, is avoidance and therefore should entail preservation in situ of any significant archaeological remains. However, the extent, nature and significance of the archaeological remains, both onshore and offshore, has not yet been fully established or identified and it is uncertain that avoidance will be a practical option given the engineering requirements of the proposed works.</p> <p>The Tendring District is particularly rich in prehistoric ritual remains which range from single monuments to extensive cemetery areas. One example is the Scheduled Monument site at Ardleigh, which lies c.1.5km directly west of the proposed substation site, the scheduled area covers a site nearly 900m long by 600m wide and provides a good illustration of a well</p>	<p>Onshore Archaeology and Cultural Heritage</p>		<p>Assessment to date has shown there are no known in situ seabed prehistory sites within the study area. The potential for such sites to exist, as indicated by the presence of palaeolandscapes features is discussed in Section 16.5.1 of Chapter 16 Offshore and Intertidal Archaeology and Cultural Heritage.</p> <p>A summary of embedded mitigation measures is detailed in the ES Section 25.3.3 of Chapter 25 (Onshore Archaeology and Cultural Heritage) . Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available. The results are presented in Appendix 25.8 (document reference 3.3.55). The GDBA has been updated and reissued (Appendix 25.6, document reference 3.3.53) with the results of new data obtained from recent geoarchaeological monitoring of GI works (Appendix 25.9, document reference 3.3.56) and geoarchaeological investigations at the onshore substation works area (Appendix 25.12, document refernece 3.3.59). Programmes of geophysical survey and intrusive evaluation will continue post consent ongoing and will inform subsequent mitigation. Scheme design has sought to avoid the most significant archaeological remains where they were known or identified in pre-application investigation.</p> <p>Where disturbance cannot be avoided, significant effects upon sub-surface archaeological remains will be offset by the application of appropriate alternative mitigation measures which serve to preserve archaeological remains, where present, by record (e.g., following intrusive evaluation and</p>	<p>N</p>
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	<p>preserved extensive prehistoric landscape within the Tendring peninsula. There is potential for further extensive archaeological sites to be present within the development area which may not be able to be avoided within the cable corridor and so would be difficult to mitigate by design.</p> <p>The Applicant would be required to conclusively demonstrate that there is potential to avoid impact on any significant concentrations of archaeological remains where preservation would be the most appropriate mitigation strategy. Prior to the DCO application we would expect the results of all desk-based assessments and geophysical surveys to be combined in order to identify any concentrations of archaeology which may be difficult to avoid through design. Any areas where there is little or no opportunity to avoid these archaeologically or geoarchaeological sensitive areas through design would need to be evaluated through a programme of trial trenching/test pitting and/or borehole survey prior to the submission of the DCO to ensure that a suitable mitigation strategy, including preservation can be proposed.</p> <p>In addition, there may be cumulative direct effects with the Five estuaries OWF. The Five estuaries OWF is likely to follow the same cable route. It is unclear how much flexibility in design there will be, with both wind farms following similar designs, with regard to avoiding archaeological remains of high significance when no intrusive archaeological fieldwork has been undertaken. This would be of significance for any Palaeolithic sites which are rare and highly significant.</p> <p>At present there are also no proposals for outreach and enhanced public understanding as part of the mitigation beyond appropriate publication of the results of archaeological investigations and archiving. It is considered there would be scope to demonstrate a commitment to delivering enhanced public understanding/benefit and legacy as part of the mitigation considering the significant size of the scheme and the interest in the heritage of the area. The details of outreach should be included within an outline Written Scheme of</p>			<p>subsequent excavation, where required). This is detailed in Section 25.7.</p> <p>A programme of evaluation trenching and geoarchaeological evaluation is ongoing and will continue post-consent. The results will provide a better understanding of the sub-surface archaeological remains present to ensure suitable mitigation strategies can be proposed prior to the commencement of development works. Two phases of evaluation trenching have since been carried out at the Substation Zone, these are summarised in Section 25.5.4 in Chapter 25 with the full reporting included in Appendices 25.10 (document reference 3.3.57) and 25.11 (document reference 3.3.58).</p> <p>A summary and assessment of cumulative effects is presented in ES Chapter 25 Section 25.9.</p> <p>Details of appropriate public outreach/engagement are included within the OWSI submitted with this application.</p>	
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	Investigation for both onshore and offshore archaeology.				
NFOWFS3_053_096_100723	Onshore Archaeology and Cultural Heritage - Chapter 25 - Production of report on archaeological trial trenching and geoarchaeological test pits within the SSA West Area. To be submitted as an Appendix and results of geoarchaeological test pits to inform on site deposit model and geoarchaeological DBA which should be updated with any relevant information.	Onshore Archaeology and Cultural Heritage		Details of appropriate public outreach/engagement will be included within the OWSI submitted with this application. Two phases of evaluation trenching evaluation and Palaeolithic assessment have since been carried out at the Substation Zone, these are summarised in Section 25.5 of Chapter 25 (Onshore Archaeology and Cultural Heritage) with the full reporting included	N

	<ul style="list-style-type: none"> - Illustrative plan of archaeological evidence including geophysics, APs and HER overlaid and identification of any archaeological sensitive areas (where mitigation by design may not be possible). - Production of Outline WSI to set out approach to assessment and mitigation- This will need to include opportunities for the enhancement of heritage assets, and how the project might deliver public (heritage) benefit. The ES should aim to make clear public heritage benefits and outreach as part of planned mitigation 			in Appendices 25.10 - 25.12 (document reference 3.3.57 - 3.3.59).	
NFOWFS3_053_097_100723	<p>Five Estuaries Archaeological and Geoarchaeological Monitoring of Ground Investigation Works Report - Appendix 25.9</p> <ul style="list-style-type: none"> - Only 3 boreholes were monitored, and 2 historic borehole records used to create a stratigraphic model. This would not be considered robust enough to make conclusions across the whole scheme. The borehole records used for the geoarchaeological DBA should have been incorporated and some may have been more suitable for the creation of a deposit model. - The report states that the gravel deposits are deeply buried and conventional archaeological evaluation of this buried land surface is unlikely to be practical. - This is based on one borehole record, the geoarchaeological DBA notes that the Kesgrave gravels are present at much shallower depths across the scheme. The report needs amending to clarify this and should be updated as new information becomes available. A site deposit model across the entire scheme would be beneficial. 	Onshore Archaeology and Cultural Heritage		The GDBA has been updated and reissued (Appendix 25.6, document reference 3.3.53) with the results of new data obtained from recent geoarchaeological monitoring of GI works (Appendix 25.9, document refernece 3.3.56) and geoarchaeological investigations at the onshore substation works area (Appendix 25.12, document reference 3.3.59).	N

NFOWFS3_053_098_100723	<p>Geoarchaeological Desk Based Assessment - Appendix 25.6</p> <ul style="list-style-type: none"> - The geoarchaeological DBA has presented a very high-level assessment based on existing BGS borehole data and desk-based research. It has created a basic deposit model and zoned the route into Geoarchaeological Characterisation Zones (GCZs). - This approach is considered appropriate however the interpretation is based on a limited number of borehole records and should be supplemented with purposive borehole data which includes analysis and interpretation of the sediments from the borehole cores. - Any geotechnical boreholes taken prior to DCO submission should be monitored by a geoarchaeological specialist in order to refine and update the model. - The potential for geophysical survey, Electrical Resistivity Tomography (ERT), should be explored prior to DCO submission to enable a more detailed deposit model and identify any areas which have potential to preserve early prehistoric sites. - The DBA has identified that the Kesgrave deposits lie at depths that will be impacted upon, in places, the cable trenches. The discovery and identification of any Palaeolithic and Mesolithic sites within the development area would be considered of high importance. 	Onshore Archaeology and Cultural Heritage		<p>Additional ground investigation works have since been completed as part of the evaluation works and can be viewed in Appendix 25.12 (document reference 3.3.59). An updated Geoarchaeological DBA incorporating these results has been produced and is presented in Appendix 25.6 (document reference 3.3.53).</p>	N
NFOWFS3_053_099_100723	<p>Offshore Archaeology and Cultural Heritage - Chapter 16</p> <ul style="list-style-type: none"> - Commitment to avoid heritage receptors is preferable, the success of this will depend on the accuracy in the identification of Archaeological Exclusion Zones and the practicality of avoiding these by design. This information should be clearly presented in the ES to ensure there is flexibility in design to achieve the mitigation proposed. - Further assessment of data in areas of high archaeological/geoarchaeological significance should be carried out specifically in the nearshore/intertidal zone where in situ archaeological or palaeoenvironmental remains would be of national or international significance. These should then be assessed for inclusion as AEZ's - Any AEZs within the intertidal zone could be of 	Offshore Archaeology and Cultural Heritage		<p>The Outline Written Scheme of Investigation (WSI) (Offshore) (Document Reference: 7.11) outlines the approach to delivering mitigation measures for the Project.</p> <p>Table 16.3 of Chapter 16 (Offshore and Intertidal Archaeology and Cultural Heritage) the ES outlines the embedded mitigation measures which include the application of Archaeological Exclusion Zones (AEZs)_ and avoidance by micro-siting.</p> <p>Further assessment for areas of potential geoarchaeological interest is included as additional mitigation in Section 16.6.1.2.3 of Chapter 16 (Offshore and Intertidal Archaeology</p>	N

	<p>high significance and there would be potential for more traditional 'land-based' archaeological investigation techniques to be proposed to determine the nature, significance and extent in order to preserve in situ. The potential for archaeological evaluation within the intertidal zone should be explored and considered as a mitigation method in the forthcoming OWSI (Offshore)</p> <ul style="list-style-type: none"> - Geophysical survey should be completed across the entire survey area. Should this not be possible any areas where geophysical survey has not been completed should be clearly identified on a plan. - Any forthcoming OWSI should include details on how information will be reported, including methods of publication, should this be appropriate. Proposals for outreach and enhanced public understanding should also be included as part of the mitigation. 			<p>and Cultural Heritage) the ES.</p> <p>Given the use of HDD at landfall it is anticipated that impacts to intertidal archaeology can be avoided.</p> <p>The Outline WSI (Offshore) (Document Reference: 7.11) details methods of reporting, publication and outreach and engagement as appropriate.</p>	
NFOWFS3_053_100_100723	<p>Ecology</p> <p>Place Services on behalf of the Joint Councils has reviewed onshore ecology and ornithology chapters of the PEIR and its appendices and figures and note that Chapter 23 will be updated in the ES once the onshore project area is further refined and the data analysis for all remaining baseline ecological surveys has been completed and reported upon.</p> <p>We welcome the amendments that have been made since the EIA Scoping Opinion consultation and from ongoing technical consultation via the Onshore Ecology and Ornithology Expert Topic Group (ETG). The provision of confidential reports for sensitive species is noted though we request that unredacted versions are provided to appropriate key stakeholders when the DCO application is submitted.</p> <p>We look forward to reviewing draft Ecological Management Plan with embedded mitigation and best practice measures and further details for the Project to deliver a minimum of 10% BNG for the onshore elements in the ES.</p>	Onshore Ecology		<p>Noted. This is addressed in the OLEMS (document reference 7.14) and Biodiversity Net Gain Strategy (Document Reference 7.22).</p>	N
NFOWFS3_053_101_100723	<p>Chapter 23</p> <p>Paragraph 17</p> <ul style="list-style-type: none"> - The Conservation of Habitats and Species Regulations 2017 should have (as amended) added 	Onshore Ecology		<p>This has been addressed in Section 23.4.1.2 in Chapter 23 (Onshore Ecology).</p>	N

NFOWFS3_053_102_100723	Paragraph 21 and Table 23.7 - References to CWS and RNR are incorrect for Essex as the correct terms are Local Wildlife Site (LoWS) and Special Roadside Verge (SRV)	Onshore Ecology		This has been amended throughout Chapter 23 (Onshore Ecology).	N
NFOWFS3_053_103_100723	Paragraphs 139, 153, 185, 289, 332, 384, 38, Tables 23.2, 23.7, 23.37, and the Glossary - All references to the Essex BAP and LBAP are not relevant as this was archived many years ago.	Onshore Ecology		These have been amended throughout this chapter. In the October ETG this comment was raised by North Falls. Natural England advised North Falls to use the National BAP list instead .	N
NFOWFS3_053_104v	Arboriculture An Arboricultural Impact Assessment (AIA) will need to be undertaken to assess the quality of the existing trees along the length of proposed cabling route. All reports and plans must comply with 'British Standard 5837:2012 Trees in relation to design demolition and construction – Recommendations' and should provide details on all existing trees and vegetation to be retained and/or removed to facilitate the scheme, outlining any Arboricultural impacts and constraints. This will identify any trees within the site that would pose a constraint to this development and if they are of sufficient quality to merit protection and/or retention. An Arboricultural Method Statement (AMS) and associated tree protection plans will be required to ensure retained vegetation is adequately protected throughout the course of the development.	Onshore Ecology		The baseline environment and impacts in relation to woodland and trees are addressed in Sections 23.5.3.4 and 23.6.1.5 of Chapter 23 (Onshore Ecology).	N
NFOWFS3_053_105_100723	Where existing trees pose a constraint or their removal is required to facilitate this development, replacement planting opportunities should be incorporated into the design through methods such as native hedgerows and SUDs schemes and should be presented with the submission of a Soft Landscaping Plan. Good species selection would allow for an enhanced provision for wildlife and bring long term ecological benefits to the area to potentially mitigate any disturbance during construction.	Onshore Ecology		This is addressed in the OLEMS (document reference 7.14)	N

