



Applicant's Responses to the Examining Authority's Fifth Round of Written Questions

Applicant: Norfolk Boreas Limited Document Reference: ExA.WQ-5.D14.V1

Deadline 14

Date: August 2020 Revision: Version 1

Author: Royal HaskoningDHV

Photo: Ormonde Offshore Wind Farm





Date	Issue No.	Remarks / Reason for Issue	Author	Checked	Approved
20/08/2020	01D	First draft for internal review	CD/DT/IM/EV/PG/CJ	VR	JL
25/08/2020	01F	Final for submission at Deadline 14	CD/DT/IM/EV/PG/CJ	VR	JL







Table of Contents

1	Archaeology and Heritage Assets	11
1.0	Offshore and intertidal archaeology	11
1.1	Onshore archaeology	11
1.2	Onshore heritage assets	11
2	Biodiversity, Biological Environment and Ecology	11
2.0	Offshore benthic and marine mammals	11
2.1	Onshore Ecology	13
2.2	Offshore Ornithology	13
3	Compulsory Acquisition	14
3.0	Compulsory Acquisition	14
4	Cumulative effects of other proposals	14
4.0	General cumulative effects, including phasing	14
4.1	Onshore cumulative effects of other proposals (construction)	37
5	Development Consent Order and Deemed Marine Licences	38
5.0	General	38
5.1	Articles	39
5.2	SCHEDULE 1 PART 1: Authorised Development	40
5.3	SCHEDULE 1 PART 3: Requirements	40
5.4	SCHEDULES 9 to 13: Deemed Marine Licences	41
5.5	SCHEDULE 14: Hedgerows	44
5.6	SCHEDULE 15: Arbitration Rules	45
5.7	SCHEDULE 16: Procedure for Discharge of Requirements	45
5.8	SCHEDULE 17: Protective Provisions	45
5.9	Consents, Licences and Other Agreements	46
5.10	Compensation to Protect Natura 2000 Network	46
6	Fishing and fisheries	47
6.0	Fishing and fisheries	47
7	Grid connection	49
7.0	Grid connection	49
8	Habitats Regulation Assessment	50
8.0	River Wensum SAC	50
8.1	Norfolk Valley Fens SAC	50
8.2	Southern North Sea SAC	50





8.3	Haisborough, Hammond and Winterton SAC	50
8.4	Offshore ornithology	54
8.5	Greater Wash SPA	55
8.6	Flamborough and Filey Coast SPA, Alde-Ore Estuary SPA and Haisborough and Winterton SAC	
8.7	Flamborough and Filey Coast SPA	60
9	Landscape and Visual Effects	61
9.0	The Applicant's landscape and visual assessment	61
9.1	The Applicant's visual assessment	61
9.2	Alternatives considered	61
9.3	Landscape effects	61
9.4	Visual effects	62
9.5	Outline Landscape and Ecological Management Strategy (OLEMS)	62
9.6	Good Design	69
9.7	Matters arising from the accompanied site inspection (ASI) on Thursday 2	•
10	Marine and Coastal processes	70
10.0	Marine and Coastal processes	70
11	Navigation	70
11.0	Navigation	70
11.1	Aviation and Radar	70
12	Onshore construction effects	71
12.0	Cable corridor and ducting	71
12.1	Cable corridor and ducting	72
12.2	Mobilisation Areas	72
12.3	Noise and Vibration	72
12.4	Construction Hours	72
13	Socio-economic effects	73
13.0	Skills and Employment Strategy	73
13.1	Jobs	73
13.2	Tourism	73
13.3	Land use and Agriculture	75
13.4	Public Health	75
13.5	Other offshore industries and activities	80
14	Traffic and transportation	80
14.0	Outline Traffic Management Plan (OTMP)	80





14.1	Highway Intervention Scheme for Link 34 (B1145 through Cawston)	80
14.2	Oulton	91
14.3	Link 69 Little London Road in North Walsham from the B1145 Lyngate Road to an access point 210m east	
14.4	Outline Access Management Plan and Access to Works Plan	92
15	Water Resources and Flood Risk	93
15.0	Water Resources and Flood Risk	93
16	General	93
16.0	General	93
16.1	Environmental Statement (ES)	99
16.2	Waste management, ground conditions and contamination	100
REFERENCES	101	





Glossary of Acronyms

AEol	Adverse Effect on Integrity		
AOD	Above Ordnance Datum		
ВТ	British Telecom		
CA	Compulsory Acquisition		
CAOS	Compulsory Acquisition Objections Schedule		
CSIMP	Cable Specification Installation and Monitoring Plan		
DAS	Design and Access Statement		
DCO	Development Consent Order		
dDCO	Draft Development Consent Order		
DEFRA	Department for Environment, Food and Rural Affairs		
DML	Deemed Marine Licence		
EA	Environment Agency		
EIA	Environmental Impact Assessment		
ES	Environmental Statement		
ExA	Examining Authority		
FFC	Flamborough and Filey Coast		
GIS	Gas Insulated Switchgear		
HDD	Horizontal Directional Drilling		
HGV	Heavy Goods Vehicle		
HHW	Haisborough Hammond and Winterton		
HIS	Highway Intervention Scheme		
HoTs	Heads of Terms		
HRA	Habitats Regulations Assessment		
HVAC	High Voltage Alternating Current		
HVDC	High Voltage Direct Current		
JNCC	Joint Nature Conservation Committee		
KIS-ORCA	The Kingfisher Information Service - Offshore Renewable & Cable Awareness project		
LPA	Local Planning Authority		
М	Metres		
MCA	Maritime and Coastguard Agency		
MGN	Marine Guidance Note		
MMO	Marine Management Organisation		
NCC	Norfolk County Council		
NFFO	National Federation of Fishermen's Organisations		
NFU	National Farmers Union		
NNDC	North Norfolk District Council		
OAMP	Outline Access Management Plan		
OCoCP	Outline Code of Construction Practice		
OLEMS	Outline Landscape and Ecological Management Strategy		
OTMP	Outline Traffic Management Plan		
PPA	Performance Planning Agreement		
RPA	Relevant Planning Authorities		
SAC	Special Area of Conservation		
SIP	Site Integrity Plan		
SoCC	Statement of Community Consultation		
3000	Statement of Community Consultation		





SoCG	Statement of Common Ground	
SoS	Secretary of State	
SPA	Special Protection Area	
TCE	The Crown Estate	
TBC	To be Confirmed	
TH	Trinity House	
UK	United Kingdom	





Glossary of Terminology

Array cables	Cables which link wind turbine to wind turbine, and wind turbine to offshore electrical platforms.		
Cable logistics area	Existing hardstanding area to allow the storage of cable drums and associated materials and to accommodate a site office, welfare facilities and associated temporary infrastructure to support the cable pulling works.		
Cable pulling Installation of cables within pre-installed ducts from jointing pit along the onshore cable route.			
Ducts	A duct is a length of underground piping, which is used to house electrical and communications cables.		
Evidence Plan Process	A voluntary consultation process with specialist stakeholders to agree the approach to the EIA and information to support the HRA.		
Interconnector cables	Offshore cables which link offshore electrical platforms within the Norfolk Boreas site.		
Jointing pit	Underground structures constructed at regular intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.		
Landfall	Where the offshore cables come ashore at Happisburgh South.		
Landfall compound	Compound at landfall within which HDD drilling would take place.		
Landfall compound zone	Area within which the landfall compounds would be located.		
Link boxes	Underground chambers or above ground cabinets next to the cable trench housing low voltage electrical earthing links. Areas approx. 100 x 100m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.		
Mobilisation area			
Mobilisation zone	Area within which a mobilisation area would be located.		
National Grid new / replacement overhead line tower	New overhead line towers to be installed at the National Grid substation.		
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400kV overhead lines.		
National Grid overhead line temporary works	Area within which the work will be undertaken to complete the necessary modification to the existing 400kV overhead lines.		
National Grid substation extension	The permanent footprint of the National Grid substation extension.		
National Grid temporary works area	Land adjacent to the Necton National Grid substation which would be temporarily required during construction of the National Grid substation extension.		
Necton National Grid substation	The grid connection location for Norfolk Boreas and Norfolk Vanguard.		
Norfolk Boreas site The Norfolk Boreas wind farm boundary. Located offshore, this the wind farm array.			
Norfolk Vanguard	Norfolk Vanguard offshore wind farm, sister project of Norfolk Boreas.		
Offshore service platform A platform to house workers offshore and/or provide helicopter refuell facilities. An accommodation vessel may be used as an alternative for hworkers.			
Offshore cable corridor	The corridor of seabed from the Norfolk Boreas site to the landfall site within which the offshore export cables will be located.		





Offshore electrical platform	A fixed structure located within the Norfolk Boreas site, containing electrical equipment to aggregate the power from the wind turbines and convert it into a suitable form for export to shore.			
Offshore export cables	The cables which transmit power from the offshore electrical platform to the landfall.			
Offshore project area	The area including the Norfolk Boreas site, project interconnector search area and offshore cable corridor.			
Onshore cable route	The up to 35m working width within a 45m wide corridor which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.			
Onshore 400kV cable route	Buried high-voltage cables linking the onshore project substation to the Necton National Grid substation.			
Onshore cables	The cables which take power and communications from landfall to the onshore project substation.			
Onshore infrastructure	The combined name for all onshore infrastructure associated with the project from landfall to grid connection.			
Onshore project area	The area of the onshore infrastructure (landfall, onshore cable route, accesses, trenchless crossing zones and mobilisation areas; onshore project substation and extension to the Necton National Grid substation and overhead line modifications).			
Onshore project substation	A compound containing electrical equipment to enable connection to the National Grid. The substation will convert the exported power from HVDC to HVAC, to 400kV (grid voltage). This also contains equipment to help maintain stable grid voltage.			
Onshore project substation temporary construction compound	Land adjacent to the onshore project substation which would be temporarily required during construction of the onshore project substation.			
Overhead Line	An existing 400kV power line suspended by towers.			
Pre sweeping	The practice of dredging the seabed to prepare it for foundation or cable installation. It is either used to provide a level surface on which to place foundations or to allow cables to be installed at a sufficient depth to minimise the chance of them becoming exposed. Offshore cables which would link either turbines or an offshore electrical platform in the Norfolk Boreas site with an offshore electrical platform in one of the Norfolk Vanguard sites.			
Project interconnector cable				
Project interconnector search area	The area within which the project interconnector cables would be installed.			
Running track	The track along the onshore cable route which the construction traffic would use to access workfronts.			
Safety zones	An area around a vessel which should be avoided during offshore construction. Protective materials to avoid sediment being eroded away from the base of the foundations as a result of the flow of water.			
Scour protection				
The Applicant	Norfolk Boreas Limited			
The Norfolk Vanguard OWF sites	Term used exclusively to refer to the two distinct offshore wind farm areas, Norfolk Vanguard East and Norfolk Vanguard West (also termed NV East and NV West) which will contain the Norfolk Vanguard arrays.			
The project	Norfolk Boreas Wind Farm including the onshore and offshore infrastructure.			
Transition pit	Underground structures that house the joints between the offshore export cables and the onshore cables			
Trenchless crossing compound	Pairs of compounds at each trenchless crossing zone to allow boring to take place from either side of the crossing.			





Trenchless crossing zone Areas within the onshore cable route which will house trenchless centry and exit points.	
Workfront A length of onshore cable route within which duct installation v occur, approximately 150m.	





The Applicant's Responses to the Examining Authority's Fifth Round of Written Questions in regard to the Norfolk Boreas Application.

The Examining Authority (ExA), published a fifth round of Written Questions (WQs) on 11 August 2020.

The Applicant has responded to each of their relevant questions, detailed in numerical order in Sections 1 to 16 of this document.





1 Archaeology and Heritage Assets

1.0 Offshore and intertidal archaeology

PINS Question	Question is addressed to:	Question:	Applicant's Response:
Number	addressed to.		
		No Questions	

1.1 Onshore archaeology

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions

1.2 Onshore heritage assets

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:	
			No Questions	

2 Biodiversity, Biological Environment and Ecology

2.0 Offshore benthic and marine mammals

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.2.0.1	Natural England (NE)	Micrositing to mitigate impacts to archaeological and Annex 1 habitat features:	





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		In response to R17.1.21 MMO [REP13-035] stated that it is content that the information within the proposed CSIMP does provide enough detail to assist with the discharging of the plan at the post consent stage. However, MMO defers to NE on all aspects relating to HRA. Therefore, is NE content with the Applicant's response to R17.1.21 [REP13-013]? If not, what further mitigation does NE consider necessary?	
Q5.2.0.2	The Applicant	Decommissioning in the HHW SAC: Clarify if cable as well as cable protection would be removed from the HHW SAC in decommissioning.	The scope of the decommissioning works would be determined by the relevant legislation and guidance at the time of decommissioning. Decommissioning would be subject to a separate licence supported by an EIA for the decommissioning of the project and the decommissioning programme required under section 105 and 108 of the Energy Act 2004. In the case of export cables within the HHW SAC, it would be agreed with the relevant authorities (currently the MMO, in consultation with Natural England) through the decommissioning plan whether the cables would be removed from the seabed. Current best practice in the UK, as described in section 5.4.19.7 of Chapter 5 Project Description of the ES, is that buried offshore cables would be simply cut at the ends and left in situ. The main rationale for not removing export cables within the HHW SAC is that the EIA for the decommissioning would likely conclude that cable removal would cause far greater impacts to the Annex I feature of the HHW SAC than leaving the cables in situ. Therefore, the Applicant has not made a commitment to decommission marine export cables within the HHW SAC at this stage. Following discussions with Natural England on 13 August 2020 the Applicant understands that although NE's general position is that all infrastructure should be removed from SACs in this instance and given the features of the HHW SAC, NE are likely to agree that cables should





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			be left in situ. The only exception is where cable protection is being decommissioned thus exposing the cables as this may present a hazard to other marine users. At these locations it may be necessary to remove the relevant discrete sections of cable. However, if necessary, these details would be agreed within the final decommissioning plan prior to decommissioning and does not require anything further pre consent.

2.1 Onshore Ecology

P	NS	Question is	Question:		Applicant's Response:
Q	uestion	addressed to:			
N	umber				
				No Questions	

2.2 Offshore Ornithology

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions





3 Compulsory Acquisition

3.0 Compulsory Acquisition

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.3.0.1	The Applicant; NFU/LIG	Provide a detailed, track change update of the Compulsory Acquisition Objections Schedule [REP6-023] in relation to the status of negotiations [REP11-010].	An updated tracked changed version of the Compulsory Acquisition Objections Schedule [REP6-023] has been submitted by the Applicant at Deadline 14 (ExA.CA.D14.V6). This includes updates to landowner negotiations where applicable.