NFOWFS3_053_106_100723	The area of land chosen passes closely to residential areas and there may be trees on site that hold special cultural or personal value to the local residents. This could prove a source of contention if trees are seen to have high amenity value. Consultation with the local residents should be undertaken once the tree impacts and methods has been established.	Onshore Ecology		This is assessed in Chapter 25 Onshore Archaeology and Cultural Heritage (Volume I) and Chapter 32 Tourism and Recreation.	N
NFOWFS3_053_107_100723	Historic Buildings Place Services on behalf of the Joint Council's have been involved in the consultation process for the selection of potential proposal sites for the North Falls Offshore Windfarm, including the location of the offshore section, the area of landfall, cable corridor and onshore substation. The selection process included the creation of a ZTV related to the location of the Onshore substation which identified a number of designated heritage assets which could potentially be affected by the development. A further site visit narrowed the selection of designated heritage assets which are likely to be affected by the construction of the onshore substation in the proposed location through the change of their wider setting.	Onshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_053_108_100723	An initial assessment of the impact of the proposal on the setting of the heritage assets identified during the consultation process has now been submitted and would be further developed, where appropriate, once the detailed layout for the offshore section, area of landfall, cable corridor and onshore substation has been finalised.	Onshore Archaeology and Cultural Heritage		The initial selection of heritage assets for assessment has been reviewed to ensure it remains appropriate and the assessment is set out at Appendices 25.3 and 25.4 (document references 3.3.50 and 3.3.51). and summarised as section 25.5.8 of Chapter 25 (Onshore Archaeology and Cultural Heritage).	N
NFOWFS3_053_109_100723	Offshore Project section: The initial heritage assessment is only limited to the designated heritage assets which fall within a closer distance from the area of landfall. Further assessment of the assets identified in Table 1 of Appendix 25.4 would be required. The required additional turbines and offshore substations are likely to affect some of the views from Conservation Areas and heritage assets along the coastline towards the sea. The introduction of permanent offshore infrastructure has the potential to affect the significance of the identified heritage assets as a result of change in their setting. These include:	Onshore Archaeology and Cultural Heritage		An assessment of the effects to the setting of coastal heritage assets is presented in ES Chapter 16 Offshore Archaeology and Cultural Heritage Chapter 25, Section 25.7.2.1. An appraisal has been carried out to respond to the Historic England (HE) and ECC request to consider a larger study area from the initial heritage assessment. This is detailed in Appendix 25.4, (document reference 3.3.51).	N

	<ul style="list-style-type: none"> - Grade II Listed and Scheduled Monument Martello Tower K and associated battery south west of Walton Mere; - Grade II Listed Martello tower and brick lined moat; - Grade II Listed Martello tower adjacent to sea wall; 				
NFOWFS3_053_110_100723	<p>Martello Towers draw their significance from their architectural and historic interest as well as from their relationship with the seafront which forms part of their setting and highly contributes to the understanding of the significance of these assets and their historic function as defensive structures. As such, the introduction of the proposed offshore within the setting of the Towers would result in less than substantial harm to the significance of these designated heritage assets.</p>	Offshore Archaeology and Cultural Heritage		<p>Assessment of the Martello towers between Slaughden and St Osyth has considered the specific aspects of the varied settings of these heritage assets as well as seeking to better understand how views to the seaward contribute to significance (Appendix 25.4 (document reference 3.3.51)).</p>	N
NFOWFS3_053_111_100723	<p>Due to the distance of the development from the coastline and the limited visibility, the harm to the significance of the Tower is considered at the low end than less than substantial. As the setting of Martello Tower K has been permanently changed and urbanised and there is limited intervisibility with the proposed offshore infrastructures, the impact is considered neutral.</p>	Offshore Archaeology and Cultural Heritage		<p>Noted. See appraisal detailed in Appendix 25.4, (document reference 3.3.51).</p>	N
NFOWFS3_053_112_100723	<ul style="list-style-type: none"> - Grade II Listed Old Lifeboat House <p>The Old Lifeboat House draws its significance from its architectural and historic interest, and its community value for its role as an important provision in the coastal town of Walton. The maritime setting, therefore, highly contributes to the significance of the building as designated heritage asset and contributes to our understanding of its historic function and relationship with the sea. As such, the introduction of the proposed offshore within the setting of the Towers would result in less than substantial harm to the significance of the Old Lifeboat House. This harm can be assessed at</p>	Offshore Archaeology and Cultural Heritage		<p>The assessment set out at Appendix 25.4 (document reference 3.3.51) considers the specific townscape context of this asset as well as the contribution of views to the seaward to its significance.</p>	N

	the lower end of less than substantial due to the increased distance of the development from the designated heritage asset and the limited intervisibility of the proposed infrastructure.				
NFOWFS3_053_113_100723	Grade II Listed 40-44, The Parade - Grade II Listed Seaspan - Frinton and Walton Conservation Area; - Clacton Seafront Conservation Area. The maritime setting contributes to the significance of these designated heritage assets and enhance our appreciation and understanding of Frinton, Walton and Clacton as seaside towns. The introduction of the proposed offshore within the setting of these designated heritage assets would result in less than substantial harm. This harm can be assessed at the lower end of less than substantial due to the increased distance of the development and the limited intervisibility of the proposed infrastructure.	Offshore Archaeology and Cultural Heritage		An appraisal has been carried out to respond to the Historic England and Essex County Council request to consider is detailed in Appendix 25.4 (document reference 3.3.51).	N
NFOWFS3_053_114_100723	Grade II* Listed Church of St Mary; The church draws its significance from its architectural and historic interest. The churchyard forms its immediate setting and is mostly secluded in character, retaining a sense of isolation and seclusion despite the erosion and urbanisation of the wider setting. The development is not considered to affect the wider setting of St Mary's Church or prevent from an appreciation of its significance as an ecclesiastical building.	Offshore Archaeology and Cultural Heritage		A detailed assessment of the predicted effects on the significance of onshore heritage assets is presented in Appendix 25.3 (document reference 3.3.50).	N
NFOWFS3_053_115_100723	Onshore Section: At this stage, a high-level assessment of the predicted impacts from the onshore infrastructure on the significance of onshore heritage assets resulting from changes in their setting has been submitted. A further detailed assessment would be required once the refined layout would be finalised.	Onshore Archaeology and Cultural Heritage		A summary is provided in Section 25.5.8 of Chapter 25 Onshore Archaeology and Cultural Heritage.	N

NFOWFS3_053_116_100723	<p>Landfall Section: The potential wider area for landfall has been allocated between Frinton on Sea and Holland on Sea and includes a portion of the Frinton and Walton Conservation Area. As no permanent above-ground building is required at landfall, the proposed development is expected to have a temporary impact on the setting of these designated heritage at Construction stage and at dismissal only.</p>	Onshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_053_117_100723	<p>Onshore Cable Corridor Section: The selection process has established a wider area for the onshore cable corridor connecting the landfall site to the proposed onshore substation. As no permanent above-ground building is required following the installation of the connecting cables, the proposed development is expected to have a temporary impact on the setting of any designated heritage assets in close proximity to the building site at Construction stage and at dismissal only.</p>	Onshore Archaeology and Cultural Heritage		A detailed assessment of the predicted effects on the significance of onshore heritage assets is presented in Appendix 25.3 (document reference 3.3.50). A summary is provided in Section 25.5.8 of Chapter 25 Onshore Archaeology and Cultural Heritage.	N
NFOWFS3_053_118_100723	<p>Onshore Substation section - Grade II Listed Building Jennings Farm; - Grade II* Listed Building St Marys Church; These designated heritage assets draw their significance from their architectural and historic interest as well as the open agricultural landscape which forms part of their setting. The required above ground infrastructures within the offshore substation are likely to affect the views from the designated heritage asset into the wider rural landscape. The introduction of permanent offshore infrastructure has the potential to affect the significance of the identified heritage asset as a result of a change in the character of its setting, which will result in less than substantial harm to the significance of Jennings Farm. Due to distance from the site and intervening buildings and vegetation, this harm can be assessed at the lower end of less than substantial, however, a more detailed assessment would be required once the refined layout would be finalised.</p>	Onshore Archaeology and Cultural Heritage		A detailed assessment of the predicted effects on the significance of onshore heritage assets is presented in Appendix 25.3 (document reference 3.3.50)	N

NFOWFS3_053_119_100723	<p>Socio Economics and Skills ECC welcomes the clarification on skills and employment in the previous consultation - scoping opinion – (table 31.1) and the reference to the Outline Skills and Employment Plan that will be submitted as part of the DCO application. ECC is already deploying resources in a Tendring Future Skills Programme which will be one of our key delivery vehicles for skills activity to support workforce planning for this and other projects. Likewise, ECC is working closely with the Essex Chambers of Commerce on the Local Skills Improvement Plan (LSIP) which will provide a valuable insight into the employment and skills landscape for the County. Therefore, ECC is keen to go above and beyond the requirements of the DCO and use this project as an example of good practice – with early engagement on skills and employment and not just activity that is about meeting minimum planning requirements.</p>	Socio-economics		<p>An OSEP been developed as part of the DCO process. ECC has been consulted during the production of the OSEP to understand how the OSEP could draw upon local market intelligence, contribute to local priorities and build on existing activities, including the LSIP and Tendring Future Skills programme.</p>	N
NFOWFS3_053_120_100723	<p>ECC's skills and employment agenda is very clear. Firstly, we are keen to maximise skills and training opportunities for local residents and thereby support the workforce planning for this development. Secondly, we are also keen to maximise employment opportunities for local residents and directly support this project through the construction and operational phase. However, this project is not recruiting in isolation and we are aware of the huge skills shortage areas that businesses are reporting, including the 3-9 month lead up period to fill some existing vacancies (referenced in the PEIR). Through the Tendring Future Skills Programme, we will encourage the developer to coordinate with ECC in order to work with primary and secondary schools, local colleges and training providers, local universities, as well other voluntary groups providing information, advice and guidance, immediately. ECC will make the introductions and support the process as much as possible from the outset and well in advance of the Outline Skills and Employment Plan. Only through this early dialogue will the Outline Skills and Employment Plan reflect the reality of the challenge and interventions required.</p>	Socio-economics		<p>An OSEP has been developed as part of the DCO process. This includes consideration of education and training opportunities. North Falls is committed to working with local stakeholders to maximise local skills and employment benefits of the Project.</p> <p>The OSEP includes consideration of skills shortages. ECC has helped to support the OSEP process by helping to coordinate consultation with local education providers.</p>	N

NFOWFS3_053_121_100723	<p>Climate Change</p> <p>ECC notes the submission of details pursuant to climate change in Chapter 33 of the PIER. ECC notes the acknowledgement that the submission at 33.1.5 that: “The design of the Project is currently being developed and adaptive capacity to climate change (defined as ‘the potential or ability of a system to adapt to the effects or impacts of climate change’) is being incorporated into the design. At this stage of the design, there is insufficient information to undertake an assessment to determine the vulnerability and resilience of the Project to climate change. This will be considered further at the assessment stage for the Environmental Statement (ES).”</p> <p>ECC looks forward to the receipt of the as promised details at DCO submission. It is noted that the current proposals make reference to The Essex Climate Action Commission, which was set up to advise Essex County Council with respect to tackling climate change. The Commission published its ‘Net Zero: Making Essex Carbon Neutral’ report in July 2021 (Tendring District Council, 2021), which encourages large-scale renewable energy installations such as wind farms as proposed by this NSIP to be embraced in Essex. The Commission also advises that residents and businesses should be supplied with 100% renewable energy, and to see Essex produce enough renewable energy within the county to meet its own needs by 2040.</p>	Climate Change		<p>A CCRA has been undertaken for the ES and is presented in this chapter (see Section 33.6.2 of Chapter 33 Climate Change). The assessment evaluates the Project’s adaptive capacity and describes mitigation measures which have been incorporated to ensure that the design is resilient to the projected effects of climate change.</p> <p>Noted. The ‘Net Zero: Making Essex Carbon Neutral’ (Essex Climate Action Commission, 2021) report has been reviewed and taken into consideration in this chapter (Section 33.4.1.3 of Chapter 33). Chapter 2 Need for the Project provides details of the renewable electricity anticipated to be generated by the Project.</p>	N
NFOWFS3_053_122_100723	<p>Tourism</p> <p>Tourism is a major part of the Tendring District economy providing a wide and diverse range of tourism opportunities as it makes the most of its rural seaside location which is well connected to the wider region by means of a variety of transport modes. Options include hotels, guest houses, holiday parks, camping and caravanning, attracting significant number of visitors if all age ranges in a variety of settings.</p>	Tourism and Recreation		<p>The existing environment, as described in Section 32.5 of Chapter 32 (Tourism and Recreation), notes the volume and value of the tourism economy in Tendring as the character and offer of tourism in the district. This includes a baseline assessment of visitor accommodation.</p>	N
NFOWFS3_053_123_100723	<p>One of Tendring’s stated Local Plan priorities is as at Policy PP9 to PP 11 in the Adopted Tendring Local Plan and Objective 10 within the same “to work with partners to provide an</p>	Tourism and Recreation		<p>Policies PP 9 to PP 11 are considered within Section 32.4.1.2 of Chapter 32 (Tourism and Recreation).</p>	N

	enhanced environment for tourism and the maritime sector and its associated services.”				
NFOWFS3_053_124_100723	The Cultural, Visitor and Tourism sector encompasses a range of activities which play an important role in the District’s economy. This sector is worth more than £353 million per annum to the economy and is estimated to provide 7,900 jobs across Tendring District. The majority of jobs and businesses in this sector are located in and around Clacton. Figures from the Economic Strategy 2019 show that tourism employment has grown by 35% over the last five years.	Tourism and Recreation		The existing environment, as described in Section 32.5 of Chapter 32 (Tourism and Recreation), notes the volume and value of the tourism economy in Tendring, drawing on more recent data than is cited in the comment.	N
NFOWFS3_053_125_100723	The cumulative impacts of the entire project on the transport infrastructure, in particular any challenges around heavy plant traffic impact across the proposed routes at busy times of the year, will need to be assessed against any potential impact on access to tourism facilities within the District.	Traffic and Transport		Noted.	N
NFOWFS3_053_126_100723	Impact on tourism in the area is considered to be on two fundamental issues. The first is the impact of the development as built. Whilst the offshore array would have an impact on the coastal area it is considered unlikely that it would have an adverse effect on the enjoyment of the area from a tourism perspective given the presence of existing arrays offshore, and due to the distance of the development and its visibility from the shoreline.	Tourism and Recreation	Seascape, Landscape and Visual Impact Assessment	Noted.	N
NFOWFS3_053_127_100723	Secondly, and of more tourism impact, is the implementation of the development, if consented, on the landward side of the proposal. It is estimated that the cable connections from shore to Lawford could take 3 years to construct. During this time the area will see a significant increase in vehicle numbers, including HGV’s and large abnormal road, which themselves could see significant build-up of traffic on both the affected rural highway network and routes leading thereto, which could have a significant impact on the free flow of traffic resulting in tourist seeking alternatives. Hence ECC considers that seasonal increases as a result of tourism will need to be looked at and mitigated as required to safeguard and where possible enhance the impact the	Traffic and Transport	Tourism and Recreation	Noted.	N

	development would have on the tourism sector to protect its attractiveness of the same and safeguard socio economic interests and enhance the same wherever possible.				
NFOWFS3_053_128_100723	As such it would be necessary to see a full outline of the impacts on tourism will be mitigated. The aforementioned PEIR document on Tourism and Recreation cites potential impacts on the identified sites as 'negligible'. However, and to assess the impact this development would have on this important sector, this should be monitored and further work carried out as necessary, at sites at landfall are popular destinations. The cumulative impacts of the entire project on the transport infrastructure, in particular any challenges around heavy plant traffic impact across the proposed routes at busy times of the year.	Tourism and Recreation		Noted.	N

Consultee reference	Summary of comments	Theme/code	Theme/code	Applicant's response	Project change (Y / N)
NFOWFS3_054_001_140723	<p>Dear Mr Harper, North Falls Offshore Wind Farm Project– Statutory Consultation under Section 42 of the Planning Act 2008. Preliminary Environmental Information Report Thank you for your letter dated 16 May 2023 consulting Historic England (HE) on the Preliminary Environmental Information Report (PEIR) stage of your application for the above project. Historic England is the Government’s lead advisor on the historic environment and we are a non-departmental public body sponsored by, and reporting to the Secretary of State for Culture, Media and Sport. For the purposes of Section 42 of the Planning Act 2008 and Regulation 11 of Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, we are a statutory a consultee. In addition to our responsibilities within the terrestrial landscape, the National Heritage Act (2002) enabled Historic England to assume responsibility for maritime archaeology in the English area of the UK Territorial Sea. This consultation relates to North Falls Offshore Wind Farm Ltd (North Falls) proposal to develop an offshore wind farm known as North Falls Offshore Wind Farm, with associated infrastructure. The scheme is outlined in the PEIR that accompanied your consultation letter. This project is defined as a Nationally Significant Infrastructure Project in relation to Section 15(3) of the Planning Act 2008 (as amended) (the Act). We recognise this PEIR has been informed by previous consultations, which have guided your approach to the location, site selection and the approach to the overall development. East of England 2 Historic England’s response is limited to our statutory remit for the historic environment. Our advice is given in relation to the</p>	N/A		Noted.	N


	<p>information currently available and may be subject to change as our understanding of the impact on heritage assets changes.</p>				
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NFOWFS3_054_002_140723	<p>In relation to Listed Buildings, the remit for detailed comments and advice on Grade II Listed Buildings lies with the relevant Local Authority Conservation Officers.</p> <p>For onshore archaeology, the remit for detailed comments and advice on nondesignated archaeological remains lies with the relevant Local Authority Archaeological Advisors. Our advice, however, includes comments on the submitted documents relating to the archaeological assessments and mitigation proposals.</p> <p>Our advice includes comments from our regional Science Advisor and includes suggestions of further detail we would expect to see presented in the Archaeological Mitigation Strategy.</p>	Onshore Archaeology and Cultural Heritage		Noted.	N
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<p>NFOWFS3_054_003_140723</p>	<p>Project Summary</p> <p>North Falls is a proposed extension project to the operational Greater Gabbard Offshore Wind Farm (OWF) off the coast of Suffolk. The new wind farm would include up to 72 offshore wind turbines split into two arrays. The array areas would be located approximately 22km off the coast of Suffolk.</p> <p>The wind turbines would have a rotor diameter of up to 337m. The design envelope has set a maximum and, where relevant, a minimum realistic worst-case scenario against which environmental effects can be assessed. The offshore WTGs would be connected via subsea cables to up to two Offshore Substation Platforms (OSPs). These would transform the voltage and transmit the power generated via further subsea cables within the offshore export cable corridor to a landfall location between Clacton-on-Sea and Frinton-on-Sea on the Essex coast.</p> <p>Connection to the National Grid would be at a new National Grid East Anglia Connection Node (EACN) 400kV substation within Tendring, Essex. The location for the proposed National Grid connection point is still being considered at this stage and would be subject to a separate consent process. The precise location of the onshore substation and grid connection is subject to ongoing consultation and would be located in the onshore substation zone.</p> <p>East of England 3</p> <p>At this stage the following have been identified:</p> <ul style="list-style-type: none"> • Onshore cable corridor(s), comprising at least 204m wide (up to 243m wide) broad corridors in which the onshore export cables would be located; • Onshore substation zone, comprising an approximately 60ha zone within which the Project's onshore substation would be located. <p>The onshore cable corridor would be up to 24km from landfall to the proposed new onshore substation. The primary cable installation method would be open cut trenching. The maximum design parameters taken into consideration for the onshore</p>	<p>Site Selection and Assessment of Alternatives</p>	<p>Onshore Archaeology and Cultural Heritage</p>	<p>Noted.</p>	<p>N</p>
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	<p>export cable route were:</p> <ul style="list-style-type: none"> • Proposed onshore cable route construction width in areas of open cut trenching – 60m; • Proposed onshore cable route construction width of 'trenchless' crossings – up to 122m. <p>The proposed landfall installation method would be by Horizontal Directional Drilling (HDD). The permanent land take for each transition joint bay (per bay) would be 4 x 15m. A maximum 100 x 200m temporary landfall construction compound for up to four transition joint bays may be required. It is estimated there will be up to seven cable construction compounds, with a maximum compound footprint of 150 x 250m. The maximum onshore substation platform footprint would be 267 x 300m. The maximum onshore substation equipment height would be 18m.</p> <p>We note and welcome that North Falls is reviewing the sharing an onshore cable route (but with separate onshore export cables) and/or co-locating separate project onshore substation infrastructure, where practicable. We also note that North Falls is reviewing an offshore electrical connection, supplied by a third party electricity distribution network provider.</p>				
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<p>NFOWFS3_054_004_140723</p>	<p>Historic England's Advice (comments in relation to the PEIR by chapter and/or annex) Comments in relation to Marine Geology, Oceanography and Physical Processes (Volume 1, Chapter 8) (Document Reference 004447048-03) East of England 4 We note the data to inform the PEIR was based on available grey literature associated with various developments together with geophysical data and survey reports produced by the Galloper and Greater Gabbard OWF projects (Sections 8.1 and 8.4.2.2). Section 8.5.2 and Table 8.12 describes the offshore geology, identifying three main units, which from an archaeological perspective include: • Holocene: i.e. surficial sediments comprising reworked modern Holocene (Recent) and early Holocene (Section 8.5.2.1, para. 62) • Pleistocene: comprising a 'variety of channel complexes of varying sizes, incising through London Clay Formation and Harwich Formation' (Section 8.5.2.1, para. 61 and Plate 8.3). We note these units are also identified within the offshore ECC, as described in Section 8.5.2.2. It is, therefore, recommended that any Outline (Offshore) WSI included within the DCO application should focus on the use of this information to produce a deposit model as a viable mitigation measure.</p>	<p>Marine Geology Oceanography and Physical Processes</p>		<p>A commitment to the development of the preliminary deposit model, through the assessment of geotechnical and geophysical data post- consent, is captured in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11)</p>	<p>N</p>
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<p>NFOWFS3_054_005_140723</p>	<p>Comments in relation to Offshore Archaeology and Cultural Heritage (Volume 1, Chapter 16) (Document Reference 004447026-03) Chapter 16 considers the potential impacts of the Project on offshore archaeology and cultural heritage. It includes baseline data on the historic environment of the study area and an assessment of potential impacts and associated mitigation for the construction, operation and decommissioning phases of the Project. The chapter is supported by an Offshore Archaeology and Cultural Heritage Technical Report (Volume 2, Annex 16.1). In addition, we note Volume 2, Chapter 10: Seascape, Landscape and Visual Assessment. It is acknowledged that significant archaeological remains are present within the marine zone that need to be considered (buried archaeology, wrecks and aircraft). For example, the export cable corridor passes through the former marine aggregate license Area 447 where significant Palaeolithic and Pleistocene material was identified and recorded (Bynoe 2017 and Bynoe et al. 2022). We note within the glossary of terminology on pages 9-10 definitions are provided for the Mesolithic and Palaeolithic. It is unclear, however, why no definition is provided for the Neolithic. We would recommend this is added for the DCO application. East of England 5</p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>Noted (Neolithic added to glossary).</p>	<p>N</p>
<p>NFOWFS3_054_006_140723</p>	<p>We would recommend reference is also made to Bynoe et al. 2022: 'Strategic support for marine development management: Palaeolithic archaeology and landscape reconstruction': </p>	<p>Offshore Archaeology and Cultural Heritage</p>		<p>Noted (added to Table 16.7 and referenced in Section 16.8.3.1).</p>	<p>N</p>

NFOWFS3_054_007_140723	<p>Section 16.4.3.1 (Understanding cultural heritage assets) includes the statement that 'further investigation and data gathering will be progressed post-consent, including high resolution surveys, alongside additional mitigation requirements as set out in the Outline WSI (Offshore) to be submitted alongside the DCO application'.</p> <p>We note no draft Outline WSI (Offshore) is included within the PEIR documents.</p> <p>Measures to record or protect remains recorded offshore will be agreed in consultation with Historic England. Early engagement with Historic England on an Outline WSI (Offshore) would assist in its timely acceptance during any DCO examination period.</p>	Offshore Archaeology and Cultural Heritage		The Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11) has been drafted alongside the ES for submission with the DCO application.	N
NFOWFS3_054_008_140723	<p>We welcome the statement that 'there will be archaeological input into any future sampling programmes' (Section 16.6.1.2.3). To support whether assessment is beneficial, it is essential the Applicant has access to appropriate and experienced archaeological advice.</p>	Offshore Archaeology and Cultural Heritage		Noted (this is addressed in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11)).	N
NFOWFS3_054_009_140723	<p>We agree with the impacts scoped in for assessment, as listed in Section 16.6.1 (construction, operations and maintenance and decommissioning) regarding direct and indirect impacts such as disturbance of sediment containing potential marine heritage receptors (material and contexts) leading to the exposure of those marine heritage receptors.</p> <p>We are therefore pleased to see the findings of the Marine Geology, Oceanography and Marine Processes chapter (Volume 1, Chapter 8) have been incorporated into the discussions of indirect impacts on sediments (Section 16.6.1.3).</p>	Offshore Archaeology and Cultural Heritage	Marine Geology Oceanography and Physical Processes	Noted.	N

NFOWFS3_054_010_140723	<p>We note from Table 16.2 (Realistic worst case scenarios) in relation to impacts 1 and 4 that there is no worst case scenario as impacts 'will not occur due to the application of embedded mitigation'. Whilst we understand the principle behind the rationale, we consider this cannot be stated categorically until the mitigation process has been realised. This caveat should be reflected in the ES. Additionally, this table only considers the worst case scenario of the greatest area (horizontal) of seabed and shallow buried deposits impacted by the proposed infrastructure. It does not consider the greatest area (vertical) of deposits that could impacted deeply buried deposits of archaeological interest.</p> <p>East of England 6</p> <p>It also suggested in the second part of Impact 3 that indirect impacts arising from seabed preparation and installation of foundations and cables would have a positive effect – given that there is no consideration of the negative impacts. We acknowledge that there is potential for sediment mobilisation to have positive effects but this is by no means guaranteed. This impact should be amended to consider the negative impacts also.</p>	Offshore Archaeology and Cultural Heritage	Marine Geology Oceanography and Physical Processes	Table 16.2 has been updated to reflect these comments.	N
NFOWFS3_054_011_140723	In relation to Table 16.3 (Embedded mitigation measures) it would have been useful to include reference to a Protocol for Archaeological Discoveries (PAD).	Offshore Archaeology and Cultural Heritage		Noted (added to Table 16.3).	N
NFOWFS3_054_012_140723	<p>Regarding the sources cited in Table 16.7 (Data and information sources), we would recommend the North Sea Prehistory Research and Management Framework (NSPRMF) is also included. This document includes a resource assessment (i.e. literature review) as well as research questions and strategies. These are directly relevant and applicable in the production of any Outline (Offshore) WSI. They should be used by this project, post-consent and pre-commencement (should permission be obtained).</p> <p>It should be noted, the NSPRMF has now been updated</p>	Offshore Archaeology and Cultural Heritage		Noted (added to Table 16.7 and referenced in the Outline WSI (Offshore) (Document Refence: EN010119/APP/7.11).	N

	and published online as part of the UK programme for digital research frameworks: https://researchframeworks.org/nsprmf/ .				
NFOWFS3_054_013_140723	It is acknowledged there is high potential for the presence of a range of archaeological material which has not been seen in the geophysical data due to issues of visibility. It is noted the East area of the Northern and Southern array areas contain large sand waves with megaripples that could conceal archaeological remains of interest (Section 16.5.2.1, Paragraph 130).	Offshore Archaeology and Cultural Heritage		Noted (the offshore project area has been refined following PEIR with the removal of the northern array area and interconnector corridor).	Y
NFOWFS3_054_014_140723	We note it is acknowledged that the potential for submerged landscapes in the marine study area is high (Section 16.5.11) and significant sites are located in nearby areas (e.g. Clacton, Jaywick and Frinton). In particular, potentially well-preserved palaeogeographic features were identified within three of the four projects areas (Northern array area, Southern array area and the ECC). The investigation of these features has the potential to contribute to our understanding landscape and environmental change as well as refining the geological chronology for the region (Section 16.5.11, Paragraph 101).	Offshore Archaeology and Cultural Heritage		Noted (the offshore project area has been refined following PEIR with the removal of the northern array area and interconnector corridor).	Y
NFOWFS3_054_015_140723	We are pleased the archaeological potential of the intertidal zone is also recognised (Section 16.5.3.1). However, it is stated in paragraph 161 that no offshore geotechnical surveys are planned and will be delivered post consent (subject to permission). We consider the detail of any Outline (Offshore) WSI prepared for this project is crucial to demonstrate that mitigation measures are identified and ready to be implemented. East of England 7	Offshore Archaeology and Cultural Heritage		Geoarchaeological assessment (with objectives incorporated into the geotechnical campaigns) will be guided by the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11xxx) and survey specific method statements.	N