4 Cumulative effects of other proposals

4.0 General cumulative effects, including phasing

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.4.0.1	Interested Parties	Projects included in cumulative impact assessment Provide any comments that you wish to make further to the Applicant's response to the ExA question at ISH5 [REP13-016, ref 8c)] and follow up from OFH2 [REP13-014, ref 4] in which the Applicant confirms that its response to WQ1 [REP2-021, response to Q4.0.1] stands regarding not including the Dudgeon and Sheringham Shoal extension project(s) in the cumulative impact assessment for the Proposed Development.	
Q5.4.0.2	The Applicant	a) Set out succinctly why different approaches have been adopted for cumulative impact assessment for offshore (no reference to scenarios) and onshore (includes reference to and differentiates between the two scenarios).	a) As explained in paragraph 21 of Chapter 6 EIA methodology (APP-219), the reason for not including separate assessments for Scenario 1 and Scenario 2 in the offshore assessments is that in the offshore environment Norfolk Vanguard would not undertake any enabling works for Norfolk Boreas, in contrast to the onshore environment





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		 b) Would there be any difference in findings if the offshore cumulative assessment had differentiated 	where Norfolk Vanguard would undertake significant enabling works for Norfolk Boreas under Scenario 1.
		between scenarios?	The worst case scenario for all cumulative effects offshore would be that Norfolk Vanguard is taken forward and therefore that is what has been assessed. This is the same as the approach taken to all other projects and it would not be reasonable to assess separate CIA scenarios including or excluding other projects.
			The approach to assessment was outlined in the PEIR to which there were no responses that questioned the approach and the approach was also agreed with all relevant stakeholders through the Evidence Plan process.
			b) If a separate cumulative assessment was conducted for Scenario 2 offshore, this would exclude Norfolk Vanguard from the cumulative assessment. However, as stated above there is separate offshore infrastructure for Norfolk Boreas and Norfolk Vanguard and therefore in the offshore assessment it would not be appropriate to undertake a cumulative assessment which excludes Norfolk Vanguard. The worst case cumulative assessment for the offshore environment is to include both Norfolk Vanguard and Norfolk Boreas. Notwithstanding this, whilst the exclusion of the Norfolk Vanguard project from the CIA would in all cases lead to impacts of less magnitude, this would not necessarily reduce the impact significance.
Q5.4.0.3	The Applicant	At OFH3, the ExA heard submissions that there would be 11 years of cumulative construction stage adverse effects relating to traffic, noise and vibration, air quality, onshore heritage, health and visual would be felt by communities in Broadland District if the Order was consented. Confirm what the worst case scenario would be (duration of specific construction activities and number of years in total) for	The construction works which affect communities in Broadland District are associated with the onshore cable route construction. That is the duct installation and cable pulling works for Norfolk Boreas and Norfolk Vanguard, and the works referred to by HP3 as the onshore cable corridor construction, comprising the installation of the onshore export cables for HP3. Prior to these works there would be some preconstruction works such as environmental surveys. However, for the





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		Cawston, Oulton and the crossing north of Reepham, based on the projects included in your cumulative assessment.	purpose of this worst case, commencement refers to the start of the main construction works on the onshore cable route.
			The detailed construction programmes are not yet developed to identify when specific construction activities will be undertaken in specific areas such as Cawston, Oulton or the crossing north of Reepham, therefore this specific information cannot be provided at this stage. As such, the information below provides an overall worst case in terms of the cumulative elapsed time (number of years in total) of the overall onshore cable route construction works as a result Norfolk Boreas, Norfolk Vanguard and HP3 (the offshore wind farm projects included in the cumulative assessment), but not specific to communities in the Broadland District. The level and length of construction activities within the Broadland District will not be continuous throughout the periods shown, further details are provided below on durations of specific construction activities.
			Outline Worst Case Activity Periods for Broadland District Communities
			The following worst case activity periods are based on the high level indicative programme information contained within Project Description ES Chapter for each of the relevant projects [Norfolk Boreas Chapter 5 APP-218, Norfolk Vanguard Chapter 5 APP-239, HP3 Chapter 3 APP-058], a programme extracts from these chapters are presented in Appendix 4.1 for ease of reference. These high level indicative programmes identify that main construction works on the onshore cable routes are planned to commence for HP3 in 2022, Norfolk Vanguard in 2022, Norfolk Boreas Scenario 1 in 2026 or Norfolk Boreas Scenario 2 in 2023.
			Norfolk Vanguard and Norfolk Boreas have the option to undertake the cable pulling works in up to two phases per project totalling a worst case of four total cable pulling phases, should both projects





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			proceed. This is the worst case in terms of the period of the works, resulting in a 2 year period for duct installation works followed by further 2 years for cable installation per project, resulting in a worst case of 6 years.
			HP3 have the option to be completed in a single phase or in two phases, including the potential for an overlap or a gap between the completion of construction of one phase and the start of construction of another. The worst case in terms of duration would be two phases with a maximum of 3 years break where no construction activity occurs between phases, spanning a total of 5.5 years.
			Scenario 1 cumulative worst case period of works (years in total)
			Under Norfolk Boreas Scenario 1 (NB1), Norfolk Vanguard (NV) proceeds to construction and undertakes the duct installation works for both projects therefore the worst case duration would be total of 6 years (2 year duct installation, 2 years NV cable pulling, 2 years NB1 cable pulling) from the start of 2022 to the end of 2027. If HP3 was also to proceed, then they would commence construction on the onshore cable route in early 2022 until early 2024, followed by a period of no activity, until commencing again in early 2027 and ending early 2028. Therefore, under this worst case, the total elapsed time of construction activities across all three projects would be from the start of 2022 to early 2028, just over 6 years.
			Scenario 2 cumulative worst case period of works (years in total)
			Under NBS2, NV does not proceed to construction, NB2 worst case duration would be 4 years (2 year duct installation and 2 years cable pulling works (from start 2023 to end 2026). If HP3 was to also proceed, their construction period would be as outlined above from early 2022 to early 2028. Therefore, under this worst case the total elapsed time of construction activities across both projects would be





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			determined by the period of the HP3 works i.e. early 2022 to early 2028, approximately 6 years.
			Duration of specific construction activities
			Though the worst-case elapsed time of construction could be approximately 6 years, the level of construction activity within this period will fluctuate and depend on the specific activities being undertaken. Although detailed programmes will not be available until closer to construction, there are a number of key assumptions made within the Norfolk Boreas EIA which provide a guide on the duration of specific activities and can be used to provide a more realistic indication of the works period for Cawston, Oulton and east of Reepham within the overall elapsed period for the works across the entire onshore cable route:
			 Duct installation at an indicative rate of 150m/week [APP- 218]
			 Cable pulling and jointing at an indicative rate of 5 weeks per cable length (~800m) [APP-218]
			Appendix 24.22 (Scenario 2) [APP-637] indicates the period of duct installation for Cawston, Oulton and east of Reepham which will be conducted principally from MA6 (East and West) and MA7 (West). This is estimated in the order of 43 weeks (~10 months) within the 2 year overall period allocated for the task of onshore duct installation throughout the onshore cable route.
		ining Norfally Paraga Offshara Wind	Similarly, Appendix 24.22 (Scenario 2) [APP-637] and Appendix 24.4 (Scenario 1) [APP-619], with reference to Figure 24.12 (Scenario 2) [APP-463] and Figure 24.7 (Scenario 1) [APP-458] illustrate the area of Cawston, Oulton and east of Reepham is principally incorporated within cable section 9. This cable section estimates 6 cable lengths





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			with a subsequent construction period of 30 weeks within each 1 year cable pulling period allocated for the task of overall onshore cable pulling throughout the onshore cable route.
			On this basis, with respect to Norfolk Vanguard and Norfolk Boreas, under Scenario 1 the period of works for both projects is approximately 38 months (just over 3 years) within a 6 year period (including duct installation and cable pulling). Under Scenario 2, the period of works for Norfolk Boreas is approximately 24 months (2 years) within a 4 year period.
			The HP3 ES Chapter 3, Section 3.7 includes that the installation of their onshore export cables is expected to take up to 30 months in total, however work is expected to progress along the export cable route with a typical duration of three months at any particular location. As stated under the two phase worst case there would be a 3 years break where no construction activity occurs between phases. Therefore within the 6 year period therefore would only be a total of 30 months construction activity, and typically 3 months in one area.
			Further information on the duration of works in Cawston are provided in the recent Technical Note provided by HP3 [ExA.AS-4.D14.V1], this identifies that the onshore construction works for HP3 which required construction vehicles through Cawston are in connection the delivery of two cable sections; 9 & 10 (to the West of the village). In the note HP3 commit to a staggered approach to the installation of the cable in these sections (to reduce traffic flows) and as such works will be over a total of up to 11 months in this area.
			Therefore, although the total cumulative elapsed period for the works is shown as 6 years, the duration of works within that period will not be continuous.
Q5.4.0.4	The Applicant	Cumulative adverse effects on health	a) Table 27.5 defines the criteria as:
			"Temporary disturbance or obstruction of roads and footpaths due to





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		 a) In Table 27.5 [APP-240], justify how disturbance or obstruction of roads and footpaths can be characterised as a 'temporary' source of impact leading to potential health effects, in Cawston and Oulton, in light of your response to Q5.4.0.3. b) How would the assessment of cumulative effects on health effects change in light of the duration of worst case cumulative construction period (your response to Q5.4.0.3). 	road transportation of materials and equipment, workforce traffic, and construction areas." Where construction area road closures are required, these will be for short durations i.e. 1-2 weeks each, and as such the impacts are both short-term and temporary as stated in ES Chapter 24 Traffic and Transport [APP-237]. Roads and footpaths will not be closed for the entire duration of the construction period, and closures will only be required whilst works are undertaken on a particular section which is limited in time due to the use of a sectionalised construction method referred to in embedded mitigation Table 27.20 [APP-240]. It should be noted that both HP3 and Boreas (and Norfolk Vanguard) have also committed to utilising a sectionalised construction approach to minimise the disruption to local communities. The impacts as a result of the transportation of materials and equipment will also be temporary, taking place only during the construction phase of the project. Considering cumulative impacts Vattenfall have committed to installing ducts for both of their projects in a single construction phase consequently the majority of the movement of materials for both projects will occur only in one construction period. Substantially reduced material movements will be required to enable cable pulling into the already installed ducts for the second Vattenfall project.
		The Applicant has responded in full to concerns regarding the increased impact of traffic on human health in the response to Q5.13.4.1. In summary, the approach taken by the Applicant has been deemed appropriate by Public Health England, the increase in traffic from current levels as a result of cumulative construction effects have not been assessed as significantly higher than the current traffic levels and human health impacts must be assessed appropriately and proportionally to ensure a true representation of the potential impacts. For further detail please see the response to Q5.13.4.1.	





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.4.0.5	The Applicant	Cumulative effects, inter-relationships and intra-project and inter-project cumulative effects Representations at, and in lieu of attendance at, OFH3, particularly at the Cawston and Oulton sessions) raise concerns about the cumulative, sequential, combined (when receptors	b) The assessment of cumulative effects on health was conducted using both the worst case and the cumulative worst case, as a result of this the assessment and its findings are still applicable and valid. a) As the footprint for environmental impacts is restricted to the areas adjacent to the cable route, the Applicant assessed communities along the route as a population. This approach to the assessment follows the guidance and approaches recommended by Public Health England (PHE) ¹ and is considered appropriate for the role and purposes of an EIA, in support of a DCO application and in relation to
		would be subjected to multiple impacts) adverse effects of construction activities on communities. It is unclear to the ExA where the overall effects on communities such as Cawston and Oulton are set out in the assessment when taking into account cumulative effects from other projects and inter-relationships [APP-219, para 40] (also referred to as intraproject effects in the human health assessment [APP-240]).	the scale of the project and the impacts anticipated .The Applicant has been careful to consider best practice EIA methodologies, current guidance and in particular has actively engaged with all relevant bodies who have a public health remit specifically, PHE and the local planning authorities. All relevant bodies have agreed that the Applicant's approach to the assessment is both compliant and appropriate for the scale of the project and the impacts anticipated, please rerefer to Section 2.1 of the final SoCGs with Breckland Council
		The intra-project cumulative assessment [APP-240, Section 27.7.1] does not take account of all impacts on one set of receptors and distinguishes in no finer detail for its site-specific assessment than "population along the onshore cable route". The inter-project cumulative assessment states that the geographic and temporal spread of the relevant projects means that populations would be unlikely to feel a significant increase in health effects as a result of multiple projects being	[REP9-013], Broadland District Council [REP10-036], North Norfolk District Council [REP10-040] and Norfolk County Council [REP9-015]. Furthermore, PHE in their response to the ExA's Third Round of Written Questions [REP7-063] confirmed "We are satisfied with the Applicant's assumptions and assessment as set out in ES Chapter 27 Human Health [APP-240]". The Applicant has been in ongoing dialogue with the aforementioned bodies during the EIA process and

¹ Cave, B., Fothergill, J., Pyper, R. & Gibson, G. (2017) Health and Environmental Impact Assessment: a briefing for public health teams in England. PHE Briefing Note. London, England. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment data/file/629207/Health and environmental impact assessment.pdf

Applicant's Responses to the Examining Norfolk Boreas Offshore Wind ExA.WQ-5.D13.V1

Applicant's Responses to the Examining Authority's Fifth Round of Written

Farm

Questions





constructed [APP-240, Section 27.7.2]. This is different to the representations made by Interested Parties and others at OFH3. a) Explain where the overall effects on communities are set out in the application documentation. b) provide more rapid and effective response, alongside the project wide Local Planning Authority investigation procedures [REP10-006, Section 5.2] and [REP10-012, Section 2.4]? This might also be appropriate for the period of onshore construction at the landfall for the communities at Happisburgh. constructed [APP-240, Section 2.7.2]. This is different to the representations made by Interested Parties and others at OFH3. The Applicant undertook an assessment of all the impacts to the population along the onshore cable route. Each potential topic which could impact human health (including wellbeing) was assessed as part of the ES [APP-232 – APP-247]. These topics include Chapter 20 Water Resources and Flood Risk; Chapter 21 Land Use and Agriculture; Chapter 25 Noise and Vibration; Chapter 26 Air Quality; Chapter 29 Landscape and Visual Impact Assessment; Chapter 30 Tourism and Recreation; and	PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
• Chapter 31 Socio-economics. None of these topics, were assessed as having a significant impact on the population in question, post mitigation. The impact on the assessed population is laid out in the above chapters, an overview of which can be found in Chapter 34 Summary [APP-247], and interrelationships have been summarised in Chapter 33 Onshore Cumulative Impacts [APP-246]. The Applicant conducted a cumulative impact assessment with other proposed wind farm development where sufficient information was available to do so, namely Norfolk Vanguard and HP3. Both Norfolk Vanguard and HP3 also concluded in their own ES's that project level or cumulative noise, air quality, human health, socio-economics impacts to the local community would not be significant. It is clear from the HP3, Vanguard and Boreas project and cumulative impact assessments that there is a common conclusion that project and cumulative impacts on local communities following mitigation are non-significant. Given the temporary and episodic nature of the impacts which are			 representations made by Interested Parties and others at OFH3. a) Explain where the overall effects on communities are set out in the application documentation. b) provide more rapid and effective response, alongside the project wide Local Planning Authority investigation procedures [REP10-006, Section 5.2] and [REP10-012, Section 2.4]? This might also be appropriate for the period of onshore construction at the landfall for the 	The Applicant undertook an assessment of all the impacts to the population along the onshore cable route. Each potential topic which could impact human health (including wellbeing) was assessed as part of the ES [APP-232 – APP-247]. These topics include • Chapter 20 Water Resources and Flood Risk; • Chapter 21 Land Use and Agriculture; • Chapter 24 Traffic and Transport (Chapter 24; • Chapter 25 Noise and Vibration; • Chapter 26 Air Quality; • Chapter 29 Landscape and Visual Impact Assessment; • Chapter 30 Tourism and Recreation; and • Chapter 31 Socio-economics. None of these topics, were assessed as having a significant impact on the population in question, post mitigation. The impact on the assessed population is laid out in the above chapters, an overview of which can be found in Chapter 34 Summary [APP-247], and interrelationships have been summarised in Chapter 33 Onshore Cumulative Impacts [APP-246]. The Applicant conducted a cumulative impact assessment with other proposed wind farm development where sufficient information was available to do so, namely Norfolk Vanguard and HP3. Both Norfolk Vanguard and HP3 also concluded in their own ES's that project level or cumulative noise, air quality, human health, socio-economics impacts to the local community would not be significant. It is clear from the HP3, Vanguard and Boreas project and cumulative impact assessments that there is a common conclusion that project and cumulative impact son local communities following mitigation are non-significant.