NFOWFS3_054_016_140723	The statement made in Section 16.6.1.2.3 (Unlocated Marine Heritage Receptors) is very important and any ES produced must adequately determine such risk and ensure viable mitigation strategies are presented and delivered within any draft Deemed Marine Licence(s) (dMLs).	Offshore Archaeology and Cultural Heritage		The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows: Schedule 8, Part 2, Condition 21; Schedule 9, Part 2, Condition 21; Schedule 10, Part 2, Condition 21.	N
NFOWFS3_054_017_140723	We note a total of 1827 seabed features have been identified to date following the marine geophysical surveys: 45 A1 anomalies of anthropogenic origin, 11 A3 anomalies of possible archaeological interest, and 1771 A2 anomalies of possible archaeological interest where the current interpretation is uncertain (Table 16.14).	Marine Geology Oceanography and Physical Processes	Offshore Archaeology and Cultural Heritage	Noted (the baseline in Section 16.5.2 has been updated following removal of the northern array area and the interconnector cable corridor).	Y
NFOWFS3_054_018_140723	In Section 16.5.1.2 we note that 16 palaeogeographic features have been identified within the northern array area and 15 in the southern array area. 44 palaeogeographic features have been identified within the ECC study area relating to complex channelling. The deposits infilling these features have the potential to preserve archaeological and organic palaeoenvironmental remains of high importance, such as channel 7065 recorded in the cable corridor (Sections 16.5.1.2 and 16.5.1.3).	Marine Geology Oceanography and Physical Processes	Offshore Archaeology and Cultural Heritage	Noted (the baseline in Section 16.5.1 has been updated following removal of the northern array area and the interconnector cable corridor).	Y

NFOWFS3_054_019_140723	<p>In addition, areas of possible organic material were frequently seen in the geophysical surveys, which further points to the archaeological and geoarchaeological potential of the proposed development area (Section 16.5.1, para 90). A robust strategy to investigate and understand these features and deposits will therefore need to be developed. We are, therefore, pleased to see specific objectives for targeted geotechnical samples and geoarchaeological assessment have been considered (Section 16.6.1.2.3). We would expect to see these explored in more detail in any Outline (Offshore) WSI.</p>	Marine Geology Oceanography and Physical Processes	Offshore Archaeology and Cultural Heritage	Geoarchaeological assessment (with objectives incorporated into the geotechnical campaigns) will be guided by the Outline WSI (Offshore) (Document Refence: EN010119/APP/7.11) and survey specific method statements.	N
NFOWFS3_054_020_140723	<p>In relation to A2 anomalies, we note they have not been given AEZs but will be mitigated through micro-siting, and further investigation and mitigation if impacts cannot be avoided. In principle we have no issue with this approach, but we wish to highlight that a lot of investigation and mitigation works are proposed for postconsent. Should significant archaeological remains and deposits come to light, further investigation and mitigation would potentially be time consuming. Therefore, we recommend that the production of a post-consent Offshore WSI by an appropriate and experience archaeological contractor, collection of further data, its assessment by an appropriate and experience archaeological contractor, and submission to the regulatory authority and their advisors is done in a timely manner as set out in an accepted Outline (Offshore) WSI. This will ensure that enough time is built in to undertake these processes.</p> <p>East of England 8</p>	Offshore Archaeology and Cultural Heritage		<p>The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Refence: EN010119/APP/7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows:</p> <p>Schedule 8, Part 2, Condition 21;</p> <p>Schedule 9, Part 2, Condition 21;</p> <p>Schedule 10, Part 2, Condition 21.</p>	N

NFOWFS3_054_021_140723	<p>We note from 16.6.1.2.3 (Additional mitigation) that further archaeological assessment of high-resolution geophysical data and geoarchaeological assessment of geotechnical data will be undertaken post-application/post-consent in order to reduce, as far as possible, the potential for unintended impacts during construction.</p> <p>This is appropriate to mitigate impacts to potential heritage assets and should be conducted by an appropriate and experienced archaeological consultant, who should be involved in the planning stages for surveys.</p>	Offshore Archaeology and Cultural Heritage		<p>The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows:</p> <p>Schedule 8, Part 2, Condition 21;</p> <p>Schedule 9, Part 2, Condition 21;</p> <p>Schedule 10, Part 2, Condition 21.</p>	N
NFOWFS3_054_022_140723	<p>We are pleased to see acknowledged the further assessment of data for potential prehistoric deposits set out in this subsection relating to additional mitigation, and the associated objectives would contribute to publicly available information for seabed prehistory in the Thames offshore region. We note that archaeological input will be afforded to sampling programmes.</p>	Offshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_023_140723	<p>It is acknowledged there is the potential for previously unknown remains of archaeological interest to be present within the footprint of the proposed scheme. It is stated that unexpected discoveries will be managed through a Protocol for archaeological discoveries, which will be outlined in detail in the Outline (Offshore) WSI (Section 16.6.1.2.3).</p>	Offshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_024_140723	<p>We are pleased to see monitoring requirements will be described in the in-principle monitoring plan (IPMP) and detailed in the Outline (Offshore) WSI (Section 16.7). Any monitoring proposed should be proportional to the significance of heritage assets potentially impacted.</p>	Offshore Archaeology and Cultural Heritage		Noted.	N

NFOWFS3_054_025_140723	<p>We are mindful that structure placement and cable routes are yet to be confirmed. The maximum design parameters and the approach to identifying maximum possible effect are understood in the assessment provided vis. a worst-case scenario approach. However, we recommend the ES includes depths of dredging required for the placement of gravity base jacket foundations. From our perspective, it is the depth and area of seabed excavation that indicates the greatest possible direct impact to archaeological materials on, within and beneath the contemporary seabed, either within the array areas or offshore ECC.</p>	Offshore Archaeology and Cultural Heritage	Site Selection and Assessment of Alternatives	Table 16.2 assumes an average 5m sediment depth in calculating the maximum volume of disturbed seabed during seabed preparation for Gravity Base Systems (GBS).	N
NFOWFS3_054_026_140723	<p>Table 16.3 presents the embedded mitigation measures; the approaches outlines are what we would expect to see (avoidance/AEZs, further investigation). We are pleased to see avoidance will form the primary mitigation approach, and archaeologists and archaeological specialists will be involved in the design of the geoarchaeological survey campaigns.</p>	Offshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_027_140723	<p>We would recommend that archaeologists are also be involved in the design of any future geophysical campaigns offshore to ensure opportunities are maximised. In East of England 9 addition, we would also recommend that geoarchaeologists are allowed direct access to the geotechnical cores, to record and assess continuous core sequences rather than isolated deposits allowing for greater reliability and confidence in the resulting conclusions.</p>	Offshore Archaeology and Cultural Heritage		A commitment to seeking the advice of an archaeologist / geoarchaeologist in planning future surveys is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11).	N

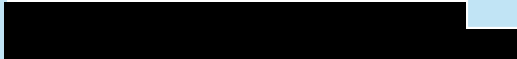
NFOWFS3_054_028_140723	We advise that all mitigation measures are clearly included as conditions within any draft Deemed Marine Licence submitted and detailed within the Outline (Offshore) WSI.	Policy and Legislative Context		The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows: Schedule 8, Part 2, Condition 21; Schedule 9, Part 2, Condition 21; Schedule 10, Part 2, Condition 21.	N
NFOWFS3_054_029_140723	We appreciate the evolution of the project design, the application of good practice and use of standard protocols. We also note that where significant effects are determined additional mitigation measures will be forthcoming. Any additional mitigation will need to be covered in the Outline (Offshore) WSI.	Project Description	Offshore Archaeology and Cultural Heritage	The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows: Schedule 8, Part 2, Condition 21; Schedule 9, Part 2, Condition 21; Schedule 10, Part 2, Condition 21.	N
NFOWFS3_054_030_140723	We agree with the spatial extent of 56 AEZs proposed, as described in Section 16.6.1.1.1.	Project Description	Offshore Archaeology and Cultural Heritage	Noted.	N

NFOWFS3_054_031_140723	<p>We note the design of the proposed scheme has not yet been finalised, so there is potential it may not be possible to avoid some of identified assets. If this occurs, strategies would be developed and agreed that aim to reduce, remedy or offset disturbances. This may include the use of high resolution geophysical surveys carried out as part of the UXO surveys, or the use of a ROV, which is welcomed (Sections 16.6.1.1.3 and 16.6.1.2.3).</p>	Project Description	Offshore Archaeology and Cultural Heritage	<p>The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows:</p> <p>Schedule 8, Part 2, Condition 21;</p> <p>Schedule 9, Part 2, Condition 21;</p> <p>Schedule 10, Part 2, Condition 21.</p>	N
NFOWFS3_054_032_140723	<p>It should be also noted the true extent of known sites at the time of the application may not be completely recorded and captured within prescribed AEZs until a high resolution UXO specification survey has been undertaken. This should be corroborated with detailed ground-truthing investigations (utilising onboard archaeological expertise), to assess any outlying geophysical anomalies.</p>	Offshore Archaeology and Cultural Heritage		<p>The approach to further investigation / ground truthing is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11).</p>	N

NFOWFS3_054_033_140723	<p>Comments in relation to Onshore Archaeology and Cultural Heritage (Volume 1, Chapter 25) (Document Reference 004447035-03)</p> <p>Chapter 25 considers the potential impacts of the Project on onshore archaeology and cultural heritage. It includes baseline data on the historic environment of the study area and an assessment of potential impacts and associated mitigation for the construction, operation and decommissioning phases of the Project.</p> <p>The Chapter is supported by</p> <ul style="list-style-type: none"> • Cable Landfall Search Area East of England 10 • Historic Environment Desk-Based (Baseline) Assessment (Volume III, Appendix 25.1) • Onshore Cable Corridor(s) and Onshore Substation Zone, Historic Environment Desk-Based (Baseline) Assessment (Volume III, Appendix 25.2) • Onshore Infrastructure Setting Assessment (Volume III, Appendix 25.3) • Offshore Infrastructure Setting Assessment (Volume III, Appendix 25.4) • Heritage Walkover Survey (Volume III, Appendix 25.5) • Geoarchaeological Desk-Based Assessment (Volume III, Appendix 25.6) • Onshore Historic Environment Gazetteers (Volume III, Appendix 25.7) • Archaeological Geophysical Survey Report (Volume III, Appendix 25.8) • Five Estuaries Archaeological and Geoarchaeological Monitoring Of Ground Investigation Works Report (Volume III, Appendix 25.9). <p>We offer the following comments in relation to onshore archaeology and cultural heritage, based on the information provided in the PEIR. Comments in relation to the use of LiDAR, historic mapping and HER datasets</p>	Onshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_034_140723	<p>We welcome the use of LiDAR data to inform assessment (Volume III, Appendix 25.1 and 25.2, Annex D). We would recommend this data is presented in the supporting appendix for the DCO application.</p>	Onshore Archaeology and Cultural Heritage		The LiDAR assessment is included in Appendices 25.1 and 25.2 (Volume III) of this ES.	N

<p>NFOWFS3_054_035_140723</p>	<p>As part of the Scoping Response (12 August 2021), we have advised previously that resolution of 1m is the basic minimum needed for archaeological assessments using LiDAR, but where greater detail is required, higher resolution is preferable. This is in line with Historic England's document, Using Airborne LIDAR in Archaeological Surveys, 2018.</p>	<p>Onshore Archaeology and Cultural Heritage</p>		<p>The LiDAR resolution used was agreed in ETG PEIR Feedback on the 03/08/2023.</p> <p>It was presented that while 2m resolution may be below the minimum of Historic England's requirements, this dataset is one of the earliest LiDAR datasets available and still provides microtopographic earthwork evidence, particularly in Simple Local Relief Modelling, which may have been eroded in later datasets and therefore is not discarded from this investigation but included alongside datasets of higher resolution to provide context. Given that most of the features are no longer present, or are visible as cropmarks, from APSs experience, obtaining a higher resolution dataset would not provide sufficiently valuable additional context, and with the extant NLP full site coverage of 1m resolution, when taken as a whole, this investigation meets and exceeds Historic England's minimum requirements.</p>	<p>N</p>
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NFOWFS3_054_036_140723	<p>We would expect the onshore cable corridor and onshore substation zone options to demonstrate there is sufficiently high LiDAR resolution for the identification of archaeological earthworks. In particular, we note Table 5 of Appendix 25.2, Annex D, shows that half of the LiDAR tiles along the onshore cable corridor have a resolution of 2m.</p> <p>We would, therefore, recommend higher resolution drone LiDAR is obtained and presented, and discussed in the DCO application.</p>	Onshore Archaeology and Cultural Heritage		Addressed in comment above.	N
NFOWFS3_054_037_140723	<p>We note the historic mapping presented for the cable landfall desk-based assessment is presented in Annex D of Volume III, Appendix 25.1. We would recommend the historic mapping is also presented for the entirety of the onshore cable route. We would recommend the historic mapping is reproduced for the DCO application as complete maps, to provide context for the onshore cable route. We East of England 11 would also recommend an insert map is provided for each illustration, to show the location of each figure in relation to the wider scheme.</p>	Onshore Archaeology and Cultural Heritage	Site Selection and Assessment of Alternatives	The reduction of the onshore project area for ES means that the extent of the mapping provided supplies ample context for the assessment purposes.	N
NFOWFS3_054_038_140723	<p>In terms of the presentation of Figure 25.2, to avoid confusion in the DCO application, we would recommend the Palaeolithic and unknown monument polygons and Iron Age and unknown monument points are better distinguished in the ES chapter, i.e. shaded in different colours on Figure 25.2 (and reproduced in the DCO application). This is because it is currently difficult to distinguish each one. Comments in relation to the investigation of Onshore Archaeological Remains (and the impact of Onshore Infrastructure)</p>	Onshore Archaeology and Cultural Heritage		Noted. Figure 25.2 has been to reflect the recommended changes.	N

NFOWFS3_054_039_140723	<p>The direct and indirect impacts that the proposed development could have on the historic environment have been summarised in Section 25.4.3, Paragraph 41. It should be noted that we consider dewatering and any resulting changes to the preservation conditions of an archaeological site a direct impact. We would also recommend issues such as compression are considered in areas where deposits such as peat may be impacted, as this could result in physical damage as well as changing the preservation conditions.</p>	Onshore Archaeology and Cultural Heritage		<p>The GDBA has outlined the areas where the presence of peats and waterlogged deposits may become a concern (Appendix 25.6, Volume III).</p>	N
NFOWFS3_054_040_140723	<p>We note the discussion of previous archaeological investigations (Section 25.5.3.12) that this is focused on archaeological remains/artefacts only and not on the palaeoenvironmental evidence.</p>	Onshore Archaeology and Cultural Heritage		<p>This section is based on data of past investigations held in the Essex Historic Environment Record only. The GBDA has been updated and reissued (Appendix 25.6, Volume III) with the results of new data obtained from recent geoarchaeological monitoring of GI works (Appendix 25.9, Volume III) and geoarchaeological investigations at the onshore substation works area (Appendix 25.12, Volume III).</p>	N
NFOWFS3_054_041_140723	<p>We note, and welcome, the statement that ‘the preferred and optimum mitigation measure is preservation in situ, wherever possible’ (Paragraph 305). We would recommend the principles presented in the Historic England document ‘Preserving Archaeological Remains’ (2015) are referred to where preservation is being considered for a site:  It is important to consider each site on a case-by-case basis to ensure preservation is</p>	Onshore Archaeology and Cultural Heritage		<p>HE principles for preservation of archaeological remains in situ are referenced in Section 25.7.</p>	N

	the right choice for the given site and the archaeological remains.				
NFOWFS3_054_042_140723	Where avoidance is not possible, it is stated, 'direct (physical) impacts would be offset or reduced through either preservation in situ or archaeological fieldwork and reporting' (Section 25.8, Paragraph 348, see also Section 25.7.1.2.3, Paragraph 306).	Onshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_043_140723	We note it is the intention to submit an Outline (Onshore) WSI alongside the DCO application, to be further developed and agreed with stakeholders prior to construction taking account of the final detailed design (Section 25.8, Paragraph 347).	Onshore Archaeology and Cultural Heritage		Noted. The Outline Written Scheme of Investigation (OWSI) has been submitted as part of the DCO application (Doc ref 7.12).	N
NFOWFS3_054_044_140723	East of England 12 We note also it is the intention to determine the site-specific measures post-consent 'in response to the combination of onshore archaeological and cultural heritage assessment' (Section 25.7.1.2.3, Paragraph 304).	Onshore Archaeology and Cultural Heritage		Noted.	N

NFOWFS3_054_045_140723	<p>It is stated in Section 25.7.1.2.4, Paragraph 308 that 'the residual magnitude and significance of effect will be reduced or offset to levels considered non-significant in EIA terms (i.e., anticipated to be no worse than a minor adverse significance of effect for Impact 2)'. At this stage, however, no trial-trenching evaluation has been undertaken to test the results of the aerial photography, LiDAR analysis and potential archaeological assets identified as geophysical anomalies, as well as other potential archaeological remains recorded in the HER (for example, indicated by the Portable Antiquities Scheme) – and to assess the significance of these archaeological remains. It should be noted that geophysical technique applied to date (magnetometry) will not identify all types of archaeological features and remains that may be present, such as organic structures/remains made from wood.</p>	Onshore Archaeology and Cultural Heritage		<p>A programme of evaluation trenching is ongoing and will continue post-consent. The results will provide a better understanding of the sub-surface archaeological remains present to ensure suitable mitigation strategies can be proposed prior to the commencement of development works. Results from the Phase 1 and Phase 2 evaluation trenching surveys are presented in Appendices 25.10 and 25.11 (Volume III).</p>	N
NFOWFS3_054_046_140723	<p>The survey work to date has identified a number of features/sites across the onshore cable corridor and onshore substation zone, some of which have the potential to be of high heritage significance. Similarly, no palaeoenvironmental or geoarchaeological assessment has been carried out. We find this disappointing. We would recommend these techniques should be used as soon as possible to assess significance and potential of the deposits present, and to provide the evidence-base from which the mitigation measures would be produced and agreed.</p>	Onshore Archaeology and Cultural Heritage		<p>Phase 1 and 2 of evaluation trenching has since taken place, the results of which are presented in Appendix 25.10 and 25.11 (Volume III). The GBDA has been updated and reissued (Appendix 25.6, Volume III) with the results of new data obtained from recent geoarchaeological monitoring of GI works (Appendix 25.9, Volume III) and geoarchaeological investigations at the onshore substation works area (Appendix 25.12, Volume III)</p>	N

NFOWFS3_054_047_140723	<p>We note there is potential for unknown buried archaeological remains, geoarchaeological / palaeoenvironmental remains, and above ground heritage assets, to be affected as a result of construction works (Section 25.7.1.2, Paragraph 261). It is stated, 'in the absence of further data regarding the 'potential' archaeological resource, such assets must be considered as potentially having a high perceived heritage significance' (Section 25.7.1.2, Paragraph 261). In Section 25.4.3.1, Paragraph 46, however, it is stated the level of detail provided in the PEIR, 'sufficiently characterises these assets so that potential impacts upon their significance can be understood for the purposes of EIA'.</p>	Onshore Archaeology and Cultural Heritage		<p>The GBDA has been updated and reissued (Appendix 25.6, Volume III) with the results of new data obtained from recent geoarchaeological monitoring of GI works (Appendix 25.9, Volume III) and geoarchaeological investigations at the onshore substation works area (Appendix 25.12, Volume III)</p>	N
NFOWFS3_054_048_140723	<p>We note Table 25.11 assigns 'perceived heritage importance' to potential archaeological remains identified to date. The criteria for determining heritage importance are listed in Table 25.7. It is, however, caveated in Paragraph 60. We also note it is stated that, 'for assets of an uncertain heritage importance, where East of England 13 uncertainty occurs, the precautionary approach is to assign the highest likely level of importance' (Section 25.4.3.3, Paragraph 61, also 25.5.7, 208-9). We would add that, in the absence of intrusive evaluation, i.e. archaeological trial trenching and geoarchaeological/palaeoenvironmental surveys, it is problematical to assign importance or significance to archaeological remains.</p>	Onshore Archaeology and Cultural Heritage		<p>The applicant notes this response. The assessments of heritage importance have been reviewed and amended within the ES where appropriate in the light of emerging information from the evaluation trenching at the substation zone.</p>	N
NFOWFS3_054_049_140723	<p>We note in Table 25.11 that a large number of potential archaeological remains have been assigned as low perceived heritage importance. Fourteen recorded sites in Table 25.11 are perceived as 'Low-High'; in effect, this means the significance has not been established at this stage. We also note it is stated 'many of these assets are not yet fully understood' (Section 25.4.3.1, Paragraph 46).</p>	Onshore Archaeology and Cultural Heritage		<p>Archaeological work to date has sought to develop an understanding of the value of identified and potential archaeological remains present along the onshore cable route. Assessment has taken a worst-case approach, considering the highest</p>	N

				perceived value. Further programmes of intrusive evaluation will seek to better define the sub-surface archaeological remains present to allow development mitigation proposals. Details of surveys carried out to date are outlined in Section 25.5.4.	
NFOWFS3_054_050_140723	There is also a large number of assets of unknown date within the study area (Section 25.5.3.11, Paragraphs 142-7). We would, therefore, question the further assertion in Paragraph 46 that the level of detail provided in the PEIR 'sufficiently characterises these assets'. In our view, the only way to adequately establish the significance of archaeological remains is through pre-determination evaluation.	Onshore Archaeology and Cultural Heritage		The assessments of heritage importance have been reviewed and amended within the ES where appropriate in the light of emerging information from the evaluation trenching at the onshore substation works area. A programme of evaluation trenching is ongoing and will continue post-consent. The results will provide a better understanding of the sub-surface archaeological remains present to ensure suitable mitigation strategies can be proposed prior to the commencement of development works.	N
NFOWFS3_054_051_140723	In our view, the ES chapter submitted as part of the DCO application will need to be supported by sufficient evidence. The significance of all archaeological remains needs to be established and presented in the ES and the impact of the proposals on the significance needs to be presented.	Onshore Archaeology and Cultural Heritage		An analysis of the significance of effects on heritage assets is presented in Section 25.7. This is supported by sufficient and robust evidence.	N

NFOWFS3_054_052_140723	We also note the geophysical survey is ongoing (Section 25.4.7, Paragraph 81). Consequently, the information presented within the PEIR is incomplete. The findings from this ongoing survey will be presented within the ES chapter submitted as part of the final DCO application (Section 25.4.7, Paragraph 81; 25.5.4, 161 and 25.6.1, 240).	Onshore Archaeology and Cultural Heritage		Results from the geophysical surveys are presented in Appendix 25.8 (Volume III).	N
NFOWFS3_054_053_140723	We are concerned to ensure the significance of all archaeological remains is adequately established within the proposed development. We would strongly recommend the onshore cable corridor, landfall search area and onshore substation zone are also assessed by systematic trial-trenching evaluation, test-pitting and, where appropriate, geoarchaeological/palaeoenvironmental coring. This is to ensure archaeological remains of high heritage significance are identified and preserved in situ.	Onshore Archaeology and Cultural Heritage		The programme of evaluation trenching works is ongoing and the results of Phase 1 and Phase 2 evaluations at the Onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III). The updated GDBA takes account of more recent geoarchaeological and palaeoenvironmental assessments carried out within the onshore project area.	N
NFOWFS3_054_054_140723	We consider the evaluation is especially important for parts of the scheme with limited flexibility to relocate works, and thus avoid (and preserve in situ) any archaeological remains of high heritage significance. We would recommend targeted trial-trenching evaluation is carried out prior to DCO submission, and the results submitted for examination.	Onshore Archaeology and Cultural Heritage		The programme of evaluation trenching works is ongoing and the results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III). Evaluation trenching has targeted areas where design flexibility is limited, at the onshore substation and at pinch points along the onshore cable route.	N

NFOWFS3_054_055_140723	<p>East of England 14</p> <p>We consider trial-trenching evaluation should be carried out prior to DCO submission, as a minimum, at the location(s) of the proposed onshore substation zone, as well as at the landfall location, construction compounds and pinch points along the route, for example, at directional drill access points. We also consider any areas of the onshore cable corridor where 'hot spots' of archaeological remains have been defined should be also evaluated with trial-trenching, if they cannot be avoided and preserved in situ by the scheme. This would aid the project design and reduce the risks of unexpected discoveries impacting the completion of the proposed scheme if consented.</p>	Onshore Archaeology and Cultural Heritage	Project Description	<p>The programme of evaluation trenching works at the onshore substation works area have been completed (Phase 1 and Phase 2) and are presented in Appendix 25.10 and 25.11 (Volume III). These form part of an ongoing programme of works that will inform detailed design.</p>	N
NFOWFS3_054_056_140723	<p>In our view, this approach is proportionate and justified to ensure the significance of any archaeological remains have been adequately assessed. It is best practice in terms of the assessment of archaeological remains to identify, in advance, whether any important remains are present that could preclude or modify the proposed development. This is consistent with our response to the Scoping Report (dated 12 August 2021).</p>	Onshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_057_140723	<p>We consider it premature to assign 'perceived heritage importance' for archaeological remains that have not been fully assessed (Table 25.11). We also consider it problematic, therefore, to assign 'magnitude of impact' to deposits that, we consider, have not been adequately assessed. This is because no archaeological trial-trenching, test-pitting or palaeoenvironmental coring has been undertaken at this stage to establish the significance of archaeological remains.</p>	Onshore Archaeology and Cultural Heritage		<p>The results of Phase 1 and Phase 2 archaeological and geoarchaeological evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III) and in the ES. These set out an understanding of the value of these heritage assets for assessment purposes, but also form part of an ongoing programme of evaluation works that will</p>	N

				inform development of mitigation strategies.	
NFOWFS3_054_058_140723	The results of the geophysical survey should be tested with trial-trenching evaluation and, in particular, because the geophysics has not defined some of the archaeological remains already recorded by other survey techniques.	Onshore Archaeology and Cultural Heritage		The programme of evaluation trenching works is ongoing. The results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III). The trench locations targeted known anomalies identified from NMP, aerial imagery and geophysical survey techniques.	N
NFOWFS3_054_059_140723	Furthermore, it is possible that further, previously unknown, remains might be defined by further assessment and, in particular, by trial-trenching. Section 25.4.7, Paragraph 80, for example, states the information used to compile the PEIR chapter 'is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown'.	Onshore Archaeology and Cultural Heritage		The geophysical survey and settings assessments have been completed and are presented in Appendices 25.3, 25.4 and 25.8 (Volume III). A programme of evaluation trenching is ongoing.	N
NFOWFS3_054_060_140723	It is stated further investigation and data gathering would be progressed postconsent, 'including any outstanding geophysical surveys and trial trenching, alongside additional mitigation requirements as set out in the Outline WSI (Onshore) to be submitted alongside the DCO application' (Section 25.4.3.1, Paragraph 47, also 25.6.1, 242).	Onshore Archaeology and Cultural Heritage	Project Description	The applicant notes this response. Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available; this information has been combined with desk-based and aerial photographic information	N

				to allow inferences drawn from different techniques to be compared and any discrepancies or apparent shortfalls to be better understood. A programme of evaluation trenching is ongoing and will continue post-consent. The results will provide a better understanding of the sub-surface archaeological remains present to ensure suitable mitigation strategies can be proposed prior to the commencement of development works.	
NFOWFS3_054_061_140723	<p>We note, however, Section 25.7.1.2.3, Paragraph 300 states, additional investigation 'may include' any outstanding geophysical survey and a scheme-wide programme of trial-trenching. In our view, these surveys must be undertaken.</p> <p>The survey and evaluation work will enable the archaeological resource 'to be appropriately addressed by means of mitigating any impacts in a manner that is proportionate to the significance of the remains present' (Section 25.7.1.2.3, Paragraph 300).</p>	Onshore Archaeology and Cultural Heritage		<p>The applicant notes this response. Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available; this information has been combined with desk-based and aerial photographic information to allow inferences drawn from different techniques to be compared and any discrepancies or apparent shortfalls to be better understood. A programme of evaluation trenching is ongoing and will continue post-consent. The results will provide a better understanding of the sub-surface archaeological remains present to ensure suitable mitigation</p>	N

				strategies can be proposed prior to the commencement of development works.	
NFOWFS3_054_062_140723	It is critical, therefore, that the survey and evaluation adequately establish the significance of archaeological remains as well as the impact of the proposed scheme on that significance. It is also critical this work is carried out at the appropriate stage to inform the decision-making process.	Onshore Archaeology and Cultural Heritage		The applicant notes this response. Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available; this information has been combined with desk-based and aerial photographic information to allow inferences drawn from different techniques to be compared and any discrepancies or apparent shortfalls to be better understood. A programme of evaluation trenching is ongoing and will continue post-consent. The results will provide a better understanding of the sub-surface archaeological remains present to ensure suitable mitigation strategies can be proposed prior to the commencement of development works.	N