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			restricted to the construction phase of the project along the onshore cable route and the non-significant assessment of all the relevant impacts, a community by community assessment is not considered proportionate or necessary by the Applicant. The use of a sectional approach as a form of embedded mitigation, will result in communities being impacted for a part of the construction period, and not the entire duration reducing the duration and scale of impacts experienced at each point along the onshore cable route.
			A community by community assessment was not deemed proportionate, borne out through comprehensive and ongoing consultation with the relevant statutory public health bodies.
			b) Part of the role of the Norfolk Boreas Limited Community Liaison Officer (CLO) will be to manage proactive updates to communities, to enable them to understand the work programme, and thus enable for example any personal measures they might consider appropriate, as far as possible allowing them control of how they respond to the works programme, as well as to respond reactively to any public concerns, queries or complaints in a professional and diligent manner. Equally, via regular meetings with local representatives such as the Principal Contractor, Public Relations direct contact, there will be opportunities to explore and identify ways in which adjustments, not impacting materially on the planned works can be implemented to accommodate local interests and needs (see also the Applicant's response to ExA Q5.4.0.7 and Q5.4.0.8 below).
			Enquiries and grievances will be dealt with in an expedient and courteous manner. Any complaints will be logged, investigated and, where appropriate, rectifying action will be taken and mitigation measures will be reported back to the relevant party, again as appropriate and in compliance with GDPR. Relevant reporting will also





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			be shared with appropriate stakeholders, as part of any agreed mechanism outlined in the final CoCP and or TMP.
			Where the Applicant and relevant stakeholders identify the potential for any particular sensitivities, specific measures will be put in place, for example a 24h telephone response line, so that issues can be resolved or tensions de-escalated quickly. Key performance measures will be agreed with statutory consultees in advance and recorded in the CoCP, such as realistic and prompt response and resolution timings. However, the Applicant's emphasis will firmly be to prevent avoidable distress and harm, by anticipating opportunities to enable locally appropriate solutions. The strategy to share the CLO responsibilities among individuals who will understand their local area well, foster local relationships and understanding, also means that more bespoke, locally-appropriate measures can be implemented and communicated.
Q5.4.0.6	The Applicant; Norfolk County Council	Cumulative effects at port(s) The ExA understands that confirmed details of the base port(s) to be utilised for offshore construction and maintenance has yet to be made in relation to offshore construction and operation of the proposed Norfolk Boreas OFW project. Once a decision was reached: a) How would such facilities be provided or brought into operation? b) What would be the mechanism for the assessing and mitigating any adverse cumulative traffic and transport effects which could arise at the port(s)? c) Should the Outline Travel Plan (OTP) [APP-700] include a commitment to assess car parking needs and availability during the construction phase at the port(s) to identify potential cumulative effects on the local community including those associated with offshore	 a) To the extent that appropriate facilities did not already exist at the base port, new facilities would need to be consented, either through permitted development rights (if applicable) or by way of a separate planning application. b) Any new facilities which are likely to give rise to significant environmental effects cannot be constructed under permitted development rights and would be subject to a separate planning application. This would be accompanied by an environmental impact assessment which identifies measures necessary to mitigate any significant environmental effects predicted (as appropriate), including in relation to adverse cumulative traffic and transport effects. Any necessary mitigation measures would be secured through any planning permission issued.





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		construction workers' car parking, in order to develop a car parking strategy, in consultation with the relevant local authority, before the commencement of the offshore works? d) Should the Outline Traffic Management Plan (OTMP) [REP10-016] include a commitment to assess HGV movements cumulatively, with any mitigation proposals for agreement with the relevant highway authority. e) Should the OTMP also include a commitment to prepare Route Access Surveys for ports other than Kings Lynn as that which is included for Kings Lynn prepared for Norfolk Vanguard OWF [REP10-020, Appendix 3]. f) If the principle is agreed, the Applicant to include suitable wording for the OTP and OTMP, or appropriate wording secured elsewhere. g) If the principle is not agreed, the Applicant to provide without prejudice wording for inclusion in the OTMP and OTP to cover these points, should the ExA be minded to recommend their inclusion to the SoS. h) NCC to comment.	c) to e) As stated in the OTMP (paragraph 3) [REP10-016] the scope of the OTMP and OTP (and the OAMP) is for the management and control of the onshore construction works, they are not applicable to offshore construction or maintenance works. Therefore, it is not appropriate to include any requirements for offshore works within these documents. The Applicant acknowledges the need to consider the potential impacts associated with employee and HGV movements for the offshore construction works associated with the primary base port. However, the traffic impacts of the base port will be assessed when the actual site has been announced in the context of any port operating permissions or as part of a separate planning application if new facilities are required. f) and g) As detailed in response to points c) to d) the principle is not agreed, the scope of the OTMP and OTP is for the onshore construction works only and therefore any requirements relating to the offshore construction and maintenance works are beyond the scope of these documents and therefore no additional wording should be included.
Q5.4.0.7	The Applicant; Broadland DC; North Norfolk DC; Breckland Council; Cawston Parish Council; Oulton Parish Council; Happisburgh Parish Council	Community Liaison The OCoCP sets out the role of a Community Liaison Officer [REP10-013, Section 2.4] and the role of an Agricultural Liaison Officer [REP10-013, Appendix B]. The OTMP sets out the role of a Traffic Management Plan Coordinator [REP10-017, Section 5.3]. The ExA notes that there is an indicative outline of the role description for the Traffic Management Coordinator. a) Provide a fuller description of all three roles, including: • key responsibilities • part time or full time;	The identification of these roles and the assurance that they will be operational at the appropriate point post-consent are secured in the relevant outline plans which are certified documents within the dDCO. The Applicant asserts it is not necessary to secure the level of detail described below at this stage. There is an implicit requirement the role definition and job description will correspond to the execution plans for construction of the detailed design, which will be drawn up in due course. The scope of these roles will be subject to discussion with the relevant LPAs as part of the production of the final CoCP and





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		 location; duration of contract; The ExA notes that there would be project wide Local Planning Authority investigation procedures [REP10-016, Section 5.2] and [REP10-012, Section 2.4] in place. Is the role of the proposed Community Liaison Officer to provide an on-the-ground, local presence to enable a rapid and effective response to community concerns, in locations such as Necton, Cawston, Oulton and Happisburg? Respond to this question in light of the representations during OFH3. c) Where and how are these details secured? d) Other Interest Parties may wish to comment 	TMP. However, for the sake of transparency, the Applicant shares early thinking here. While each of the three roles mentioned in the question will collaborate and exchange relevant information as appropriate, they are distinct, and primarily, aim to meet the interests and needs of different stakeholders in relation to accessing information and providing a means of communicating opportunities, concerns and feedback to the Applicant. The feedback will inform Project activities and enable adaptation to improve implementation of our plans. Community Liaison Officer (CLO) Main purpose: to represent the Applicant and become the focal point of contact between community stakeholders (e.g. residents, local business owners, schools, Parish Councillors, local groups, local road users) and the Applicant. The CLO(s) will inform stakeholders proactively about the Applicant's planned activities and implement engagement activities, including handling feedback, issues and concerns, and ensuring appropriate escalation and resolution. Key Responsibilities Key point of contact for all local community stakeholders including Parish Councils, residents, interest groups etc., potentially affected by the project Refresh local community and stakeholder mapping and maintain relevant [GDPR compliant] stakeholder database Daily liaison with internal and external project personnel based on and off site Deliver integrated communication solutions on behalf of the Applicant. Such activities may include: Organise, attend and facilitate engagement activities with community groups and individuals. Regular updates to District area's/ Parish Council Representatives. Maintain details of engagement activities





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			 (including reporting to stakeholders). Coordinate with specialists / prepare and deliver presentations on project activities to community stakeholders. Prepare reports and assist with the dissemination of results to the community and stakeholders. Manage relevant communication (digital and analogue) materials and events including, notification flyers, traffic alerts e.g. via radio, webpage content, liaison with contact centre. Coordinate and deliver specific temporary closures information to affected stakeholders (as appropriate). Implement and monitor the grievance mechanism. Work closely with others in the company (including consultants and contractors) to document and respond (and escalate, as needed) issues arising from the grievance mechanism. Report to management. Pre-emptively asses, evaluate, and propose mitigation measures in relation to stakeholders' interests and needs, and assist in the management of risk/benefit assessment, and strategic plans and programs.
			1.5 FTE One half time CLO for each work-area, corresponding to the three relevant LPA areas: North Norfolk District Council, Broadland Council, Breckland Council; reporting to Local Liaison Manager
			The term of the CLO role will span the duration of the onshore construction works. Anticipated start date 2022.
			Agricultural Liaison Officer (ALO)
			Main purpose: to represent the Applicant and become the focal point of contact between Landowners, Agents, other Land Interests, including tenants / occupiers, and the Applicant. The ALO(s) will inform stakeholders proactively about the Applicant's planned activities and implement engagement activities, including handling





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			feedback, issues and concerns, and ensuring appropriate escalation and resolution.
			Key Responsibilities
			 Key point of contact for all land interests, their agents and interest groups such as the LIG and NFU. Maintain [GDPR compliant] land interests database Support management of the Applicant's timely access requirements Regular liaison with internal and external project personnel based on and off site. Identify information needs of land interests and coordinate with colleagues to proactively ensure timely and accessible information giving. Organise, attend and facilitate engagement activities with land interests and agents. Maintain documentation of engagement activity. Ensure land interests are aware of broader community liaison activities, materials & tools. Regular contact with Applicant's wider stakeholder engagement team. Pre-emptively assess, evaluate, and propose mitigation measures in relation to stakeholders' interests and needs, and assist in the management of risk/benefit assessment, and strategic plans and programs. Implement and monitor the grievance mechanism. Work closely with others in the company (including consultants and contractors) to document and respond (and escalate, as needed) issues arising from the grievance mechanism. Report to management.
			One FTE to cover the onshore cable corridor area
			The term of the ALO role will span the duration of onshore construction works. Indicative start date 2022





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Number			Traffic Management Plan Coordinator (TMPC) Main purpose: Represent the Applicant and become the focal point of contact between relevant stakeholders – namely Local Highways Authority – NCC, Highways England, Local Authorities (e.g. District Councils in their role as discharging authority), Police and the Local Rescue / Emergency services – and the Applicant. The TMPC will inform stakeholders about the Applicant's planned and appropriate reactive activities and implement engagement activities, including handling feedback, issues and concerns, and ensuring appropriate escalation and resolution. The TMPC has a very specific technical role, to manage the implementation of the TMP, however within this role, there is a strong requirement to collaborate with relevant stakeholders, and ensure there is appropriate two-way information flow between the parties to pre-empt, avoid and mitigate for disruption to / resulting from any third-party activities in the locality. Key Responsibilities Manage the implementation of the TMP plan Organise, attend and facilitate engagement activities with relevant stakeholders Report monitoring and progress of plan to the Applicant and relevant stakeholders (i.e. local authorities, NCC and HE etc.) Maintain documentation of engagement activities Inputting into and attending community liaison as required by Norfolk Boreas Limited Providing details of any complaint investigations to Norfolk Boreas community liaison Daily liaison with internal and external project personnel
			Main purpose: Represent the Applicant and become the focal product between relevant stakeholders — namely Local Highwa Authority — NCC, Highways England, Local Authorities (e.g. Dist Councils in their role as discharging authority), Police and the L Rescue / Emergency services — and the Applicant. The TMPC winform stakeholders about the Applicant's planned and appropreactive activities and implement engagement activities, including feedback, issues and concerns, and ensuring appropriescalation and resolution. The TMPC has a very specific technical role, to manage the implementation of the TMP, however within this role, there is strong requirement to collaborate with relevant stakeholders, ensure there is appropriate two-way information flow between parties to pre-empt, avoid and mitigate for disruption to / resulting any third-party activities in the locality. Key Responsibilities Manage the implementation of the TMP plan Organise, attend and facilitate engagement activities or relevant stakeholders Report monitoring and progress of plan to the Applicative relevant stakeholders (i.e. local authorities, NCC and Feature and attending community liaison as required by Norfolk Boreas Limited Providing details of any complaint investigations to No Boreas community liaison





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			workers and sub-contractors with respect to any traffic- related topics • Feed into coordination of the Applicant's timely access requirements. One FTE The term of the TMCP role will span the duration of onshore construction works. An indicative start date being 2022
Q5.4.0.8	The Applicant; Broadland DC; North Norfolk DC; Breckland Council; Cawston Parish Council; Oulton Parish Council; Happisburgh Parish Council	Community Liaison The ExA is not clear whether the Community Liaison Officer, Agricultural Liaison Officer and Traffic Management Plan Coordinator are to be a shared resource with the Norfolk Vanguard OFW project and Hornsea Project Three if it were consented. a) Explain the relationship of each post to all three projects. b) What measures are proposed to provide a single point of contact for community liaison in the event of concurrent construction periods if the Proposed Development and Hornsea Three OWF were to both be consented and have concurrent construction periods. c) Where and how is this secured? d) Other Interested Parties may wish to comment	a) It is most likely that under Scenario 1, the Community Liaison Officer, Agricultural Liaison Officer and Traffic Management Plan Coordinator are to be a shared resource with the Norfolk Vanguard OWF project, should both Vattenfall projects proceed to construction. These roles would not be a shared resource with HP3. Under both Scenario 1 and Scenario 2, HP3 and its representatives are a stakeholder, and each of the roles outlined above would equally ensure that HP3 is aware of the Applicant's programmed activities, and that relevant views and activities of HP3, are considered during planning and implementation of the Applicant's schedule of works, including communication and engagement. b) There are clear variations between the construction methodology, duration and geographic locations of the Applicant's and HP3 onshore construction programmes. However, should NB (and potentially NV) and HP3 construction periods overlap, the Applicant will seek to schedule regular communication with their equivalent party in HP3. The Applicant will collaborate with HP3 such that any contact from the public or stakeholder (be-it a concern, complaint or idea), is passed on efficiently to the relevant party. The purpose of these proactive and reactive exchanges / meetings would be to update both parties on respective plans and progress, explore the potential for





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			cumulative effects and to agree avoidance and mitigation strategies, including effective communication, to local community stakeholders.
			c) The implementation of these roles and the commitment to a communication plan which will include procedures for engaging with HP3 are secured in the relevant outline plans which are certified documents within the dDCO.
Q5.4.0.9	The Applicant; Broadland DC; North Norfolk DC; Breckland Council; Cawston Parish	 Community Liaison a) Are Parish Councils to be consulted on the content and details of the Communications Plan? b) If they are, should this be included in the OCoCP? c) If they are not, why not? d) Other Interested Parties may wish to comment. 	a) to c) As noted in the Applicant's response to Q5.4.0.7 above, the communication planning will be agreed with the LPAs, as part of the process to finalise the CoCP and the TMP. The LPAs are best placed to advise on and influence communication plans, as they have district wide expertise and statutory remit with respect to communications with local stakeholders.
	Council; Oulton Parish Council; Happisburgh Parish Council		The relevant CLO will make contact early with each relevant Parish Council (and as appropriate with Local District Councillors) to introduce themselves and their role. They will seek to establish both an open invitation to stakeholders to make contact whenever communities identify specific opportunities or issues that they want to bring pre-emptively or reactively to the attention of the Project, as well as regular Project meetings, to ensure there is an opportunity for general updates (two way) and reviewing and evaluating the effectiveness of local engagement and communication, and ensuring adjustments and improvements are made as and when appropriate. In this sense, the relevant PCs will be able to feed into communications plans. It is anticipated regular project meetings will be organised collectively — with representatives from each PC attending, on a monthly basis. This enables local representatives to understand how the Project is operating in a slightly wider local context and facilitates collective learning and opportunities to be identified.
			The Applicant would of course, have no issue should the LPA want to consult with relevant Parishes on the communication plans. We do





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			not consider at this stage it would be necessary to write this into the OCoCP nor the OTMP.
Q5.4.0.10	The Applicant	Respond to Points in Mulbarton Parish Council's D13 submission Respond to the matters raised in Mulbarton Parish Council's representations at Deadline 13.	The Applicant acknowledges the detailed thinking presented by Mulbarton PC. While aspects of the schemes presented therein may be technically deliverable – they are alternatives which are not relevant to this stage of the development process of the Project. Conceptual technical solutions to issues surrounding a more coordinated offshore grid, and the required regulatory reform required to enable them are the topic of the Offshore Transmission Network Review, announced on 15 July 2020 by the Energy Minister. The review's objective is "to ensure that the transmission connections for offshore wind generation are delivered in the most appropriate way, considering the increased ambition for offshore wind to achieve net zero. This will be done with a view to finding the appropriate balance between environmental, social and economic costs." Both the Department of Business Energy and Industrial Strategy and NG ESO are agreed that the Offshore Transmission Network Review should not affect those projects with an existing contracted position for grid connection. Rather, the wholesale changes to the current regulatory framework, and funding mechanism, that are required by a conceptual integrated offshore network, including variations on the themes described in the Mulbarton PC paper, require longer time frames to be explored, enabled, funded, consented and delivered – and are only relevant in relation to projects expected to connect to the onshore network after 2030 (i.e. without a current grid agreement). As previously stated in submissions [AS-024, REP5-045, REP7-017], Vattenfall is participating in the Offshore Transmission Network Review as a key stakeholder, interested in supporting UK Government's desire to deliver on offshore wind goals as part of the UK's drive to achieve net zero C-emissions by 2050.