NFOWFS3_054_063_140723	Archaeological work at this stage would help to ensure the DCO application is wellinformed and appropriately designed. It would also significantly reduce the risk of additional unexpected costs and delays at a later stage.	Onshore Archaeology and Cultural Heritage	Project Description	The results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III). These evaluations have contributed to a well-informed and appropriately designed scheme.	N
NFOWFS3_054_064_140723	If archaeological evaluation is not undertaken, as recommended, the applicant should provide clear justification in the DCO application for this, i.e. as to why it has not been, or cannot be, undertaken at this stage in the process.	Project Description		The results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III). These evaluations have contributed to a well-informed and appropriately designed scheme.	N
NFOWFS3_054_065_140723	The applicant should also factor any risks into the ongoing project timetables to ensure any unexpected discoveries are managed appropriately.	Project Description		The results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III). These evaluations have contributed to a well-informed and appropriately designed scheme.	N
NFOWFS3_054_066_140723	For areas of the proposed development where trial-trenching evaluation would not be undertaken in advance of DCO, we would recommend the DCO should be worded appropriately to secure preservation in situ of any archaeological remains of high heritage significance defined post consent, should the circumstances be considered necessary by Essex County Council and also Historic England.	Project Description	Onshore Archaeology and Cultural Heritage	This archaeological investigation and mitigation is set out in the OWSI (Doc ref 7.12) which will be secured as a requirement of the draft DCO.	N

NFOWFS3_054_067_140723	The potential impact to buried archaeological remains would be mitigated through preservation by record and through an approved programme of archaeological investigation, although we note remains will be preserved in situ, wherever possible. The approaches used to mitigate the impacts would be presented in the Outline WSI.	Onshore Archaeology and Cultural Heritage		This archaeological investigation and mitigation is set out in the OWSI (Doc ref 7.12) which will be secured as a requirement of the draft DCO.	N
NFOWFS3_054_068_140723	The approaches that may be used for archaeological mitigation are summarised in Section 25.7.1.2.3, Paragraph 301. . In addition to preservation in situ, these would include archaeological excavation, archaeological monitoring and watching brief and also earthwork condition surveys. The approaches listed are what we would expect but we need to comment on the detail of the Outline WSI when it has been produced.	Onshore Archaeology and Cultural Heritage		Noted, this will be detailed within the OWSI (Doc ref 7.12)	N
NFOWFS3_054_069_140723	It is stated in Section 25.7.1.3.1, Paragraph 315 that 'the presence / absence, nature and extent of deposits of geoarchaeological and palaeoenvironmental interest is currently unknown (or not fully established) within the onshore project area, [and] it is not possible to identify potential impacts according to the various elements of construction'. This points to a clear area of investigation that is needed for the ES so the impacts of the proposed scheme can be understood and mitigated. We do not agree, therefore, with Section 25.7.1.3.4, Paragraph 321 which states that magnitudes of impacts can be reduced through mitigation.	Onshore Archaeology and Cultural Heritage		Further assessment of geoarchaeological and palaeoenvironmental remains has since been completed and is presented in Appendix 25.12 (Volume III), allowing appropriate and effective mitigation to be defined. The results of which are summarised in section 25.5.4 and carried through to the impact assessment in section 25.6.	N

NFOWFS3_054_070_140723	<p>It is noted there is moderate to high geoarchaeological and palaeoenvironmental potential within the onshore study area (Section 25.5.11). It is also noted that peat was recorded in all three boreholes monitored at the landfall location (Section 25.5.11, Paragraph 231 and Volume 3, Appendix 25.9) which could be of high archaeological and/or palaeoenvironmental interest. It is also stated, further evaluation of potential geoarchaeological / palaeoenvironmental remains 'is likely to include a programme of geoarchaeological monitoring of engineering-led GI works to inform mitigation approaches such as geoarchaeological assessment and palaeoenvironmental survey' (Section 25.7.1.2.3, Paragraph 301).</p> <p>We would recommend a systematic geoarchaeological assessment is carried out, informed by the geoarchaeological desk-based assessment (Volume 3, Appendix 25.6). It should not be based solely on the monitoring of engineering-led works as these do not always targeted areas of archaeological interest. Again, we would recommend this assessment is carried out in advance of the DCO, and the results submitted, along with mitigation measures, for examination. If engineering-led GI are to be monitored as well, we would recommend that additional detail is provided in a method statement about how the deposits will be sampled and assessed. We would also recommend the geoarchaeologists are allowed direct access to, and able to retain when necessary, the geotechnical cores. This is because it is better to record and assess continuous core sequences rather than isolated deposits as this allows for greater reliability and confidence in the resulting conclusions. We would be pleased to review the method statement for this work.</p>	Onshore Archaeology and Cultural Heritage	Project Description	The geoarchaeological monitoring of ground investigation works has been carried out and is presented in Appendix 25.9 (Volume III).	N
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NFOWFS3_054_071_140723	<p>We would recommend the application of scientific dating is considered carefully before the cores are recovered as some of the deposits discussed in this section exceed the upper limit of some dating techniques, such as radiocarbon dating. For these deposits, alternative techniques would be required, such as optically stimulated luminescence (OSL) dating. As this technique provides a date for the last time mineral grains were exposed to light, the collection and storage of sampled cores needs to be carefully considered and may require the use of light-proof sleeves on cores when they are being collected.</p>	Onshore Archaeology and Cultural Heritage		<p>Storage and processing of samples for scientific dating techniques and other analyses will be planned as appropriate and as required in future stages of mitigation, drawing on information recovered from the archaeological evaluation trenching and geoarchaeological survey to date. Details will be provided within the Outline WSI (doc ref. 7.12)</p>	N
NFOWFS3_054_072_140723	<p>We are pleased the potential indirect impacts to archaeological remains during construction have been discussed in Section 25.7.1.3, including the potential for dewatering that would lead to the degradation to any remains of interest from changes to ground conditions (Section 25.7.1, Paragraph 250 and 25.7.1.3, 311). It should be noted that changes to the water environment could impact the preservation conditions of nearby archaeological remains/deposits outside of the red-line boundary.</p>	Onshore Archaeology and Cultural Heritage		<p>Assessment of potential changes in ground conditions is presented in Section 25.7.1.2.4.</p>	N
NFOWFS3_054_073_140723	<p>Section 25.7.1.3, Paragraph 311 states, 'construction activities undertaken as part of the Project have the potential to effect below ground deposits of archaeological and geoarchaeological interest over a wider area than that of the footprint of the Project, for example, through hydrological changes that may cause desiccation and drying out of wetland deposits and associated preserved waterlogged archaeological or geoarchaeological remains'.</p>	Ground Conditions and Contamination	Offshore Archaeology and Cultural Heritage	<p>A detailed approach to mitigating the potential impact of the development on below ground deposits of archaeological and geoarchaeological remains is specified in the OWSI submitted as part of the DCO application and secured via the DCO.</p>	N

NFOWFS3_054_074_140723	We agree with this statement but it is unclear from the PEIR how this will be assessed or established. We assume it would be established post-consent, and this work would be specified in the Outline (Onshore) WSI referred to in Section 25.7.1.3.3, Paragraph 320.	Project Description		A detailed approach to mitigating the potential impact of the development on below ground deposits of archaeological and geoarchaeological remains is specified in the OWSI submitted as part of the DCO application and secured via the DCO.	N
NFOWFS3_054_075_140723	We recommend this is carried out in advance of the DCO, and the results submitted, along with mitigation measures, for examination. In terms of the timetable for this work, it should be noted that some of the approaches used to investigate the water environment can take at least several weeks to complete.	Project Description		A detailed approach to mitigating the potential impact of the development on below ground deposits of archaeological and geoarchaeological remains is specified in the OWSI submitted as part of the DCO application and secured via the DCO.	N
NFOWFS3_054_076_140723	If the proposed development has the potential to dewater areas we would need to understand the extent of the impact on deposits/remains of archaeological and palaeoenvironmental interest (horizontal and vertical) and if the effects would be permanent. Some impacts may be mitigated through engineering/design options, but we would need to understand how any impacts would be managed and the effects this would have on any remains of interest.	Ground Conditions and Contamination	Offshore Archaeology and Cultural Heritage	A detailed approach to mitigating the potential impact of the development on below ground deposits of archaeological and geoarchaeological remains is specified in the OWSI submitted as part of the DCO application and secured via the DCO.	N
NFOWFS3_054_077_140723	The preparation of the Outline (Onshore) WSI will need to detail how organic deposits will be sampled and investigated, the sort of remains that will be assessed and the techniques that will be applied.	Project Description		A detailed approach to mitigating the potential impact of the development on below ground deposits of archaeological and geoarchaeological remains is specified in the OWSI submitted as part of the DCO application and secured via the DCO.	N

NFOWFS3_054_078_140723	<p>Comments in relation to the proposed Outline WSIs (for Onshore Infrastructure)</p> <p>We note the archaeological mitigation requirements would be set out in the Outline (Onshore) WSI to be submitted alongside the DCO application. We have provided some further comments, below, to inform the production of this document. We would be pleased to provide more detailed advice and guidance in due course.</p>	Project Description		<p>The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.</p>	N
NFOWFS3_054_079_140723	<p>East of England 18</p> <p>The Written Scheme of Investigation for each stage of archaeological work should be approved by Essex County Council and Historic England, as the statutory historic body.</p>	Introduction		<p>The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.</p>	N
NFOWFS3_054_080_140723	<p>We would recommend, therefore, that Historic England is also a named party in the DCO to ensure subsequent documentation relating to archaeological investigation are also approved by Historic England post DCO being granted.</p>	Project Description		<p>The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.</p>	N

NFOWFS3_054_081_140723	The Outline (Onshore) WSI should outline the work that will be carried out as well as the approaches the utilised and the remains that will be investigated. The document should be clear how this work will proceed. It should also outline what is expected of the contracting unit(s) responsible for excavating the sites.	Project Description		The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.	N
NFOWFS3_054_082_140723	We would recommend the Outline (Onshore) WSI should be supplemented by a detailed WSI prepared for each stage of archaeological investigation by the archaeological organisation commissioned to undertake the work. This should be included in the DCO to ensure the detailed scope for each stage of investigation is approved by Essex County Council and Historic England prior to commencement of the archaeological investigation. We would be pleased to review these WSIs.	Project Description		The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.	N
NFOWFS3_054_083_140723	If the evaluation (archaeological trial-trenching, test-pitting and palaeoenvironmental coring) is not undertaken in advance, we also consider that the detailed WSIs for evaluation of the onshore infrastructure should be also submitted for DCO examination, along with the Outline WSI.	Project Description		The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.	N

NFOWFS3_054_084_140723	A timetable for each stage of archaeological investigation, including fieldwork, assessment, analysis, reporting, publication and archiving, as well as display and presentation and community engagement, should be submitted to and approved by Essex County Council and Historic England. This should be included in the DCO to provide clarity to all parties as to when the approval of the detailed written scheme of archaeological investigation or detailed method statement, by the competent authority, will occur.	Project Description		The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.	N
NFOWFS3_054_085_140723	As well as publication and deposition of the project archive in a suitable museum or archive repository, we would recommend there should be provision for public engagement and outreach activities during the investigation as well as provision for the museum-quality display of artefacts and presentation of discoveries revealed by the proposed development. We consider this would help to mitigate the impact of the development on archaeological remains.	Project Description		The OWSI secured by DCO Requirement (see document reference 7.12) sets out the scope and methods of further archaeological investigation, allowing the appointed archaeological advisor/contractor to set out site-specific WSIs. It will also set out broad opportunities for archaeological engagement and outreach.	N
NFOWFS3_054_086_140723	Comments in relation to the Historic Environment Settings Analysis – Onshore Substation We note the consideration of heritage setting in Section 25.5.8 as well as in Volume 3, Appendix 25.3 (document ref. 004612096-02) for the onshore substation. The heritage assets considered as part of the initial setting assessment for the onshore infrastructure are listed in Section 25.5.8, Paragraph 212. We are satisfied with selection of the highly-graded heritage assets (Scheduled Monuments and Grade I and II* Listed Buildings) for assessment. We can also confirm we are satisfied the Scheduled ‘Settlement site NNE of Lawford	Onshore Archaeology and Cultural Heritage		The applicant notes the response which has been used to inform the scope of the assessment of effects arising from change to setting of heritage assets within Appendix 25.3 (Volume III) and Section 25.7.	N