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			national grid on the same time frame as the projects described by their respective developers, omits to consider the necessary steps that would need to begin afresh. For example, new grid connection agreements, new offshore surveys, a new EIA and NSIP process would need to be undertaken and successfully completed. This would be followed by detailed design and other business-critical milestones, which effectively would mean construction could begin no sooner than the very late 2020s, and first power would therefore not be delivered until after 2030. Furthermore, the Applicant would draw the author of the paper's
			attention to the Applicant's (and Norfolk Vanguard's) consultation materials (e.g. APP-172 doc.5.1.22.13 Consultation Report Appendix 22.13 - Consultation Summary Document, p19) which illustrates the offshore and coastal environmental constraints limiting the likelihood of achieving consent for offshore cabling making landfall via the Wash, for Walpole or near Bawdsey for Bamford. Such options do not meet the current environmental protection standards which developers expect to deliver.
Q5.4.0.11	The Applicant	The Crossing with Hornsea Three OWF, North of Reepham a) Explain what is meant by 'overall thermal efficiency' with respect to the crossing of cables between Hornsea Project Three, Norfolk Vanguard and Norfolk Boreas [REP10- 037, Page 16, 17]. b) Further to matters raised by N2RS at OFH2 [EV12-002] regarding lack of certainty over HVAC or HVDC and therefore cable numbers should Hornsea Three OWF be consented, the NFU at OFH3 [EV13-011] and your statement in the latest SoCG with the NFU [REP10-037, pages 15 to 17], provide a method statement with cross-section illustrations for construction of the crossing point of cables which illustrates all the possible construction process options (open cut trench	a) Overall thermal efficiency relates to minimising the overall thermal interaction (heating) between the different project cables and the ground. The projects will seek to be thermally independent of each other, or in other words, to minimise the thermal interaction of the projects so far as possible.
			b) The general principle for the crossing of the cables as noted in the SoCG with the NFU [REP10-037], presents an outline method statement, which details that:
			The general principle will be that the project with the least number of cables will carry out the installation method by trenchless crossing and be below the other project. Therefore, the project with the most cables will use an open cut trench method and be located above the other





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		and trenchless) of the Proposed Development with both scenarios (ie with and without Norfolk Vanguard OFW) and Hornsea Three with HVAC and HVDC. c) In presenting the options set out the thermal efficiency factors and potential for disruption to agriculture for each option. d) Include in the OCoCP this method statement, or a version of it which sets out those options which would meet the "most thermally efficient crossing design". e) Where is the commitment by all parties to ensure that other parties could still install their cables secured [REP9-026, para 23]? f) The EXA understands that discussions are on-going with Ørsted for Hornsea Project Three to agree the most thermally efficient crossing design. What are the implications for this Examination if no agreement is reached?	project. However, if there is a good technical reason, such as beneficial for overall thermal efficiency, it may be that the project with the least cables would be more appropriately located above the other project. In the case where only one project goes ahead, the project to be constructed, will be installed using open cut methods within the subsurface. The general principle captures the overarching construction arrangement, however the specific crossing arrangement and associated method statement can only be determined following detailed design once the number of cables, circuits and power flow is identified. c) The potential for disruption to agriculture will be minimised so far as possible through the general principle that where the projects cross, the project with the least number of cables will carry out the installation by trenchless crossing below the project with the most cables, which will use open trench methods. This limits the open trench works to only Norfolk Vanguard and Norfolk Boreas or Hornsea Project Three such that either: 1) Norfolk Vanguard and Norfolk Boreas ducts are installed through open trench method with Hornsea Project Three utilising a trenchless crossing 2) Hornsea Project Three is installed through open trench method with Norfolk Vanguard and Norfolk Boreas utilising a trenchless method. This principal is also most likely to result in the least thermal interaction, unless, during detailed design and final selection of number of cables, circuits and current flow it is identified due to technical reasons, that it would be beneficial for the project with least cables to cross over the project with the most cables. Irrespective,





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			the open trench works are limited to only Norfolk Vanguard and Norfolk Boreas or Hornsea Project Three.
			d) The general principal will provide an overall thermally efficient crossing design, however the specific crossing arrangement and associated method statement can only be determined following detailed design once the number of cables, circuits and power flow is identified. It is therefore not appropriate to include a method statement in this regard to the OCoCP at this stage.
			e) The draft Norfolk Boreas DCO includes protective provisions for Orsted Hornsea Project Three (UK) Ltd and these are reciprocated in the draft Orsted Hornsea Project Three DCO for Norfolk Boreas and Norfolk Vanguard to ensure that other party's cables can be installed. As agreed in the SoCG [REP9-026], the Applicant and Orsted will continue to cooperate in respect of the planning crossing works and share design specifications when known to help facilitate the design of the other party's cables at the point of crossing.
			f) The crossing design will be determined post consent as part of detailed design when further details on number of cables, circuits and power flows are known, but will follow the general principles as outlined above to provide a thermally efficient design.
			The draft Norfolk Boreas DCO includes protective provisions for Orsted Hornsea Project Three (UK) Ltd and these are reciprocated in the draft Orsted Hornsea Project Three DCO for Norfolk Boreas and Norfolk Vanguard which note that both parties "must act in good faith and use reasonable endeavours to co-operate with, and provide assistance to, each other as may be required". The Applicant therefore sees no implications for the examination if this design is not completed/agreed prior to the close of examination as both parties





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			will continue to co-operate, as bound by the protective provisions, to develop a thermally efficient design.
Q5.4.0.12	The NFU and/ or LIG	The Crossing with Hornsea Three OWF, North of Reepham The Applicant will submit the requested method statement for construction process options at the crossing with Hornsea Three OWF at Deadline 14 (25 August 2020) at the same time as responses to these written questions. You are requested to provide any comments, including suggestions for amendment on this at Deadline 15 (1 September 2020).	
Q5.4.0.13	The Applicant	a) In order that the ExA can be satisfied that the necessary design assurances would be in place to enable the Applicant to rely on base survey data by others as set out in the SoCG with Ørsted for Hornsea Three OWF [REP9-026, para 23], should Hornsea Three OWF proceed ahead of the Proposed Development, include a reference to the Agreement in the dDCO. b) Does this agreement regarding survey by others need to be reflected anywhere else in the documentation for the Proposed Development, such as the OCoCP, OLEMS, WSI etc? c) How would responsibility and liability be determined in the event of baseline surveys proving inaccurate?	a) The SoCG between the parties outlines specific areas in which cooperation and assistance is identified, such as survey works. This is proposed to help reduce the number of surveys undertaken and ensure consistency in base survey data utilised by all parties. This will only apply in areas where requirements for survey data overlap (i.e. at the crossing point) and where the survey data remains contemporaneous with the discharge requested for the subsequent project. For example, if one project has undertaken archaeological investigation works at the cable crossing, then there would not be a need for the follow on project to undertake these works again if the LPA was content to rely on the earlier survey work having been completed. If it is not possible to rely on previous survey work, whether due to design approach, timing of works, or areas of overlap, further survey work would be undertaken as necessary. Therefore, it is not necessary or appropriate to include a reference to this in the dDCO. Notwithstanding this, it should be noted that the Protective Provisions with HP3 (contained in Schedule 17, Part 8 of the dDCO) contain a requirement to act in good faith, and use reasonable endeavours to cooperate with and provide assistance to Hornsea Three OWF at paragraph 94. These protective provisions are





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			reciprocated within the Hornsea Three draft DCO in relation to Norfolk Boreas.
			b) As set out above, the sharing of survey information is the preferred approach but is not mandatory, therefore this does not need to be included in any further documentation. Each project has their own commitments with their own management plans and DCO Requirements to undertake the required pre-construction surveys. If a project chooses to use third party data to meet their commitments and discharge the DCO Requirements then this will be at the discretion and approval of the relevant planning authority or consultees.
			c) As stated in response to part b) the accuracy of any baseline survey data is subject to review and approval by the relevant planning authority or consultees. If they were not content to rely on the accuracy of baseline survey data provided, further surveys would need to be undertaken by the project seeking discharge of the relevant Requirement. Therefore, there would not be any need to consider responsibility or liability for inaccurate survey data.

4.1 Onshore cumulative effects of other proposals (construction)

PINS Ques Num	tion addressed to:	Question:	Applicant's Response:
			No Questions





5 Development Consent Order and Deemed Marine Licences

5.0 General

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.5.0.1	Interested Parties	Updated dDCO Provide any comments on the Applicant's updated dDCO submitted at D13 [REP13-007] to [REP13-012].	
Q5.5.0.2	The Applicant	Schedule of Changes to the draft Development Consent Order Further to submission of [REP13-012], provide further updates with all versions of the dDCO and: a) Check all other changes such as turbine numbers in Schedules 9 and 10 are included in the Schedule of Changes. b) Check that the refs tally with changes eg Ref 05, are the Schedules correct?	a) To avoid duplication in the Schedule of Changes and making it unnecessarily lengthy and unwieldly, the Applicant has grouped together changes from the DCO that are the same - for instance where the provisions in Schedule 1, Part 3, Requirements are repeated in the DMLs at Schedule 9-13. The reduction in the maximum number of wind turbine generators from 180 to 158 is shown in row 64 of the Schedule of Changes [REP13-012], which makes clear that this change has been made at: • Schedule 1, Part 1, paragraph 1(a) • Schedule 9 -10, Part 3, Requirement 3(1) • Schedule 9 -10, Part 3, Paragraph 2(1)(a) • Schedule 9 -10, Part 4, Condition 8(1)(b). b) The Applicant agrees that entry 5 on the Schedule of Changes [REP13-012] should have referred to Schedule 9-10, rather than Schedule 11-12. The Applicant will include this update in the next version of the Schedule of Changes to be submitted alongside the final dDCO.
Q5.5.0.3	The Applicant	Explanatory Notes: Page 337 (Explanatory Notes) refers to certification of plans, etc as 'Article 38'. Should this be Article 37? [REP13-008]	The Applicant agrees that the reference in the Explanatory Notes of the dDCO should refer to Article 37 rather than Article 38. The Applicant will update this in the next version of the dDCO.





5.1 Articles

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.5.1.1	The Applicant	Article 2: Highway Authority definition Include in Article 2, a definition for Highway Authority: ""the highway authority" means Highways England or Norfolk County Council";	The Applicant will update the next version of the dDCO to include this definition as requested.
Q5.5.1.2	The Applicant	Article 16: Authority to investigate the land onshore The NFU confirmed at OFH3 (Session 3) that either of its previously requested additions regarding equipment to be used and an estimate of how long surveys would take (to dDCO Article 16 or to the role description for the Agricultural Land Officer (ALO)) would allay the concerns of those it is representing [EV13-011]. Notwithstanding your comments regarding additional inefficiencies and inconsistencies with the made Norfolk Vanguard DCO [REP13-015, ref 17], if the ExA came to a different conclusion from that contained in the Norfolk Vanguard DCO regarding the need for such procedures, if you wish, state a without prejudice preference for which way (Article 16 wording or wording in the ALO role description) this could be secured?	Notwithstanding the Applicant's position as outlined in REP13-015, the Applicant considers that Appendix B of the OCoCP, which contains the role of the Agricultural Liaison Officer (ALO), could be amended to include further details in relation to the provision of preconstruction survey information. Accordingly, the following wording has been included in the updated OCoCP Appendix B (Version 6), submitted at Deadline 14. The ALO will have responsibility for liaising with landowners, agents and occupiers in respect of the following: "Where possible, providing preconstruction survey information to landowners (such as company name, survey type and equipment to be used, and an estimate of how long the surveys are expected to take) prior to the preconstruction survey commencing." This text follows the wording that the NFU requested from the Highways England A303 scheme, as referred to in response to the fourth round of written questions (Q.4.5.1.1), on which the Applicant commented at Deadline 11 [REP11-007].





5.2 SCHEDULE 1 PART 1: Authorised Development

PINS	Question is	Question:		Applicant's Response:
Question	addressed to:			
Number				
			No Questions	

5.3 SCHEDULE 1 PART 3: Requirements

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.5.3.1	The Applicant	Requirements 16 and 18 There are questions below under Section 5.9 of these questions.	Noted.
Q5.5.3.2	The Applicant	Plans within the CoCP listed in Requirement 20(2): In answer to WQ2.15.0.9, REP5-045 confirms that the OCoCP now refers specifically to a Flood Warning and Evacuation Plan to be produced post-consent "as part of the Environmental Emergency/Incident and Response Plan". Should both these plans be listed within R20(2) of the dDCO as specific plans to be covered by the CoCP?	Requirement 20 (2) of the dDCO lists the subjects which the OCoCP must provide details of rather than all the individual subsidiary plans. As such the provision of the Environmental Emergency/Incident and Response Plan is covered by 20 (2) (a) relevant health, safety and environmental legislation and compliance. The details of the subsidiary plans required within the final CoCP are secured in Table 2.1 of the OCoCP. Table 2.1 has been updated to include the 'an Environmental Emergency / Incident and Response Plan (which includes a Flood Warning and Evacuation Plan)' under Requirement 20 (2) (a). An updated OCoCP (Version 6) has been submitted at Deadline 14. In accordance with Requirement 20 (2) the CoCP must accord with the OCoCP and therefore the provision of all other subsidiary plans including the Environmental Emergency/Incident and Response Plan is secured through the OCoCP and do not need to be listed within the dDCO Requirement 20 (2).
Q5.5.3.3	The Applicant, The	Notification to EA Environmental Incident Response teams: Signpost whether and if so, where the OCoCP Section 13 Environmental Incident and Response and Contingency has	The update was included as the final sentence of paragraph 185 of the OCoCP Version 5 submitted at Deadline 10 [REP10-012];





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
	Environment Agency (EA)	been updated to include that the 'Environment Agency incident response teams must be notified where an environmental incident could cause spillage or contamination into a watercourse including drains' reported as agreed with the EA in	'The Environment Agency incident response teams must be notified where an environmental incident could cause spillage or contamination into a watercourse including drains.'
		REP6-014.	As such, this is included as paragraph 186 of the updated OCoCP Version 6 submitted at Deadline 14.

5.4 SCHEDULES 9 to 13: Deemed Marine Licences

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.5.4.1	The Applicant	Schedules 11 & 12 Conditions 9 &14 for marine pollution contingency plan: In referring to the plan, condition 7(10) of the DMLs schedules 11 and 12 refers to Condition 14 (1)(d)(i) for the marine pollution contingency plan. However, in these transmission asset DMLs, the plan is actually secured through Condition 9 whereas it is secured in Condition 14 for the generation asset DMLs. Confirm and correct drafting error as appropriate	The Applicant agrees that Condition 7(10) of Schedule 11-12 should refer to Condition 9(1)(d) rather than Condition 14(1)(d). The Applicant will update this cross-reference in the next version of the dDCO.
Q5.5.4.2	The Applicant	Notification of shallow buried cables: Confirm whether the amendment proposed by NFFO in the SoCG [REP9-025] to the wording of Schedules 9 and 10 Condition 9 (12) of the dDCO including the words "a state of shallow burial or exposure of" in regard to cables on or above the seabed will be effected; and whether equivalent condition wording will also be included in Schedules 11, 12 and 13 of the dDCO.	As stated in the Applicant's Responses to the Examining Authority's Fourth Round of Written Questions (REP10-034), the Applicant's view is that the wording of Schedules 9 and 10 Condition 9(12) and the equivalent wording included in Schedules 11 and 12 Condition 4(12) and Schedule 13 Condition 3(12), is appropriate and should remain as currently drafted. The wording currently proposed with regards to the notification of cable exposures is as follows: 'In case of exposure of cables on or above the seabed, the undertaker must within three days following identification of a potential cable exposure, notify mariners by issuing a notice to mariners and by





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			informing Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MMO and MCA within five days'.
			This wording already goes beyond the standard condition, and has been agreed with both the Maritime and Coastguard Agency (MCA) and Trinity House for Norfolk Boreas in their respective final Statements of Common Ground (REP9-024 and REP9-028). The proposed wording also takes account of the changes agreed (between the Applicant and the MCA) in response to the consultation letter for the Norfolk Vanguard project from the Secretary of State dated 6 December 2019, and is the wording included in the as made DCO for Norfolk Vanguard, dated 1st July 2020. The consistency with Norfolk Vanguard is of relevance, importantly post consent, when it is likely a single marine coordination centre will be responsible for issuing both project notices. In particular, consistency is important from a contractor compliance perspective and to avoid confusion amongst stakeholders.
			In addition, "shallow burial" is a broad term with no standard definition across the offshore industry. Therefore the Applicant's view is that this term is not suitable as a parameter for reporting purposes or for inclusion within notifications such as Notices to Mariners (NtMs). The intention will be to bury the cables to an optimum depth to ensure that cables do not become exposed during operation and where it is not possible to achieve the optimum depth, due to ground conditions, cable protection will be put in place to prevent exposure. The Applicant's assessment of the seabed conditions within the offshore project area indicates that burial to an optimum depth will be achievable in the vast majority of areas. Cables will be continually monitored during operation which will provide an early indication of when a cable is no longer buried to the optimum depth. This would allow the operator of the cable to be





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			alert to the situation before the cable becomes a hazard. As described in the Outline Fisheries Liaison and Co-existence Plan (FLCP) (APP-710) regular communication and liaison with the fishing industry will be maintained throughout the lifetime of the project. This would include appropriate communication with the fishing industry in the event that cables become unburied.
Q5.5.4.3	The Applicant; The Marine Management Organisation (MMO); Maritime and Coastguard Agency (MCA)	ERCOP Conditions 15 and 10: Condition 15(8) in Schedules 9 and 10 and 10(8) in Schedules 11 and 12 requires MMO confirmation in writing that the undertaker has adequately addressed MCA recommendations contained within MGN543 "Offshore Renewable Energy Installations (OREIs) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues" and its annexes. The DML condition no longer refers explicitly to approval and implementation of an ERCOP. Confirm if this redrafting is accepted by MMO and MCA and confirm whether the same wording will be included in Schedule 13 of the dDCO.	The Applicant confirms that the wording contained within Condition 15(8) in Schedules 9 and 10 and 10(8) in Schedules 11 and 12 is agreed and as per the MCA's preferred drafting approach to this condition (see agreement within SoCG REP9-024), which no longer refers explicitly to approval and implementation of an ERCOP. As stated by the MMO in their Deadline 11 response on the draft DCO (REP11-020) the MMO is also content with the wording of this condition. This condition will be included in Schedule 13 of the draft DCO to be submitted at Deadline 16.
Q5.5.4.4	Natural England (NE); The MMO, Marine & Coastguard Agency (MCA); Trinity House (TH); Historic England (HBMCE)	Decommissioning of cables in HHW SAC Conditions 20 and 3(1)(g): Confirm satisfaction or otherwise with change to the dDCO [REP13- 007/008] that includes a new cable decommissioning condition 20 in Schedules 11 and 12 and removes condition 3(1)(g) prohibiting rock or gravel dumping.	Please see the Applicant's response to Q5.8.3.2 for an update on discussions between the Applicant, NE and the MMO regarding conditions relating to the decommissioning of cables in the HHW SAC (Conditions 20 and 3(1)(g) of Schedules 11 and 12).
Q5.5.4.5	The Applicant; The Marine Management Organisation (MMO);	MMO objection to Part 5 of Schedules 9 to 13 Procedure for Appeals Confirm satisfaction with the amendment to the Boreas dDCO/DMLs in [REP13-007/008] removing part 5 following the determination of the Norfolk Vanguard application. The MMO	The Applicant will provide any comments, as necessary, in response to the MMO and TH at Deadline 15. However, the Applicant has been in discussions with the MMO and understands that this change (to remove Part 5 from the DMLs) is supported by the MMO.





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
	Trinity House (TH)	had previously sustained an objection to Part 5 of Schedules 9 to 13 which proposes an override of the Marine Licensing (Licence Application Appeals) Regulations 2011 (Appeal Regulations) to enable the Applicant to appeal a MMO decision or failure to determine within the prescribed time period. In SoCG [REP9-023] the parties agree with each other that it should be the Secretary of State who decides this matter. TH also supported the MMO's position in regard to arbitration or appeal and deemed refusal.	

5.5 SCHEDULE 14: Hedgerows

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.5.5.1	The Applicant	Schedule 14 Update Schedule 14 and/ or the Important Hedgerow Plans to resolve seeming anomalies as follows: a) Potentially important hedgerow 62 appears in the Schedule but not on plan; b) Hedgerow 296 is important on plan and potentially important in Schedule 14; c) Potentially important hedgerow 297 appears on plan but not in Schedule 14; and d) Important hedgerow 295 appears on plan but not in Schedule 14.	a) Hedgerow 62 can be found on Sheet 11 of the Hedgerows Plan. It sits next to hedgerow 63, however the two hedgerows can blend together when viewed at 100% zoom. Due to the closeness of these two hedgerows the label for hedgerow 62 unfortunately was covered by the label for hedgerow 63 in the previous version of the plan. This has now been updated in 2.11 Important Hedgerows Plan (Version 2) submitted at Deadline 14 to clearly show both labels. b) Hedgerow 296 was correctly listed in Schedule 14 PART 3 Scenario 2 as Important, and duplicated in Schedule 14 PART 4 Scenario 2 as potentially important in error. This duplication will be removed in the next version of the draft DCO. c) Hedgerow 297 is a potentially important hedgerow which will be included in the next version of the draft DCO in Schedule 14 PART 4 Scenario 2





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			d) <u>Hedgerow 295</u> is an Important Hedgerow which will be included in the next version of the draft DCO in Schedule 14 PART 3 Scenario 2.

5.6 SCHEDULE 15: Arbitration Rules

PINS Question	Question is addressed to:	Question:	Applicant's Respons	se:
Number				
			No Questions	

5.7 SCHEDULE 16: Procedure for Discharge of Requirements

PINS	Question is addressed to:	Question:		Applicant's Response:
Question				
Number				
			No Questions	

5.8 SCHEDULE 17: Protective Provisions

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.5.8.1	The Applicant; National Grid; Cadent Gas; Network Rail; Anglian Water; The	Changes to Protective Provisions consistent with Vanguard made DCO: The ExA notes the update provided by the Applicant at ISH5. Can it now confirm that any drafting changes made to Protective Provisions in response to the making of the Norfolk Vanguard Development Consent Order are now agreed by all parties [REP13-	As the Applicant explained in the Issue Specific Hearing 5 Action Tracker [REP13-017], the Applicant has obtained approval from National Grid, Cadent Gas, and Network Rail to change the protective provisions at Part 2, 3, and 4 respectively of the dDCO.

Applicant's Responses to the Examining Authority's Fifth Round of Written Questions

Farm

ExA.WQ-5.D13.V1

Norfolk Boreas Offshore Wind





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
	Environment Agency; Ørsted	008 and REP13-012; REP13-016]. Other parties may wish to comment.	The changes to the remainder of the protective provisions are minor drafting changes and do not affect the principle of the provisions. The Applicant has, however, informed Anglian Water, the Environment Agency, and Hornsea Project Three of these changes. The Applicant understands that these changes are agreed by all statutory undertakers.
Q5.5.8.2	The Applicant; The Environment Agency (EA)	Part 7 para 73 Presumption of deemed consent or refusal: The ExA notes the continuing disagreement between the Applicant and the Environment Agency in relation to deemed discharge mechanism [REP9-020]. The ExA also notes the position set out by the Applicant at ISH5 [REP13-016]. Does either party wish to add anything further?	The Applicant has further consulted with the Environment Agency and has agreed to include a deemed refusal mechanism within the protective provisions where approval is neither given or refused within 2 months of submission of plans for the approval of the Environment Agency. The Applicant will further engage with the Environment Agency to agree the final form of protective provisions for inclusion within the Applicant's submission of the final dDCO at Deadline 16.

5.9 Consents, Licences and Other Agreements

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions

5.10 Compensation to Protect Natura 2000 Network

PINS	Question is addressed to:	Question:		Applicant's Response:
Question				
Number				
			No Questions	





Fishing and fisheries

Fishing and fisheries 6.0

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.6.0.1	The Applicant; Trinity House (TH)	Request for specific DML wording to be added re reduction in clearance depth: Trinity House (TH) stated in [REP8-034] and confirmed in the SoCG [REP9-028] that it continues to disagree with the Applicant regarding the DML condition wording and maintains its request for specific wording to be added on the grounds that a reduction of over 5% in clearance depth may cause a significant hazard to navigation without the timely risk mitigation that TH are concerned to secure in the DMLs. TH requested to signpost where in the examination alternative drafting has been provided, and if no drafting is available, provide suitable wording for consideration.	The Applicant would like to reiterate that as stated in REP11-007 (the Applicant's response to the Examining Authority's fourth round of questions ²) and the SoCG with Trinity House REP9-028 that the Applicant does not disagree with Trinity House with regards to the need for mitigation to be in place to manage any navigation safety risk associated with reducing under keel clearance by more than 5%. However the Applicant does maintain and highlights to the Examining Authority that this process is already included within Marine Guidance Note MGN 543. Annex 1(3d) of MGN 543 states 'the MCA would be willing to accept up to 5% reduction in surrounding charted depths referenced to Chart Datum, unless developers are able to demonstrate evidence that any identified risks to any vessel type are satisfactorily mitigated', noting compliance with MGN 543 is secured in Condition 15(8) (Schedule 9-10) and Condition 10(8) (Schedule 11-12) (and will be included at Schedule 13 in the next version of the dDCO to be submitted at Deadline 16) as follows: (8) No part of the authorised scheme may commence until the MMO, in 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 MCA recommendations as appropriate to the authorised scheme contained within MGN543 "Offshore Renewable Energy Installations (OREIs) — Guidance on UK Navigational Practice, Safety and Emergency Response Issues" and its annexes.Inclusion of additional text or indeed a new condition would in the Applicant's opinion create potential for confusion and could

² Response to Q.4.5.5.1 noted 'The Applicant will be fully compliant with the requirement to seek consultation on any cable protection that exceeds the 5% safety margin as defined within Marine Guidance Note (MGN) 543'. Norfolk Boreas Offshore Wind

Applicant's Responses to the Examining Authority's Fifth Round of Written

Farm

ExA.WQ-5.D13.V1





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			misalign this DCO/DML with that agreed as part of the Norfolk Vanguard DCO. Consistency with Norfolk Vanguard is important, especially from a contractor compliance perspective. Having the additional text regarding 5% of navigable depth on the face of one DCO and not the other might imply that only one project needs to comply with this requirement; whereas both projects need to comply fully with the requirements of MGN 543. Therefore the Applicant considers it is best practice for both DCOs to align in this respect. The Applicant recognises that Trinity House might want to amend this condition on future offshore wind DCOs but given the nature of the sister projects (Norfolk Vanguard and Norfolk Boreas) the Applicant considers there is the need for an exception in this case. Furthermore, Trinity House has the ability to review and has input into the cable details at various points – all of which are prior to construction. Trinity House therefore has a number of opportunities to raise any concerns relating to compliance with this requirement and can, ultimately, request that the MMO does not approve the design plan until it is complied with (secured through Schedule 9-10, condition 14(1)(a), Schedule 11-12, condition 9(1)(a) and Schedule 13 condition 7 (1) (a), which require agreement with the MMO in consultation with Trinity House and the MCA on the length and arrangements of all cables as part of the design plan).
			It should also be noted that the precise drafting of this condition has been agreed with the MCA as confirmed in their SoCG (REP9-024). Finally, the Applicant would like to clarify that the wording "and Trinity House" was added to the updated draft DCO submitted at D7 (Condition15(8) (Schedule 9-10) and Condition 10(8) (Schedule 11-12)) as the Applicant believed that this additional wording to the MGN543 condition would provide Trinity House with a further control measure (again, prior to any construction). However following Trinity House's D8 response and further liaison with Trinity House, and given their





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			concerns on the additional onus/remit it could place upon Trinity House, the Applicant agreed to remove the wording 'and Trinity House' from Condition 15(8) (Schedule 9-10) and Condition 10(8) (Schedule 11-12) from the updated draft DCO submitted at Deadline 10.
Q5.6.0.2	National Federation of Fishermens' Organisations; (NFFO)/ VisNed	Assessment of loss of fishing grounds during the operational phase: Confirm satisfaction or otherwise with the Applicant's position in [REP9-025] that the revised minimum worst-case turbine spacing proposed is sufficient to make fishing viable for beam trawlers and that NFFO/VisNed confirmed in their final SoCGs for East Anglia One and East Anglia Three that the spacing proposed would be sufficient to allow fishing safely to resume within the operational sites; and that safety zones would only be required in relation to major maintenance works and therefore, any loss of grounds associated with this would be very localised and short term.	

7 Grid connection

7.0 Grid connection

PINS Questic Numbe	Question is on addressed to:	Question:	Applicant's Response:
			No Questions





8 Habitats Regulation Assessment

8.0 River Wensum SAC

PINS Question Number	Question is addressed to:	Question:		Applicant's Response:
		No	Questions	

8.1 Norfolk Valley Fens SAC

PINS	Question is	Question:	Applicant's Response:
Question	addressed to:		
Number			
			No Questions

8.2 Southern North Sea SAC

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions

8.3 Haisborough, Hammond and Winterton SAC

PINS	Question is	Question:	Applicant's Response:
Question	addressed to:		
Number			
Q5.8.3.1	Natural	For clarification, in [REP13-038] NE, in its response to R17.1.22,	
	England	refers to comments in the risk and issue log provided at D12. The	

August 2020





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		ExA has no record of this log. The last log [REP10-065] was submitted at D10, is this the one NE intended to refer to?	
Q5.8.3.2	The Applicant; Natural England	To update the ExA on the outcome of the meeting scheduled for 13 August in [REP13-013].	During the meeting held between Natural England and the Applicant on 13 August 2020 both ornithological issues and benthic issues were discussed, primarily within the context of HRA for the HHW SAC and AOE and FFC SPAs. The MMO also attended the meeting for discussions regarding the cable protection decommissioning condition. Follow up meetings were also held with Natural England on 17, 20 and 24 August 2020 (which also included the MMO), as well as a separate meeting with the MMO on 19 August 2020. Further information regarding the discussions about the Applicant's derogation case is provided in the Applicant's response to Q5.8.6.1. Natural England confirmed that in general their position on AEoI to the three Natura 2000 sites remained unchanged as a result of the SoS's decision for Norfolk Vanguard and the minded to consent position for Hornsea Project Three. Natural England maintain that their advice provided to the Norfolk Vanguard examination (and subsequently to the SoS) and to the Norfolk Boreas examination is correct and therefore will not materially change. Natural England are of the opinion that judgements such as whether the impact is 'de minimis' are matters for the Secretary of State to determine. With regards to the inclusion of Hornsea Project Three numbers for CRM of auks and gannets, Natural England confirmed that they were in the process of acquiring the numbers used by the SoS in its assessment for that project and would be running models using those numbers with the intention of providing a position on the significance of CIA effects of these species at Deadline 14 or 15 of the Norfolk Boreas Examination.