	House' (List Entry Number 1002157) has been discounted, as stated in Section 25.5.8, Paragraph 213.				
NFOWFS3_054_087_140723	'Crop mark site S of Arleigh' (LEN 1002146) We welcome the inclusion of this Scheduled Monument within the assessment (Appendix 25.3, Section 6.1). This Monument is currently on the Heritage at Risk Register: [REDACTED]	Onshore Archaeology and Cultural Heritage		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES.	N
NFOWFS3_054_088_140723	We have concerns in terms of the assessment of setting and the impact of the proposed onshore substation on this Scheduled Monument. It is stated in Appendix 25.3, Paragraph 41, that 'views of the cropmark site are not considered to contribute to the appreciation of the asset and/or its setting'. We disagree with this assessment. We consider the rural, agricultural setting makes a positive contribution to the significance of this Monument. This asset therefore needs to be re-assessed and amended	Onshore Archaeology and Cultural Heritage		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES.	N

NFOWFS3_054_089_140723	<p>It is stated that there are no views of the onshore substation zone from this Monument (Appendix 25.3, Paragraph 41). We also note Cultural Heritage Viewpoint 2, Figures 25.3.3a-c. These visualisations need to be reproduced with winter images, to show the same viewpoints without foliage, and to demonstrate the worst-case scenario. This is because we consider the proposed development has the potential to result in a change to the setting.</p>	Onshore Archaeology and Cultural Heritage		<p>The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES.</p>	N
NFOWFS3_054_090_140723	<p>The visualisations must be reproduced to assess the cumulative impact of the proposed onshore substation for the Five Estuaries OWF as well as the proposed National Grid East Anglia Connection Node. This is because we consider the proposed developments, together, have the potential to result in a change to the setting, resulting in harm to the significance of the Scheduled Monument.</p>	Landscape and Visual Impact Assessment	Offshore Archaeology and Cultural Heritage	<p>The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES.</p>	N
NFOWFS3_054_091_140723	<p>'Church of St Mary, Little Bromley' (LEN 1337175) We welcome the inclusion of this Grade II* Listed church within the assessment (Appendix 25.3, Section 6.3).</p> <p>We have concerns in terms of the assessment of setting and the impact of the proposed onshore substation on this highly-graded designated heritage asset.</p> <p>We consider the rural, agricultural setting makes a positive contribution to the significance of this Church. We note, however, it is stated in Appendix 25.3, Paragraph 61, 'views from the church into the landscape are not considered to be such a key component to its appreciation and setting'. It is also stated, 'while the setting of the church is considered to be an important contributor to its significance, long range views from the church towards the wider</p>	Onshore Archaeology and Cultural Heritage		<p>The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES. Appendix 25.3 also includes visualisations from the cultural heritage viewpoints.</p>	N

	landscape are not considered to be a key factor to its setting' (Appendix 25.3, Paragraph 62).				
NFOWFS3_054_092_140723	It is stated that the farmhouse and farm buildings limit the views achievable in the direction towards the onshore substation zone (Appendix 25.3, Paragraph 41). We also note Cultural Heritage Viewpoint 3, Figures 25.3.4a-c. We would suggest this viewpoint is reviewed and revisited.	Landscape and Visual Impact Assessment		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES. Appendix 25.3 also includes visualisations from the cultural heritage viewpoints.	N
NFOWFS3_054_093_140723	We recommend a proxy location should be considered for this asset and would be pleased to provide further advice. We also note it is stated, the onshore substation zone 'will alter the view of the Church from Little Bromley. This Change is likely to affect the appreciation of the parish Church from the village, however, it is not considered to impact the heritage significance of the Church' (Appendix 25.3, Paragraph 85).	Landscape and Visual Impact Assessment	Onshore Archaeology and Cultural Heritage	The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7	N

				and cumulative effects have been considered at Section 25.9 of the ES. Appendix 25.3 also includes visualisations from the cultural heritage viewpoints.	
NFOWFS3_054_094_140723	This asset will be revisited once the substation design is further progressed (Appendix 25.3, Paragraph 66), which is welcomed. This is because the setting makes a positive contribution to the significance of this monument and because, in our view, the proposed development has the potential to result in a change to the setting. We would recommend that proposals should be put forward by the applicant to mitigate the impact of the onshore substation on the significance of this heritage asset.	Landscape and Visual Impact Assessment	Onshore Archaeology and Cultural Heritage	The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES. Appendix 25.3 also includes visualisations from the cultural heritage viewpoints.	N
NFOWFS3_054_095_140723	We would also recommend this visualisation needs to be reproduced with a winter image, to show the same viewpoint without foliage, and to demonstrate the worstcase scenario. This is because we consider the proposed development has the potential to result in a change to the setting.	Landscape and Visual Impact Assessment	Onshore Archaeology and Cultural Heritage	The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES. Appendix 25.3 also includes visualisations from the cultural heritage viewpoints.	N

NFOWFS3_054_096_140723	The visualisations must be reproduced to assess the cumulative impact of the proposed onshore substation for the Five Estuaries OWF as well as the proposed National Grid East Anglia Connection Node. This is because we consider the proposed developments, together, have the potential to result in a change to the setting, resulting in harm to the significance of the Grade II* Listed church.	Onshore Archaeology and Cultural Heritage		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.7 and cumulative effects have been considered at Section 25.9 of the ES. Appendix 25.3 also includes visualisations from the cultural heritage viewpoints.	N
NFOWFS3_054_097_140723	Cropmark site south and west of Little Bromley Hall (EHER 2460) We welcome the inclusion of this non-designated heritage asset within the assessment (Appendix 25.3, Section 6.5). As previously stated, in our view, the probable henge should be considered to be of equivalent significance to a Scheduled Monument.	Onshore Archaeology and Cultural Heritage		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.6 and cumulative effects have been considered at Section 25.8 of the ES. Mitigation is outlined in Section 25.6.2.	N
NFOWFS3_054_098_140723	We have concerns in terms of the assessment of setting and the impact of the proposed onshore substation on this non-designated asset. It is stated in Appendix 25.3, Paragraph 81, that 'views of the henge are not considered to contribute to the appreciation of the asset and/or its setting'. We disagree with this assessment. We consider the rural, agricultural setting makes a positive contribution to the significance of this asset and it draws a considerable amount of significance from how it is experienced in the landscape.	Onshore Archaeology and Cultural Heritage		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.6 and cumulative effects have	N

				been considered at Section 25.8 of the ES. Mitigation is outlined in Section 25.6.2.	
NFOWFS3_054_099_140723	It is noted that views of the tallest structures within the onshore substation zone will be achievable above the existing tree line (Appendix 25.3, Paragraph 83). We also note Cultural Heritage Viewpoint 4, Figures 25.3.5a-c. It is, however, concluded that this 'slight change...is not considered to change the existing setting of the henge and/or its heritage significance' (Appendix 25.3, Paragraph 83).	Landscape and Visual Impact Assessment		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.6 and cumulative effects have been considered at Section 25.8 of the ES. Mitigation is outlined in Section 25.6.2.	N
NFOWFS3_054_100_140723	We would also recommend this visualisation needs to be reproduced with a winter image, to show the same viewpoint without foliage, and to demonstrate the worstcase scenario. This is because we consider the proposed development has the potential to result in a change to the setting. Again, we would recommend proposals should be put forward by the applicant to mitigate the impact of the onshore substation on the significance of this heritage asset.	Landscape and Visual Impact Assessment		The assessment has been updated to reflect the comment and is presented in Appendix 25.3 (Volume III). Reference is made to summer and winter viewpoint photography in the assessment presented at Appendix 25.3 and Section 25.6 and cumulative effects have been considered at Section 25.8 of the ES. Mitigation is outlined in Section 25.6.2.	N

NFOWFS3_054_101_140723	<p>Cumulative Effects Assessment – Onshore Infrastructure We note Section 25.9 and Tables 25.13-16 relating to cumulative effects. Three developments have been scoped into the cumulative effects assessment for the ES (Section 25.9.3, Paragraph 354):</p> <ul style="list-style-type: none"> · Five Estuaries Offshore Wind Farm ('Five Estuaries'); · East Anglia GREEN; and · Land adjacent to Lawford Grid Substation Ardleigh Road Little Bromley Essex CO11 2QB (for construction and operation of a 50MW Battery Energy Storage System ('Little Bromley BESS')). 	Onshore Archaeology and Cultural Heritage		The impact upon heritage setting from onshore and offshore infrastructure are detailed in Appendix 25.3 and 25.4 respectively, and summarised in section 25.6.1.1. Cumulative visualisation from the viewpoints agreed with Historic England through the EPP are provided in Appendix 25.3.	N
NFOWFS3_054_102_140723	We consider it is critical that cumulative, heritage-specific visualisations are provided for examination, given the potential combined scale of the proposed developments adjacent to the proposed North Falls.	Project Description		The impact upon heritage setting from onshore and offshore infrastructure are detailed in Appendix 25.3 and 25.4 respectively, and summarised in section 25.6.1.1. Cumulative visualisation from the viewpoints agreed with Historic England through the EPP are provided in Appendix 25.3.	N
NFOWFS3_054_103_140723	In terms of the cumulative effects for onshore infrastructure relating to permanent change in the setting of heritage assets that might affect significance, we recommend cumulative visualisations should be prepared for both the Grade II* listed Church of St Mary, Little Bromley (LEN 1337175) and the Scheduled 'Crop mark site S of Ardleigh' (LEN 1002146). We would also recommend the non-designated Cropmark site south and west of Little Bromley Hall (MONUID ref. MEX8620), under consideration as a possible Scheduled Monument, is similarly assessed for cumulative effects.	Onshore Archaeology and Cultural Heritage		The impact upon heritage setting from onshore and offshore infrastructure are detailed in Appendix 25.3 and 25.4 respectively, and summarised in section 25.6.1.1. Cumulative visualisation from the viewpoints agreed with Historic England through the EPP are provided in Appendix 25.3.	N

NFOWFS3_054_104_140723	<p>We would be pleased to provide further advice and guidance in due course, as the detailed assessment progresses – and about the identification of assets for cumulative effects assessment with other projects. In terms of the cumulative effects for the offshore infrastructure, we would recommend that the coastal heritage assets identified for the Historic Environment Settings Analysis form the basis of the cumulative effects assessment with the proposed Five Estuaries OWF.</p>	Onshore Archaeology and Cultural Heritage		<p>The impact upon heritage setting from onshore and offshore infrastructure are detailed in Appendix 25.3 and 25.4 respectively, and summarised in section 25.6.1.1. Cumulative visualisation from the viewpoints agreed with Historic England through the EPP are provided in Appendix 25.3.</p>	N
NFOWFS3_054_105_140723	<p>Comments in relation to the Historic Environment Settings Analysis – Offshore Infrastructure We note the consideration of heritage setting in Chapter 25, Section 25.5.8, Paragraph 215, as well as in Volume 3, Appendix 25.4 (document ref 004620271-02) for the offshore infrastructure.</p>	Offshore Archaeology and Cultural Heritage		<p>The applicant notes the response. The scope of the assessment of change to setting has been updated to reflect this advice and is presented in Appendix 25.4 (Volume III) and section 25.7. It was agreed at ETG that a rooftop viewpoint would not be appropriate as this view does not represent the key view of or from the tower in terms of contribution to significance. Reference has been made to relevant cumulative visualisations in producing the assessment.</p>	N
NFOWFS3_054_106_140723	<p>We note the coastal heritage assets considered with respect to the offshore infrastructure, listed in Section 25.5.8, Paragraph 215. We are concerned these are limited to the Tendring coastline but we note that further assessment will be undertaken to inform the final ES, which is likely to include a larger study area extending northwards towards Aldeburgh in Suffolk (Section 25.5.8, Paragraph 216).</p>	Offshore Archaeology and Cultural Heritage		<p>The applicant notes the response. The scope of the assessment of change to setting has been updated to reflect this advice and is presented in Appendix 25.4 (Volume III) and section 25.7. It was agreed at ETG that a rooftop viewpoint would not be appropriate as this</p>	N

				view does not represent the key view of or from the tower in terms of contribution to significance. Reference has been made to relevant cumulative visualisations in producing the assessment.	
NFOWFS3_054_107_140723	We would strongly recommend a larger study area is included in the assessment, to ensure all the highly-graded heritage assets potentially impacted by the offshore infrastructure are adequately assessed. We note that a full assessment for both onshore and offshore infrastructure will be reported on at the ES stage (Section 25.5.8, Paragraph 217).	Offshore Archaeology and Cultural Heritage		The applicant notes the response. The scope of the assessment of change to setting has been updated to reflect this advice and is presented in Appendix 25.4 (Volume III) and section 25.7. It was agreed at ETG that a rooftop viewpoint would not be appropriate as this view does not represent the key view of or from the tower in terms of contribution to significance. Reference has been made to relevant cumulative visualisations in producing the assessment.	N
NFOWFS3_054_108_140723	We would be pleased to provide further advice and guidance in due course about the identification of highly-graded heritage assets in due course. We would recommend there are additional assets that should be included along the Tendring coastline, including, for example, the Grade II* Listed 'Naze Tower' (List Entry Number 1165846) and Scheduled Martello Tower D (List Entry Number 1016553).	Offshore Archaeology and Cultural Heritage	Project Description	The applicant notes the response. The scope of the assessment of change to setting has been updated to reflect this advice and is presented in Appendix 25.4 (Volume III) and section 25.7. It was agreed at ETG that a rooftop viewpoint would not be appropriate as this view does not represent the key view of or from the tower in terms of contribution to significance. Reference	N

				has been made to relevant cumulative visualisations in producing the assessment.	
NFOWFS3_054_109_140723	The viewpoints and visualisations must be heritage-specific to enable the visual impact of the scheme on the setting of key highly-graded designated heritage assets to be adequately assessed.	Landscape and Visual Impact Assessment	Project Description	The applicant notes the response. The scope of the assessment of change to setting has been updated to reflect this advice and is presented in Appendix 25.4 (Volume III) and section 25.7. It was agreed at ETG that a rooftop viewpoint would not be appropriate as this view does not represent the key view of or from the tower in terms of contribution to significance. Reference has been made to relevant cumulative visualisations in producing the assessment.	N
NFOWFS3_054_110_140723	For example, we consider the critical viewpoint for coastal Martello Towers to be from the gun platform. The viewpoint for the Grade II* Listed The Naze Tower, Walton-on-the-Naze should be taken from the top of the tower, that is 26m high. This is because the impact is potentially quite different from a viewpoint at ground level, and this is, therefore, the location that should be used for the heritage assessment visualisation.	Landscape and Visual Impact Assessment		The applicant notes the response. The scope of the assessment of change to setting has been updated to reflect this advice and is presented in Appendix 25.4 (Volume III) and section 25.7. It was agreed at ETG that a rooftop viewpoint would not be appropriate as this view does not represent the key view of or from the tower in terms of contribution to significance. Reference has been made to relevant cumulative visualisations in	N

				producing the assessment.	
NFOWFS3_054_111_140723	<p>We consider the setting assessment should be carried out in accordance with the approach set out in Historic Environment Good Practice Advice in Planning Note 3, The Setting of Heritage Assets (GPA3). In terms of access GPA3 states, because the contribution of setting to significance does not depend on public rights or ability to access it, significance is not dependent on numbers of people visiting it'. The visualisations must be reproduced to assess the cumulative impact of the proposed offshore infrastructure for the Five Estuaries OWF.</p>	Landscape and Visual Impact Assessment		The applicant notes the response. The scope of the assessment of change to setting has been updated to reflect this advice and is presented in Appendix 25.4 (Volume III) and section 25.7. It was agreed at ETG that a rooftop viewpoint would not be appropriate as this view does not represent the key view of or from the tower in terms of contribution to significance. Reference has been made to relevant cumulative visualisations in producing the assessment.	N
NFOWFS3_054_112_140723	<p>Comments in relation to the Archaeological Assessment of Geophysical Data (Volume 3, Appendix 16.1) (Document Reference 004742749-01) We understand this presents an assessment of geophysical survey data comprising sub-bottom profiler (SBP), sidescan sonar (SSS), magnetometry and multibeam echosounder (MBES). The data was acquired by Fugro in 2021; it was noted the line spacings used in different areas varied (Section 2.2.1). The line spacings used were generally greater than recommended in the Historic England document 'Marine Geophysics' (2013) in all areas, with the exception of part of the Offshore cable corridor, and so further, more detailed studies will be required to investigate the</p>	Offshore Archaeology and Cultural Heritage		The geophysical data is considered to provide an accurate characterisation of the archaeological potential of the study area, appropriate to the purposes of EIA. A commitment to the acquisition, and assessment, of further high resolution geophysical data post-consent is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11).	N

	archaeological potential of the development area in due course.				
NFOWFS3_054_113_140723	It was noted that all of the geophysical data collected in 2021 was classed as being of 'Good' quality (Sections 2.4.2-2.4.5), meaning the datasets provide the highest probability that anomalies of archaeological potential will be identified.	Offshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_114_140723	The geology of the development area has been divided into four units. Unit 3 has the highest archaeological/palaeoenvironmental potential and comprises numerous terrestrial channel features likely to represent terrestrial deposits dating from the pre-Anglian to the Early Holocene. They have the potential to contain both in situ and derive archaeological artefacts and preserve palaeoenvironmental evidence that could contribute to the reconstruction of past landscapes and environments (Sections 3.2.6, 3.2.18, 3.2.26, 3.2.38 and 5.1.2). For example, the current data suggests a significant palaeolandscape may be preserved in the western section of the southern array area.	Offshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_115_140723	Appendix 16.1, Section 3.2.28, 3.2.39 & 5.1.3 It is acknowledged that further work is needed to investigate the palaeolandscape features in more detail (Sections 3.2.28, 3.2.39 and 5.1.3). We are pleased to see recommendations have been made for suitably qualified archaeological contractors to be consulted during the geotechnical site selection process, and in the assessment of the resulting information (Section 5.1.3).	Offshore Archaeology and Cultural Heritage		Noted.	N

NFOWFS3_054_116_140723	We are pleased to see AEZs will be applied to A1 and A3 anomalies, with buffers of 50-100m depending on how dispersed the sites are (Section 5.2.2). It is noted the size and shape of AEZs could be altered should further information become available.	Project Description		The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: 7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows: Schedule 8, Part 2, Condition 21; Schedule 9, Part 2, Condition 21; Schedule 10, Part 2, Condition 21.	N
NFOWFS3_054_117_140723	It is stated that AEZs will not be applied to A2 anomalies. These remains will be avoided where possible through micro-siting. If they cannot be avoided then further assessment will be needed to ascertain the nature of the features and define the appropriate mitigation (Section 5.2.3). This approach seems sensible, but the investigation approaches that will be used will need to be detailed within subsequent Offshore WSI documents.	Project Description		The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: 7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows: Schedule 8, Part 2, Condition 21; Schedule 9, Part 2, Condition 21; Schedule 10, Part 2, Condition 21.	N
NFOWFS3_054_118_140723	A Protocol for Archaeological Discoveries will be developed to record objects of possible archaeological interest that are recovered during ground operation works (Section 5.2.4). This approach seems appropriate to deal with unexpected discoveries, but the detail will need to be presented in subsequent documents.	Project Description		The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: 7.11). The requirement for a final agreed, post-consent WSI is included in the dML as follows: Schedule 8, Part 2, Condition 21;	N

				Schedule 9, Part 2, Condition 21; Schedule 10, Part 2, Condition 21.	
NFOWFS3_054_119_140723	<p>Comments in relation to the Geoarchaeological Desk-Based Assessment (Volume 3, Appendix 25.6) (Document Reference 004340607-01)</p> <p>This document presents the findings of the desk-based geoarchaeological assessment, describing the main deposits present within the Scheme area. The transects shown in Figures 7 to 9 highlight where there are gaps in our current understanding that need to be targeted during subsequent phases of evaluation.</p> <p>We are pleased to see the limitations of the existing data were noted, in particular the apparent absence of alluvial deposits in the existing BGS boreholes (Section 6.1.7).</p>	Onshore Archaeology and Cultural Heritage		Noted. The GBDA has been updated and reissued (Appendix 25.6, Volume III) with the results of new data obtained from recent geoarchaeological monitoring of GI works (Appendix 25.9, Volume III) and geoarchaeological investigations at the onshore substation works area (Appendix 25.12, Volume III).	N
NFOWFS3_054_120_140723	<p>The limitations in the information available has meant that the archaeological and palaeoenvironmental potential of several of the key units is not currently known (Table 6).</p>	Onshore Archaeology and Cultural Heritage		Additional ground investigation works have since been completed as part of the evaluation works and can be viewed in Appendix 25.12 (Volume III).	N
NFOWFS3_054_121_140723	<p>We are pleased to see that geophysical survey techniques, such as Electrical Resistivity Tomography have been considered to investigate subsurface structures and lithological changes (Section 8.2.4). This work will add valuable information to the deposit model being developed for the site.</p>	Onshore Archaeology and Cultural Heritage		Noted.	N

NFOWFS3_054_122_140723	It is stated in Section 8.1.3 that 'Should GI works be undertaken within the Scheme, monitoring of these GI works may address some aims of the evaluation and may negate the need for further purposive geoarchaeological evaluation'. It should be noted that GI works may not always target areas of archaeological or palaeoenvironmental interest and so would recommend that purposive geoarchaeological works are carried out as well as GI works.	Onshore Archaeology and Cultural Heritage		Additional ground investigation works have since been completed as part of the evaluation works and can be viewed in Appendix 25.12 (Volume III). While GI work does not always target areas of archaeological or palaeoenvironmental interest, it does target areas of potential disturbance, and consequently provides a strong basis for the blended approach set out in the PEI.	N
NFOWFS3_054_123_140723	Table 7 summarises the recommended methods of evaluation for each of the Geoarchaeological Characterisation Zones (GCZs) and includes deep boreholes and test pits up to 4m below ground level (bgl).	Onshore Archaeology and Cultural Heritage		Noted.	N
NFOWFS3_054_124_140723	Comments in relation to the Archaeological Geophysical Survey (Volume 3, Appendix 25.8) (Document Reference 004593847-04) We welcome the geophysical survey that is currently being undertaken over the onshore substation area and onshore cable route, and presented in Volume 3, Appendix 25.8. We recognise the geophysical survey is a major piece of work, comprising a magnetometer survey of 580 hectares. We welcome the data sharing agreement for the collection of this data.	Onshore Archaeology and Cultural Heritage		Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available. The results are summarised in Section 25.5.4.1 and presented in full in Appendix 25.8 (Volume III)	N
NFOWFS3_054_125_140723	The results of the geophysical data collected to date, are presented in Volume 3, Appendix 25.8: Archaeological Geophysical Survey Report and summarised in 25.5.4 of Volume 1, Chapter 25. We note the geophysical survey presented as part of the PEIR is incomplete.	Onshore Archaeology and Cultural Heritage		Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available. The results are summarised in Section 25.5.4.1 and presented	N

				in full in Appendix 25.8 (Volume III)	
NFOWFS3_054_126_140723	Following the completion of the geophysical survey the outstanding survey results will be incorporated into the ES submitted with the final DCO application (Paragraph 160 of Volume 1, Chapter 25).	Onshore Archaeology and Cultural Heritage		Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available. The results are summarised in Section 25.5.4.1 and presented in full in Appendix 25.8 (Volume III)	N
NFOWFS3_054_127_140723	The geophysical survey was carried out across a range of environments and deposit types, which may include waterlogged deposits near water channels or in marshes. It would be useful for the completed survey report to state if any areas would benefit from the use of alternative geophysical approaches.	Ground Conditions and Contamination		Approximately 85% of the onshore project area has been subject to geophysical survey. Gaps in the data relate to areas where survey was not suitable or where access was not available. The results are summarised in Section 25.5.4.1 and presented in full in Appendix 25.8 (Volume III)	N
NFOWFS3_054_128_140723	The results of the geophysical survey should be tested with trial-trenching evaluation. We note, for example, that the geophysical survey has, in a number of locations, failed to define potential archaeological features recorded as cropmarks by air photography.	Onshore Archaeology and Cultural Heritage		The results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III).. Additional survey methods will be implemented if required following detailed design. The evaluation at the onshore substation works area demonstrated that the previous geophysical and aerial photography survey were	N

				largely accurate, with the majority of features recorded by the non-intrusive surveys identified during the evaluation. The National Mapping Programme data was shown to be inaccurate. However if the NMP data was relocated to align with the geophysical and aerial photography surveys it is far more accurate, suggesting that the inaccuracy is due to the errors in georectification of the NMP data rather than any insufficiency in more recent field survey.	
NFOWFS3_054_129_140723	For example, EHER no. 3162, is the remains of a possible barrow in Tendring parish (Chapter 25, Table 25.12; Appendix 25.2, Annex D, APS_09), detected as a ring ditch cropmark (and depicted as a tumulus on early maps). It was not, however, detected by geophysical survey (area EOT 1). Similarly, EHER no. 3189, two doubleditched oval enclosures recorded as cropmarks, also in Tendring parish, were not detected by geophysical survey (TGN_01).	Onshore Archaeology and Cultural Heritage		The results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III).. Additional survey methods will be implemented if required following detailed design. The evaluation at the onshore substation works area demonstrated that the previous geophysical and aerial photography survey were largely accurate, with the majority of features recorded by the non-intrusive surveys identified during the evaluation. The National Mapping Programme data was shown to be inaccurate. However if the NMP data was relocated to align with the geophysical and	N

				aerial photography surveys it is far more accurate, suggesting that the inaccuracy is due to the errors in georectification of the NMP data rather than any insufficiency in more recent field survey.	
NFOWFS3_054_130_140723	We would recommend that other geophysical techniques should be also undertaken, for example, resistivity survey and ground penetrating radar, where appropriate, to produce greater clarity where subsurface features are indicated that might be better defined using other survey techniques. The results of these surveys should be also presented in the DCO application.	Onshore Archaeology and Cultural Heritage		The results of Phase 1 and Phase 2 evaluations at the onshore substation works area are presented in Appendix 25.10 and 25.11 (Volume III).. Additional survey methods will be implemented if required following detailed design. The evaluation at the onshore substation works area demonstrated that the previous geophysical and aerial photography survey were largely accurate, with the majority of features recorded by the non-intrusive surveys identified during the evaluation. The National Mapping Programme data was shown to be inaccurate. However if the NMP data was relocated to align with the geophysical and aerial photography surveys it is far more accurate, suggesting that the inaccuracy is due to the errors in georectification of the NMP data rather than any insufficiency in more recent field survey.	N

NFOWFS3_054_131_140723	<p>Comments in relation to Schedule of Mitigation (Document Reference No: 004754982-02)</p> <p>We note the detail regarding mitigation and monitoring for offshore and intertidal archaeology and cultural heritage within Table 2.9. These are in general appropriate, but it would be useful for adherence to a PAD to be included with mitigation for the construction phase. Additionally, further detail should be provided in an Outline (Offshore) WSI and it must be demonstrated how these will be secured through the Outline (Offshore) WSI, DCO, and dMLs.</p>	Offshore Archaeology and Cultural Heritage		<p>The approach to investigation and mitigation is set out in the Outline WSI (Offshore) (Document Reference: EN010119/APP/7.11). The requirement for a final agreed, post-consent WSI is included as condition xxx of the dML.</p>	N
NFOWFS3_054_132_140723	<p>Summary</p> <p>Thank you for consulting Historic England on this PEIR for the North Falls Offshore Windfarm Project.</p> <p>We welcome the work that has been undertaken to assess the impact of the scheme on the historic environment, and the ongoing discussion with stakeholders. We acknowledge the proposed scheme preliminary design is ongoing and will continue to be influenced by environmental factors to avoid or reduce effects.</p>	Project Description		<p>The applicant notes the response and thanks Historic England for their ongoing engagement throughout the pre-application and consultation processes.</p> <p>Noted.</p>	N
NFOWFS3_054_133_140723	<p>As set out in our detailed advice above, we have made a number of comments and recommendations about various aspects of the project, and the chapters and annexes relating to the historic environment. We would like to see these recommendations addressed and we would be pleased to provide further, and continuing, advice in future meetings and in advance of the submission of the ES.</p>	Introduction		<p>The applicant notes the response and thanks Historic England for their ongoing engagement throughout the pre-application and consultation processes.</p> <p>Noted.</p>	N