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			With regard to Condition 23 which the SoS included within the Norfolk Vanguard DMLs to ensure that the cable protection deployed in the HHW SAC was such that it could be decommissioned (included as Condition 20 of the Norfolk Boreas DMLs at Deadline 13), Natural England provided a revised version of that condition for discussion. This revised wording included further requirements for feasibility studies, method statements, monitoring, timescales and the inclusion of Natural England as a consultee. Although the Applicant accepted that Natural England should be named as a consultee, the Applicant considered that the other additions proposed by Natural England were already included in the SoS's original drafting or would be addressed under the requirements of Section 105 and Section 108 of the Energy Act 2004, and it was not therefore necessary revise the condition in this respect. The Applicant then proposed alternative wording which remained as true as possible to the original wording provided by the SoS but made a minor changes designed to address Natural England's request to name them as consultee. Natural England highlighted that they would like some further revisions to the SoS's original drafting and the Applicant understands that these points will be detailed within Natural England's Deadline 14 submission. Natural England and the MMO both expressed a preference for the wording to be included as a Requirement in the DCO rather than a Condition within the DMLs, and the Applicant noted that the wording was such that it could be included as either a DML condition or a Requirement. Natural England and the MMO reviewed the revised wording proposed by the Applicant and provided feedback at a meeting on the 24 August 2020. Natural England and the MMO still had a number of residual concerns and therefore the Applicant suggested that a potential solution was to remove Condition 20 altogether





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			and reinstate Condition 3(1)(g). The Applicant's position is that Condition 20 and Condition 3(1)(g) are both designed to ensure that the undertaker installs cable protection (installed where cables are not buried to the optimum depth) in such a way that it could be decommissioned at the end of the project life. The Applicant, in consultation with Natural England and the MMO, introduced Condition 3(1)(g) at Deadline 10 of the Norfolk Boreas examination as Natural England agreed that this would mean that it would secure a type of cable protection which could be decommissioned. An equivalent Condition 3(1)(g) was not included within the Norfolk Vanguard DCO and therefore the SoS introduced Condition 23 (Condition 20 in the Norfolk Boreas DMLs) as a way of securing this. Therefore, Natural England, the MMO and the Applicant are all in agreement that Condition 3(1)(g) should be reinstated in the Norfolk Boreas dDCO in preference to new Condition 20 (which will be removed). These changes will be included within the dDCO which is submitted at Deadline 16. The Applicant has proposed a minor amendment to Condition 3(1)(g) as follows: "(g) in the Haisborough, Hammond and Winterton Special Area of Conservation, cable protection must not take the form of rock or gravel dumping where it is deployed to protect export cables apart from at cable crossing locations with existing cables and pipelines." This amendment ensures that the Condition only applies to cable protection associated with unburied cables due to ground conditions and that, where required for crossings, it can be left in situ as was the original intention of the commitment made at Deadline 6 and detailed within the HHW SAC control documents (document 8.20). This amendment was agreed in principle by Natural England on the 24 August.





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			Should the SoS decide that Condition 20 should be applied to the Norfolk Boreas DMLs, or alternatively included as a Requirement of the dDCO, the Applicant would be content for this to happen. The Applicant understands that should this be the case Natural England and the MMO would request further amendments to that condition/ requirement and should the SoS be minded to make these amendments, as Natural England and the MMO have presented them to the Applicant, the Applicant would also be content for these to be made.
			As set out above, during the meetings on 17, 20 and 24 August 2020 it was discussed whether Natural England felt that it was necessary to progress anything further for the Norfolk Boreas derogation case, in response to Q5.8.6.1. Please see the Applicant's response to Q5.8.6.1 for further information on these discussions.

8.4 Offshore ornithology

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.8.4.1	Q5.8.4.1 Natural England For in-combination effects, does NE have a view on the following scenario? Each OFW considered could be said to have a de minimis effect on bird mortality. However, at what point does a number of de minimis effects accumulate into a significant effect?		





8.5 Greater Wash SPA

PII	NS	Question is	Question:	Applicant's Response:
Qι	estion	addressed to:		
Νι	ımber			
				No Questions

8.6 Flamborough and Filey Coast SPA, Alde-Ore Estuary SPA and Haisborough Hammond and Winterton SAC

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.8.6.1	The Applicant	In the event that no AEoI could not be agreed for all or any of the HRA sites and without prejudice, is the Applicant willing to work with NE and the ExA in providing a fully developed derogation case to submit to the SoS by the end of the Examination?	The Applicant considers that a fully developed derogation case has already been provided. The term 'in principle' is used only because the derogation case is provided without prejudice to the Applicant's position that there is no AEoI, and therefore that a derogation case is not required.
			With respect to Flamborough and Filey Coast SPA, Natural England stated that 'we agree that in-principle, the provision of additional nest sites for kittiwakes in the southern North Sea / south-east of England might have the potential to be of benefit to the regional kittiwake population and hence in our view, would ensure coherence of the Natura 2000 network' (REP9-045).
			With respect to the Alde-Ore Estuary SPA, Natural England stated that, 'Natural England welcomes the in principle compensation measures presented by Norfolk Boreas for lesser black-backed gulls (LBBGs) at the Alde-Ore Estuary SPA. We believe that these proposals are in principle heading in the right direction. But Natural England's view is whilst the Applicant's proposal to fund a project coordinator and scoping study is helpful, there must be a commitment to delivering measures on the ground that would offset the predicted collision risk mortality' (REP9-046).





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			With regard to the compensatory measures proposed for the HHW SAC, Natural England has not raised any outstanding issues and therefore the Applicant understands that Natural England is in agreement that no further work is required for the HHW SAC compensatory measures pre-consent.
			In addition, the Applicant has proposed dDCO conditions to secure detailed compensation plans as part of the derogation case should this be considered necessary, and this specifically includes a commitment to delivering measures on the ground at Alde-Ore Estuary SPA, as advised by Natural England in REP9-046 (this is further clarified below).
			<u>FFC SPA</u>
			With respect to the Applicant's proposed compensation options for kittiwake from the Flamborough and Filey Coast SPA, Natural England (REP9-047) stated that 'if measures directly benefiting kittiwake at the FFC SPA are considered necessary (noting that compensation should be first aimed at the feature and site affected), then fisheries management would seem to be the only plausible option.' However, Natural England then went on to state that: 'We recognise that this approach is not in Norfolk Boreas's gift to deliver alone, but it would likely require facilitation by the UK Government/the regulating authority.' The Applicant is in complete agreement with both these statements. If fisheries management was an option that the Applicant felt was deliverable, and therefore appropriate to offer as compensation, then it would have been further developed in the Applicant's proposals. However, since this measure cannot be delivered by the Applicant alone (as noted by Natural England) this was not considered to represent an appropriate option for the Applicant to offer as compensation.
			Therefore, the alternative option of providing an artificial nest structure was favoured on the grounds of being effective, proven and





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			deliverable, and Natural England agreed that it was a feasible option (Natural England (REP9-045) stated that: 'Though this wasn't Natural England's preferred option, we agree that in-principle, the provision of additional nest sites for kittiwakes in the southern North Sea/southeast of England might have the potential to be of benefit to the regional kittiwake population and hence in our view, would ensure coherence of the Natura 2000 network').
			Natural England (REP9-047) identified aspects of this option for which additional detail and investigation would be welcomed in order to maximise the likelihood of success (e.g. determination of location, consideration of prey resource, risk of collisions, delivery mechanism, etc.). The Applicant agrees that these are aspects which will require further consideration, but does not consider this to be either necessary or appropriate at the current stage. Indeed, Natural England (REP9-047) has already outlined approaches they consider could be taken, for example: 'site selection could be informed by the modelled distribution of kittiwake from the FFC SPA shown in Cleasby et al. (2018). An analysis of population trends/productivity of kittiwake colonies in East Anglia with those in south-east England and the Channel, drawing on Hamilton et al. (2016), would also help identify locations that are most likely to host productive kittiwakes over the project lifetime'. The Applicant agrees that these would be appropriate steps in the process of site selection, along with practical considerations in terms of construction, maintenance and monitoring. However, these aspects are not fundamental to determine whether this compensatory measure is appropriate to ensure Natura 2000 coherence (and Natural England has stated that in their opinion this coherence would be ensured), or whether there can be certainty on the prospects of delivering the measure. Therefore it is appropriate that this is addressed, in discussion with Natural England, following consent award, and only if the Secretary of State determines compensation to be a requirement. Indeed, the draft conditions





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			proposed for the dDCO recognise the need for this through the development of the detailed plan post consent.
			AOE SPA
			With respect to the Applicant's proposed compensation options for lesser black-backed gull from the Alde-Ore Estuary SPA, the Applicant considers that there is very little disagreement with Natural England. Both parties consider that reducing predation is the most appropriate option, and that this would be best achieved through the use of predator-proof fencing. The only area remaining to be resolved is the location of the fence, and this is a matter which can only be determined through discussion with relevant landowners and Natural England. The Applicant considers that it would be unreasonable to expect relevant landowners to spend time and resource engaging in detailed discussions on this matter at the current time, since the requirement for this compensation has not been determined by the Secretary of State. Furthermore, since Natural England has agreed that identifying a suitable location and installing a fence could be achieved following award of consent and prior to turbine operation at Norfolk Boreas it is not necessary to do so at present. The need for further detail post consent is expressly recognised in the draft conditions proposed for the dDCO and accordingly can, if compensatory measures are considered necessary, be secured.
			The Applicant also understands that Natural England considers the dDCO should secure an express commitment to install a fence as a compensatory measure, and since this is intended to compensate for potential collisions at Norfolk Boreas it is appropriate that this fence should be installed prior to operation of the turbines. Therefore, the Applicant proposes to update the dDCO as follows (subject to further comment from Natural England and the MMO): PART 2





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			Alde-Ore Estuary Special Protection Area: Delivery of measures to improve breeding success
			2.—(1) No later than 12 months prior to the commencement of any offshore works, a strategy for the delivery of measures to improve breeding success at the Alde-Ore Estuary Special Protection Area and proposals for monitoring and reporting on their effectiveness must be submitted to the Secretary of State for approval, in consultation with the relevant statutory nature conservation body.
			(2) The strategy must accord include measures to install predator proof fencing in accordance with the principles contained in Section 4 of the Alde-Ore Estuary Special Protection Area (SPA) - In principle Compensation Measures for lesser black-backed gull, and must be approved in writing by the Secretary of State prior to the commencement of any offshore works.
			(3) The strategy must include timescales for the measures to be delivered prior to operation of the offshore generating station and must be carried out as approved, unless otherwise agreed in writing by the Secretary of State.
			(4) Results from the monitoring scheme required under sub-paragraph (1) including any proposals to address the effectiveness of the measures to improve breeding success at the Alde-Ore Estuary Special Protection Area must be submitted to the Secretary of State and the relevant statutory nature conservation body, and any proposals to address effectiveness must thereafter be implemented by the undertaker as approved in writing by the Secretary of State.
			Following the meeting with Natural England on 10 July 2020, the Applicant had understood that Natural England agreed that any further details relating to matters of compensation could, if necessary, be dealt with post consent through the detailed compensation plans,





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			and this was summarised in the Applicant's response to the Examining Authority's request for further information at Deadline 13 (REP13-013, see R17.1.26), 'Natural England supports the thorough consideration of compensatory measures which have been proposed [by the Applicant (in consultation with Natural England)]. Natural England confirmed during the meeting on the 10 July that they consider that the proposals contain a sufficient level of detail to demonstrate that they can suitably compensate for any AEoI and they are in agreement that any further detail would be agreed post consent in the final plans'.
			Notwithstanding the above, the Applicant is now engaging further with Natural England to explore what, if any, additional information could be usefully provided and consulted on, in response to Natural England's Deadline 9 submissions, and within the confines of the time remaining until Deadline 16 on the 8 th September.
Q5.8.6.2	Natural England	Accepting that NE have strategic decisions to make resulting from the SoS letters referring to Norfolk Vanguard, Hornsea 3, and other recent OWF decisions, can it provide its best estimation of being able to provide definitive decisions on AEol by the end of the Examination?	

8.7 Flamborough and Filey Coast SPA

PINS	Question is	Question:		Applicant's Response:
Question	addressed to:			
Number				
			No Questions	





9 Landscape and Visual Effects

9.0 The Applicant's landscape and visual assessment

	Question is addressed to:	Question:		Applicant's Response:
		ı	No Questions	

9.1 The Applicant's visual assessment

PINS	Question is	Question:	Applicant's Response:
Questi	on addressed to:		
Numbe	r		
			No Questions

9.2 Alternatives considered

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions

9.3 Landscape effects

PINS	Question is	Question:	Applicant's Response:
Question	addressed to:		
Number			
			No Questions





9.4 Visual effects

PII	NS S	Question is	Question:		Applicant's Response:
Qι	estion	addressed to:			
Nu	ımber				
				No Questions	

9.5 Outline Landscape and Ecological Management Strategy (OLEMS)

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.9.5.1	The Applicant	Onshore project substation 12m access strip for large machinery Further to the Land Plan showing the "area to be cleared of landscaping obstruction" [REP13-020], include a cut-out plan in the DAS which illustrates the adjustments to the mitigation planting in the north east corner of the Order Limits for the onshore project substation from that currently shown on the Scenario 1 Mitigation Planting Plan [REP7-010, sheet 3 of 8].	Figure 5 within the DAS showing the Scenario 1 Mitigation Planting, has been updated to show the "area to be cleared of landscape obstruction" as depicted on REP13-020. An updated DAS and accompanying figures has been submitted at Deadline 14 (Version 5).
Q5.9.5.2	The Applicant; National Grid	Finishes for National Grid substation extension a) Further to requests and comments at OFH3, can the electrical equipment required for the National Grid substation extension be coated or manufactured with a matt finish? b) If so, the Applicant is requested to include relevant wording to secure this either in the DAS or in the OLEMS.	a) The Applicant refers to its response to Q2.5.3.3 of the Examining Authority's Further Written Questions [REP5-045], its comments on deadline 4 submissions and additional submissions [REP5-051] regarding Breckland Council's REP4-026 and its response to ISH5 Action Point 13 [REP13-017]. Materials used for the electrical equipment, primarily aluminium, steel and ceramics/polymers, are dictated by the electrical and structural technical performance required to safely and efficiently operate the equipment at 400 kV. Therefore, it is not possible to alter the appearance and finishes of the electrical equipment. b) Due to the limitations on the opportunities to alter the appearance and finishes of the electrical equipment for operational functional requirements, the Applicant considers it is not appropriate to include





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			further wording in the DAS or OLEMS with respect to this equipment.
Q5.9.5.3	The Applicant; NFU/LIG	Action Point 12 from ISH5 For clarity, the ExA is anticipating more than materials options to be submitted at D14 [REP13-017, action# 12]. a) The action point states "sketch design options for layout, massing and "agricultural style" for the proposed onshore project substation" b) An indication of scale should be provided on any sketch elevations etc eg a person or a double decker bus. c) Points agreed with the landowner such as the "different layout and approach to some of the landscaping and drainage features on the site" [REP13-015, page 17] should be illustrated.	 further wording in the DAS or OLEMS with respect to this equipment. a) In response to Action Point 12 from ISH5 the Applicant has produced a Preliminary Design Report [ExA.AS-2.D14.V1] which includes the following; Design parameters and principles from existing documentation (Section 2). This includes outlining the approach on form and massing, style, materials and colour and finishes; A review of materials options for the convertor halls (Section 3) and a colour analysis and review of potential façade colours for external treatment of the convertor halls (Section 4); On overview of the zoning plan (Section 5) and how this could be reflected in an indicative onshore project substation layout (Section 6). This includes isometric visualisation of the design layout of the onshore project substation, which reflects the massing and proposed agricultural style.
			The DAS has been updated to include reference to and inclusion of the Preliminary Design Report, an updated DAS (Version 5) has been submitted at Deadline 14. b) As requested an indication of scale in the form of a person 1.8m in height has been included on the elevational visualisation presented in Figure 2 of the Preliminary Design Report [ExA.AS-2.D14.V1]. c) Landscaping At a meeting held between the landowner, a LIG representative and the Applicant on the 16 th March 2020 a range of landscaping topics were discussed in relation to the Norfolk Boreas substation including screening planting, planting plans and the use of small scale bunding. In response and since these initial discussions the Applicant has





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			continued to engage in constructive dialogue on these matters, summarised as follows:
			 Explaining the relationship between the onshore project substation and the proposed mitigation planting along the boundary; Discussing appropriate plant species; Discussing growth rates and the potential use of some regular or select standard trees.
			Where relevant, updates on these matters have been made to the OLEMS (Version 6) submitted at Deadline 14 (document reference 8.7). For example, in Section 6.6 paragraph 67, in relation to the size and age of trees which could be planted as part of the screening as follows;
			The detailed design of the planting will include the use of standard trees in select locations where their larger size will best mitigate against visual impacts, for example at a prominent end corner of a converter hall or side façade exposed in a framed view from a nearby road.
			Attenuation Pond At the meeting in March 2020, the landowner suggested that the depicted location of the Norfolk Boreas attenuation pond under Scenario 1 (as shown in DAS Figure 5 REP7-013) could instead be used for tree planting. The Applicant explained that the location was indicative and the final location would be determined based largely on the physical form of the final design of the substation. It was agreed that the Applicant would update the landowner on this matter as the design evolved. The position as presented in March 2020 remains the case, and at this stage of the design process the Applicant does not have anything further to update.





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			Ditch/Cable Crossing At the meeting in March 2020, the landowner made a request that where cables crossed ditches of an appropriate depth, the ditch was infilled with a culvert and the cable would sit above the culvert. It was agreed by the Applicant that as there is some flexibility in the approach to this matter, the request would be reviewed and accommodated if possible during detailed design of the cable route installation. The position as presented in March 2020 remains the case, and at this stage of the design process the Applicant does not have anything further to update.
			In summary, on all three matters, the Applicant is committed to continue to engage with the landowner and will feed these considerations into the detailed design stage of the onshore project substation wherever possible. Until such time that the design is sufficiently advanced no further update or final agreement on these matters will be possible. Therefore it is not possible to illustrate these points in the Preliminary Design Report at this stage (ExA.AS-2.D14.V1).
Q5.9.5.4	The Applicant; NFU/LIG	Layout and drainage and landscape features at proposed onshore substation Confirm whether the landowner of land on which the proposed onshore substation would be located is in agreement on the "different layout and approach to some of the landscaping and drainage features on the site" [REP13-015, page 17] to which the Applicant refers. If not set out the areas where differences still exist and what in your/ the landowner's opinion needs further resolution	The Applicant refers to the response to part c) of Q5.9.5.3 above. The Applicant is committed to continue to engage in positive and meaningful dialogue. In summary, discussions in relation landscaping, the attenuation pond location and cable crossing of ditches will continue and when the design detail of the onshore project substation is sufficiently advanced to be able to consider the incorporation of these points, this will be progressed further with the landowner.
Q5.9.5.5	Breckland Council; Necton Parish Council;	Independent Design Review for substations In light of comments received at OFH2 [EV12-002] and OFH3 (Necton Session) [EV13-011], the decision on Norfolk	





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
	Holme Hale Parish Council; NSAG; the NFU and LIG; Landowners and Interested Parties with an interest in Necton	Vanguard, which gives greater certainty to Scenario 1, and the ExA's ongoing concern about the complexity and detail contained in post-consent approvals for R16 and R18, the resource constraints of Breckland Council and the statements in the NIC Design Principles, the ExA invited the Applicant to consider inclusion of an independent design review at an early stage in the post-consent design process for the substations area, including those for Norfolk Vanguard if appropriate. The Applicant has set out its reasons for not involving an independent design review but has committed to amending the DAS to include a design review at an early stage conducted in a local forum [REP13-018]. Do you: a) Agree that an early design review should take place? b) If so, do you consider it should be conducted in a local forum or as an independent design review — or both?	
Q5.9.5.6	The Applicant; Breckland Council; Necton Parish Council; Holme Hale Parish Council; NSAG; The NFU and LIG; Landowners and Interested Parties with an interest in Necton	Independent Design Review for substations The ExA is consulting on ways potentially to secure the input of an independent design review and invites without prejudice comments on inclusion of wording in the Design and Access Statement (DAS) and/ or the dDCO as follows: DAS [REP7-007,Para 67] The Applicant will engage with Breckland Council and at an early stage with an independent design review panel to review the mitigation and landscape proposals and the architecture of the convertor building of the onshore project substation, at the time when further detailed design information is available. This will be undertaken through the production of a Design Guide. AND [REP7-007, Appendix 1, first para] The Design Guide will be	The Applicant reiterates the previous points raised at Deadline 13 in the Position Statement on Early Involvement of a Design Review [REP13-018], namely that the design review would be best conducted in a local forum involving the district council and local stakeholders rather than through an independent design review. Accordingly, if a design review is to be secured (whether by way of Requirement or in the DAS), in the Applicant's view, this should refer to "an early design review" or "an early design review conducted in a local forum". For reasons already stated, it is the Applicant's firm position that an "independent" design review is not appropriate in this particular case and should not be referred to in either the DAS or any Requirement of the DCO. Further, given that overriding considerations must be for a design which meets technical and safety requirements, the Applicant is wholly opposed to any requirement in the DAS to "take on board findings" of an independent design review. Notwithstanding the Applicant's comments, if the ExA recommends





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		prepared by Norfolk Boreas Limited (the Applicant) and will combine input from specialist consultants and take on board findings as appropriate from the independent design review panel. This part of the Norfolk Boreas project will enable the team to undertake the detailed design of the onshore project substation and ensure that embedded mitigation is integral in this process. The Design Guide will be presented as an A3 document, and will combine text and figures to explain the proposals OR inclusion of additional wording at R16(3) to read: "The onshore project substation must be constructed in accordance with the details approved by the relevant planning authority, which must also have been subject to an early independent design review." OR Both the above.	inclusion of a DCO Requirement, the Applicant considers this might best be included at Requirement 16(4) and not Requirement 16(3), such that details provided for approval must have been subject to a design review. The Applicant sees no purpose in securing a design review in both the DAS and a DCO Requirement.
Q5.9.5.7	The Applicant	a) Update the OLEMS to cover the point regarding levels discussed at ISH5 [REP13-016, agenda item 6] and also to refer to liaison with Breckland Council in this regard. Further to the points made at OFH2 and OFH3 (Necton Session) regarding locals' preference for some larger plant material, the ExA considers your response [REP13-014, ref 7], possibly misses the point made. Your response refers to maturity of vegetation, advance planting and the proposed areas of nurse (faster growing) and core (slower growing species). The ExA understands the request from the Necton local community to be for the planting mixes to include some larger tree plant	a) The OLEMS paragraph 71 has been updated to include reference to giving further consideration to 'levels changes' as well as the use of bunding and has been updated to include both the onshore project substation and the National Grid substation extension. b) The OLEMS paragraph 66 has been updated to include a commitment for the Applicant to explore advance planting, in addition to that implemented by Norfolk Vanguard: 'Norfolk Boreas will also explore opportunities for advance planting of their landscape planting, in areas which are not affected by the construction works, under both scenarios.' c) An additional paragraph (paragraph 67) has been added to the
		·	





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:	
		b) The ExA welcomes the Applicant's repeated commitment to explore opportunities for advance planting but notes this is not stated in the most recent version of the OLEMS (other than a reference to the potential for Norfolk Vanguard planting to provide this function in Scenario 1) [REP10-014]. You are requested to include the commitment to explore advance planting opportunities in the OLEMS (and/ or the DAS) for the Proposed Development for both scenarios. c) The ExA considers that rather than leaving the matter of size of planting to be agreed as part of the R18(2)(a) submission, it would be helpful to provide a commitment in the OLEMS to a range of sizes of plant material, which would include some larger plant material at the time of planting in the vicinity of the proposed onshore substations. You are requested to provide without prejudice wording for inclusion in the OLEMS to cover this point, should the ExA be minded to recommend its inclusion to the SoS; or to include appropriate wording in the OLEMS.	provide further commitment on the size of the proposed planting as follows; 'While the majority of the tree planting around the onshore project substation and National Grid substation extension will be small whips, these will be complimented by larger planting in select locations. While whips are small at the time of planting and their initial growth rate is slow, once established their growth rate is typically faster than that of trees planted at initially larger sizes. Larger trees do, however, have the advantage of creating a more instant effect in terms of providing a landscape setting to the proposed project. Larger trees are referred to as 'standard trees' and are measured in terms of the girth of their trunks. The four types of standard trees are light standard (6-8cm at approx. 2.0-2.5m), regular standard (8-10cm at approx. 2.5-3.0m), select standard (10-12cm at approx. 3.0-3.5m) or heavy standard (12-14cm at approx 3.5-4.0m). The detailed design of the planting will include the use of standard trees in select locations where their larger size will best mitigate against visual impacts, for example at a prominent end corner of a converter hall or side façade exposed in a framed view from a nearby road.' The updated OLEMS (Version 6) capturing these updates has been submitted at Deadline 14.	
Q5.9.5.8	Breckland Council; Broadland DC; North Norfolk DC; Necton Parish Council; Holme Hale Parish Council; NSAG; The NFU and LIG; Landowners and	Design and Access Statement and Outline Landscape and Ecological Management Strategy The Applicant will submit an updated DAS and an updated OLEMS at Deadline 14 (25 August 2020) at the same time as responses to these written questions. a) You are requested to submit any comments you may have on the Applicant's updated DAS and/ or the updated OLEMS at Deadline 15 (1 September 2020). b) If you have any comments on the way the Applicant has interpreted the ExA's questions above include		





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
	Interested Parties with an interest in Necton	these. c) If you consider any wording needs changing provide suggested alternative wording. d) If you think there are ongoing omissions set out what these are and how they can be remedied.	

9.6 Good Design

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.9.6.1	Breckland Council; Necton PC	Provision for Design Review: Comment on the Applicant's Position Statement Early Involvement of Design Review [REP13-018].	

9.7 Matters arising from the accompanied site inspection (ASI) on Thursday 23rd January

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions





10 Marine and Coastal processes

10.0 Marine and Coastal processes

PINS Question Number	Question is addressed to:	Question:		Applicant's Response:
			No Questions	

11 Navigation

11.0 Navigation

PINS	Question is	Question:	Applicant's Response:
Ques	tion addressed to:		
Num	per		
			No Questions

11.1 Aviation and Radar

PINS	Question is addressed to:	Question:		Applicant's Response:
Number	audiesseu to.			
			No Questions	





12 Onshore construction effects

12.0 Cable corridor and ducting

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.12.0.1	The Applicant	Pre-commencement works The ExA notes the Clarification Note on Pre-commencement Works [REP4-018] which highlights the commitments specific to the pre-commencement works included in the relevant dDCO Requirements. The ExA also notes the diagram in the updated note on requirements and conditions [REP11-004, Annex 1] showing how Management Plans and Pre-commencement Plans interrelate and correspond to particular Requirements. a) Applicant to include this diagram in all relevant outline management plans.	The diagram referred to was produced specifically for Annex 1 of the Note on Requirements and is relevant in the context of this note and the other diagrams presented in Annex 1. None of the other diagrams within this Annex are replicated in the outline plans and the Applicant considers that including the diagram in the outline management plans would be out of context and is not appropriate or needed. The Applicant considers the relationship between the precommencement plans, the associated management plans, and the Requirements are appropriately set out and secured within the relevant wording of the Requirement within the DCO. For example, Under Requirement 20 (4) it clearly states that: 'Pre-commencement screening, fencing and site security works must only take place in accordance with a specific plan for such precommencement works which must accord with the relevant details for screening, fencing and site security set out in the outline code of construction practice, and which has been submitted to and approved by the relevant planning. This clearly identifies that under Requirement 20 (4) the precommencement screening, fencing and site security plan must accord with the relevant details of the outline code of construction practice. If considered appropriate by the relevant LPAs, this diagram could also be included in any Planning Performance Agreement negotiated post consent.





12.1 Cable corridor and ducting

PINS	Question is	Question:	Applicant's Response:
Question	addressed to:		
Number			
			No Questions

12.2 Mobilisation Areas

PINS	Question is addressed to:	Question:	Applicant's Response:
Number	addressed to.		
			No Questions

12.3 Noise and Vibration

PINS	Question is	Question:		Applicant's Response:
Question	addressed to:			
Number				
			No Questions	

12.4 Construction Hours

PINS	Question is	Question:		Applicant's Response:
Question	addressed to:			
Number				
			No questions	





13 Socio-economic effects

13.0 Skills and Employment Strategy

PINS	Question is	Question:		Applicant's Response:
Question	addressed to:			
Number				
			No questions	

13.1 Jobs

PINS	Question is	Question:		Applicant's Response:
Question	addressed to:			
Number				
			No questions	

13.2 Tourism

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.13.2.1	The Applicant; North Norfolk District Council	The ExA notes the information you have provided regarding the tourism in North Norfolk District largely in the Local Impact Report [REP2-087, Appendix G onwards], and in subsequent submissions. a) NNDC, comment on the Applicant's views [REP13-025, Page 11]. b) Applicant, any further comments to NNDC [REP13-032]. c) The ExA notes that NNDC is determining whether any further evidence can be provided and whether the	b) The Applicant notes that no additional evidence has been submitted by NNDC to support its position on tourism impacts in REP13-032. Therefore the Applicant has no further comments on tourism and the Applicant's position remains unchanged from the detailed response provided to the ExA's Third Written Questions Q3.13.2.1 [REP7-017]. The Applicant would like to clarify a point made in the Deadline 13 submission. In paragraph 4.2 NNDC state the following; 'In its submissions following ISH 3, NNDC recorded the Applicant's acceptance at that hearing that the sensitive tourism receptors listed

Applicant's Responses to the Examining Authority's Fifth Round of Written Questions Norfolk Boreas Offshore Wind Farm

ExA.WQ-5.D13.V1





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		draft requirement can be further refined. Final positions are sought from both NNDC and the Applicant at D14.	by NNDC may not all have been assessed as part of the ES, instead being left for assessment when particular out-of-hours works are proposed [REP4-031].'
			To clarify, this point relates to noise sensitive receptors not tourism receptors. The Applicant was acknowledging that not every noise sensitive receptor along the cable route had been assessed in the EIA, but the closest receptors, as was agreed with relevant LPAs and in accordance with best practice and relevant methodologies. Since ISH3 the Applicant and NNDC have reached agreement on the definitions of noise sensitive receptors (reflected in the final SoCG REP10-040] and the text which is included in the OCoCP to capture this i.e. Section 9.1. The Applicant has fully assessed potential impacts on tourism receptors in the ES (Chapter 30) [APP-243] and the Applicant's clarification of the noise sensitive receptors assessed has no bearing on the evidence in so far as it is relevant to tourism impacts.
			c) In their Deadline 13 submission [REP13-032] NNDC refer to providing revised wording and aiming to provide further evidence by Deadline 14. Therefore, the Applicant will need time to consider any further submissions made by NNDC post Deadline 14 and will not be able to submit a final position on this matter at Deadline 14. However, on receipt of any further information from NNDC the Applicant will, if required, provide an updated final position for the subsequent deadline (i.e. Deadline 15 on the assumption that NNDC submit further information on or before Deadline 14).





13.3 Land use and Agriculture

PINS	Question is	Question:	Applicant's Response:
Question	addressed to:		
Number			
			No Questions

13.4 Public Health

PINS Question is Question addressed Number		Applicant's Response:
Q5.13.4.1 The Applica	Respond to the matters raised in the representation Corpusty and Saxthorpe Parish Council.	The Applicant would like to clarify that all appropriate guidelines and standards in gathering data and assessing the results have been adhered to and the opinions provided are given by experienced and professional topic experts as required by EIA Regulations 2017. The experts who have undertaken, checked and approved the impact assessments presented for the Norfolk Boreas project have extensive expertise of undertaking similar impact assessments across a range of Nationally Significant Infrastructure projects in the UK. The Applicant is therefore confident that the impact assessments undertaken are fully compliant with relevant standards and wholly appropriate, for the scale of the project and the nature of the impacts predicted. Public Health England confirmed in their response to the ExA's Third Round of Written Questions [REP7-063] that the Applicant's assumptions and assessment are robust and proportional for an EIA, as stated in our response to the ExA's Q5.4.0.5 above. Key issues in the Corpusty and Saxthorpe Written Representation [REP2-068] have been included as headings below: Impacts upon people and communities living along the route of the B1149 and the B1145





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			The Applicant has assessed communities as a whole population along the cable route as is appropriate in an EIA. Proportional and appropriate approaches to human health assessment in EIA are detailed in Cave et al. (2017) ³ .
			The scale and duration of impacts, the mitigation and final impact on the community has been stated in the ES in Chapter 27 Human Health [APP-240], drawing on the assessments conducted in Chapter 26 Air Quality [APP-239], Chapter 24 Traffic and Transport [APP-237], Chapter 25 Noise and Vibration [APP-238], Chapter 20 Water Resources and Flood Risk [APP-233], Chapter 30 Tourism and Recreation [APP-243] and Chapter 31 Socio-economics [APP-244].
			With regard to the communities along the route none of the potential impacts have been assessed as significant either for the project alone or cumulatively. The worst-case cumulative impacts are assessed as minor, which is not significant in EIA terms.
			Proper consideration of public health risks and costs to wellbeing The Applicant has assessed and considered health effects in line with best practice methods, current guidance and in a manner proportional to the scale and duration of the construction work, operational period and any subsequent decommissioning works. The Applicant will undertake works in a sectional approach along the linear scheme to reduce the duration which each community along the onshore cable route is impacted as part of the embedded mitigation strategy. As stated in the ES the Applicant followed advice provided in the Institute of Environmental Management and Assessment, 2017: Health in Environmental Assessment, a primer for a proportionate approach (Cave et al., 2017). The Applicant engaged

³ Cave,B. Fothergill,J., Pyper, R. Gibson, G. and Saunders, P. (2017) Health in Environmental Impact Assessment: A Primer for a Proportionate Approach. Ben Cave Associates Ltd, IEMA and the Faculty of Public Health. Lincoln, England. Available at www.iema.net

Applicant's Responses to the Examining Authority's Fifth Round of Written

Norfolk Boreas Offshore Wind Farm

ExA.WQ-5.D13.V1

Questions

Zucstions

August 2020 Page 76





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			fully with PHE, regulatory bodies and local councils to ensure they conducted an EIA which appropriately considered impacts to human health including wellbeing. PHE's support of the Applicant's assessment provides impartial and professional confidence that the consideration of health and wellbeing risks has been conducted properly.
			Given the temporary and episodic nature of the impacts, which are restricted to the construction phase of the project, and the non-significant assessment of all the relevant impacts, the applicant is confident the impact assessment provided is proportionate and comprehensive. This is borne out through comprehensive and ongoing consultation with the relevant statutory public health bodies.
			Health effects such as reduction in life expectancy, epigenetic effects, late developing illness associated with medium or long term exposure to particulate matter generated by project-related additional traffic. The Applicant would firstly like to reassure Corpusty and Saxthorpe Parish Council that the additional construction traffic will not be a long term impact, ('Long term' relates to effects measured in decades as clarified in the Human Health chapter of the ES [APP-240]).
			ES Chapter 26 Air Quality [APP-239], states that by following mitigation recommended by IAQM, any residual impacts associated with changes to particulate matter will not be significant.
			The health effects stated in the Corpusty and Saxthorpe Parish Council Written Representation related to health effects arising from long term exposure to high (significant) levels of particulate matter, which are not relevant in this case. For example, the study cited in





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			reference to epigenetic changes ⁴ , related to data and results from New Delhi the 6 th most polluted city in the world. For comparison London the most polluted city in the UK isn't within the top 500 cities listed for poor air quality. We do not see that this study can be considered an appropriate comparator, or in any way relevant for use as a comparison for air quality health effects in rural England.
			Corpusty and Saxthorpe Parish Council also cited studies ⁵ on the impact of particulate emissions on human health and associated costs. Impacts of air pollution and health as described in the study from the Royal College of Physicians ⁶ cited by Corpusty and Saxthorpe Parish Council states:
			"Growth in pollution has not always been as fast as growth in traffic, thanks to tighter exhaust controls. Modern cars produce very little carbon monoxide and hydrocarbons, and the sulphur and lead in diesel and petrol must meet tight regulations."
			The written representation refers to the estimated cost of air pollution to the NHS. However, the findings of the study cited also state that cases of any pollution related disease are lower in rural areas, and that risk of disease is higher in metropolitan areas.
			"Estimates of attributable cases due to PM2.5 exposure for Lambeth, an area with high exposure (3,242 new cases of disease per 100,000 population by 2035) were far higher than those for South Lakeland (861 new cases of disease per 100,000 population by 2035), an area with low exposure"
			Whilst the Applicant does not dispute the papers or their findings;

⁴ https://www.imperial.ac.uk/news/184333/ways-imperial-researchers-tackling-pollution-crisis/

Applicant's Responses to the Examining Authority's Fifth Round of Written

Norfolk Boreas Offshore Wind Farm

ExA.WQ-5.D13.V1

Questions

August 2020 Page 78

⁵ Air Quality damage cost update 2019, ED 59323 | Issue Number 2.0 | Date 27/02/2019, contact Sally Whiting, Ricardo Energy & Environment, Gemini Building, Harwell, Didcot, OX11 OQR, United Kingdom

⁶ https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution

⁷ https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			the research relates to long term exposure to a level of traffic and air pollution which is many orders of magnitude greater than the temporary worst case used in both the project alone and cumulative assessments within the relevant EIA chapters of the Norfolk Boreas Environmental Statement Similar to the reference to epigenetic changes related to New Delhi air quality above, the context of these papers and their conclusions are simply not relevant or applicable to support an argument against a non-significant increase in HGV traffic within a village in rural England.
			"Other significant objective evidence of the effects arising from increased traffic associated with the project are cited" The Applicant notes that the study by Imperial College London ⁸ cited by Corpusty and Saxthorpe Parish Council refers to pollution levels specifically in London and metropolitan areas. The Applicant would like to reiterate that studies based on metropolitan data, are not an appropriate comparison for the project which is sited in a rural location. The population living along the B1149 and the B1145 already reside along the roads stated, and the increase in traffic associated with the construction phase of the project will not lead to a long term impact (as defined in the relevant guidance) or significant change to the air quality of the area as stated in the ES [APP-239]. As stated above Public Health England, an objective and impartial body, support the approach, assessment and findings of the Human

⁸ https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/New-solutions-to-air-pollution-challenges-in-the-UK-LFSP-BP.pdf





13.5 Other offshore industries and activities

PINS	Question is	Question:	Applicant's Response:
	addressed to:		
Number			
			No Questions

14 Traffic and transportation

14.0 Outline Traffic Management Plan (OTMP)

PINS	Question is	Question:	Applicant's Response:
Question	addressed to:		
Number			
			No Questions

14.1 Highway Intervention Scheme for Link 34 (B1145 through Cawston)

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.14.1.1	The Applicant; Norfolk County Council; Broadland District Council; Interested Parties	Outstanding concerns from Cawston PC The ExA notes [REP11-016] that NCC is satisfied that the proposed HIS for Link 34 is sufficient to mitigate against the impact arising from the Proposed Development, including the cumulative scenario with Hornsea Project Three. However, the progress with the HIS has not alleviated concerns with residents and Cawston PC [REP13-019]. Concerns remain on matters relating to: on street carparking, risk of accident, effectiveness and compliance with the 20 mph speed limit, risk from wing	a) The Applicant is cognisant of Cawston Parish Council's (CPC) residual concerns and at the recent meeting held on the 21 st July 2020 both parties agreed to continue to engage with a view to achieving a constructive outcome [please refer to REP13-019, Appendix 1]. The Applicant has continued to respond to and provide clarification on specific matters raised by CPC throughout the examination process. The Applicant has provided clarification on the latest matters raised in CPC's Deadline 13 Submission [REP13-027] in the Applicant's response to Deadline 13 submissions, submitted at Deadline 14 [ExA.ASR.D14.V1].





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		mirrors, entrance and egress on to the B1145 from driveway, and incremental reduction in cumulative cap of 239 HGVs to manage driver compliance issue. a) In light of these outstanding concerns from the affected community, NCC and the Applicant to consider what further steps and detailed design – highway and public realm – can be secured in the OTMP before the close of this examination to maximise the mitigation provided by the HIS? b) Comments are sought from NCC to the above question, in light of the note of the meeting with Cawston PC and the Applicant [REP13-019]. c) Applicant, what was the outcome of the scheduled site visit on 31 July to review the concerns about entrance and egress from the resident's driveway on to B1145. Other relevant IPs may wish to comment. d) Broadland DC may wish to comment.	In summary, as set out in the Applicant's Response to Open Floor Hearing 2 [REP13-014] the HIS has evolved substantially during the Norfolk Boreas examination and been subject to numerous revisions in response to stakeholder concerns and formal technical reviews. Having passed an independent road safety audit and received technical approval from NCC the scheme is considered finalised from an infrastructure intervention perspective. As detailed in the Written Summary of the Applicant's Oral Case at Issue Specific Hearing 5 (Item 4 (e)) [REP13-016] notwithstanding the evolution of the HIS during the Norfolk Boreas examination, the Applicant recognises the concerns on cumulative impact. The Applicant is mindful that traffic impacts have been assessed very much on a worst case basis, and it has always been the intention to refine and manage cumulative HGV numbers post consent in line with construction methodologies and programmes. The Applicant has continued to engage with HP3 throughout the development of the HIS. Following the closure of the HP3 examination, HP3 has progressed profiling of HP3's traffic demand through Cawston and has provided a technical note to the Applicant which sets out the revised HGV traffic movements through Cawston [ExA.AS-4.D14.V1]. This note, which has been submitted to the examination at Deadline 14 [ExA.AS-4.D14.V1], includes a commitment to a 'staggered' construction programme over an 11 month period which results in the refinement of impacts for HP3 traffic flows (alone) as follows: • The duration of works involving HP3 traffic flows in Cawston will be 11 months; • The peak construction HGV total of 127 daily movements would occur for a maximum of one month;





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			 There will be significantly reduced HGV demand for 10 months of the 11 month construction duration (which would include a secondary peak of 68 daily HGV movements and a 9 month average of 62 daily HGV movements).
			The HP3 refined profiling of HGV demand represents a significant reduction in that project's HGV impact to the 'Maximum Design Scenario' assessed in the HP3 Environmental Assessment [APP – 079 of the respective examination] which was 127 daily HGV movements for a 30 month period.
			This demonstrably, re-affirms the Applicant's assertion that the Norfolk Boreas and HP3 HGV peaks can be managed post-consent so as to not overlap (e.g. the respective project HGV primary peaks have a duration of only one week and one month) to significantly reduce potential cumulative impacts.
			As stated in ISH5 (see the Written Summary of the Applicant's Oral Case at Issue Specific Hearing 5, Item 4 (e), [REP13-016]) the Applicant considers that this management and ultimate reduction of cumulative HGV numbers post consent would be the 'revised details' referred to in Requirement 21 (4) of the dDCO [REP13-007]. The extent of the reduction will need to be determined when further details of programmes are available post-consent and when construction methodologies have been refined to reduce traffic flows where possible.
			The Applicant has updated the OTMP to commit to a reduction of cumulative HGV movements on Link 34 through Cawston at the preconstruction stage (but post consent) as part of the development of the final TMP and subsequent discharge of Requirement 21 of the dDCO. The OTMP (Version 6) submitted at Deadline 14 has been





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			updated to include the following as paragraph 129 in Section 4.3.2 for Link 34 Cawston;
			"No further physical changes are proposed to the HIS, however as secured through Requirement 21 (4) 'revised details' in the form of a reduction in the cumulative HGV peak from 239 by ensuring Norfolk Boreas and Hornsea Project Three peak traffic demand does not overlap, will be captured in the final TMP. The extent of the reduction will be determined post-consent when construction methodologies are refined and construction programmes are developed."
			Thus, demonstrable avoidance of overlapping peak HGV demand (supported by monitoring and enforcement) becomes a precommencement requirement rather than a driver compliance intervention measure. This has therefore been removed from the driver compliance intervention measures in the updated OTMP (Version 6) submitted at Deadline 14.
			In the event that the 'refined' cumulative HGV totals require further intervention, then the remaining range of driver compliance measures detailed in Section 5.6 of the OTMP includes an incremental reduction of HGV demand as a further driver compliance strategy for HGV reduction.
			c) During the OFH3 and the meeting held with CPC on the 21 st July [REP13-019] the resident of Whitehouse Farm identified their concern was two-fold:
			 Due to the inherent restricted visibility the resident has to encroach onto the live carriageway to obtain enough forward visibility to egress – would this be made worse by the HIS?





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			 Would the realignment of the High Street (at the parking triangle) restrict visibility from the Chapel Street give way to an extent that this would encourage dangerous turning manoeuvres onto the High Street in the vicinity of Whitehouse Farm?
			The Applicant reviewed the entrance and egress from the property and a site visit to discuss the matter with the resident was held on 31 st July 2020. The Applicant reviewed the visibility of entrance and egress from the property by comparison of the baseline situation and the High Street realignment for a 30mph design speed (current speed limit) and produced drawings to facilitate discussions at the site visit. The data presented confirmed that a vehicle egressing the Whitehouse Farm in baseline conditions would have to encroach on the carriageway by approximately 1m to achieve safe visibility. This is marginally increased (200mm) by the realignment of the High Street. However, the critical visibility metric is that of an eastbound approaching vehicle who's driver would need to react to a vehicle encroached on to the carriageway. For this metric it was evidenced that forward visibility for an eastbound vehicle is obscured in the baseline situation by westbound traffic, for the HIS the realignment of the carriageway increases the visibility giving unimpeded safe stopping forward visibility, potentially improving road safety for vehicle egress.
			The resident acknowledged the information presented and requested further details on visibility for a 20mph speed limit (the design speed of the HIS) and visibility to a stationary HGV at the eastbound 'yield point'. They also requested further details of the visibility at the Chapel St, High St junction.
			The Applicant has produced a Technical Note on Entrance and Egress onto the B1145 which summarises the information which was shared





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			with the resident (during and following the meeting) and includes copies of all the relevant drawings [ExA.AS-5-D14.V1], which has been submitted at Deadline 14. These drawings confirm the following:
			 Egress encroachment of 1.7m required for the baseline situation is identical to that required for the HIS to obtain safe 20mph visibility. Therefore as with the 30mph design speed, eastbound safe stopping visibility is the critical metric; Very similar encroachment (~1.7m) is required to observe a stationary HGV at the eastbound yield point; There will be unimpeded, safe stopping, forward visibility for an eastbound HGV to Whitehouse Farm egress; There will be unimpeded, safe stopping, forward visibility for a HGV at the eastbound yield point; The HIS achieves the requisite 20mph safe visibility for the Chapel St, High St junction.
			Whist on site, the resident also raised concerns that vehicles currently use their driveway as an impromptu passing place. This behaviour was observed on site by a number of commercial vehicles. The improved eastbound forward visibility for the HIS will lessen the propensity for vehicles to be 'trapped' at this location and therefore the need to pull over. Notwithstanding this, the Applicant will investigate if some form of deterrent could be introduced while not restricting the legitimate use of the access for delivery vehicles.
			The resident made the helpful offer that the access area could be utilised to mount a continuous monitoring camera (within the constraints of planning/conservation permissions).
Q5.14.1.2	The Applicant; Interested Parties	Impacts of construction traffic on emergency vehicles a) Notwithstanding the reference to the Highway Code in the Driver Induction Packs [REP13-015] highlight	a) The HIS design has been informed by validated background traffic surveys, the published Hornsea Project Three traffic demand and the Norfolk Boreas traffic forecasts. The design contains sufficient tolerance to accommodate daily traffic fluctuations, it is therefore





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:					
		specific locations of conflict between HGVs (or two HGVs travelling in opposite directions) with emergency vehicles, particularly emergency vehicles travelling to the care home on Paul Engelhard Way in Cawston [REP13-054]. b) What is the implication of such conflicts on emergency response time, and how is it proposed to be resolved in the OTMP?	(including those accessing the care home off Chapel St. referred to by CPC [REP 13-015).					
Q5.14.1.3	The Applicant; Norfolk County Council; Broadland District Council	 a) Respond to the submission [REP13-054] and the specific points raised on Page 1. b) Comments are sought from NCC and Broadland DC. 	a) The Applicant has reviewed REP13-054 and considers the specific points raised on Page 1 refer to the following two key topics; • Volume of personnel traffic and associated impacts; and • Request for compensation for Cawston High Street residents Each point is dealt with in turn below: Volume of personnel traffic and associated impacts The table below shows the employee assignment of personnel passing through Cawston considered within the assessment broken down by activity: Project Infrastructure AM PM Source Peak Peak					





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:				
			Norfolk Boreas S2	TC8, MA6-East and West	38	38	NB ES Appendix 24.22 [APP- 637] & Appendix 24.28 [APP- 643]
				Pass through traffic to other NB Infrastructure sites	24	24	NB ES Appendix 24.28 [APP- 643]
			Hornsea Project Three	Cable Sections 9 & 10	122	122	HP3 ES
				Totals	184	184	
			enable the m the ES. The E associated w associated in In reality, it i site by single be required,	ers have been used a naximum environmer S has not identified a ith this worst case transacts such as noise. It is not operationally accupancy car use (estart/finish time coule to Norfolk County (atal impaci any residua affic dema cceptable e.g. excess Id get frag	es to be asse al significant nd including for personn ive parking mented) no	essed within t impacts g any el to travel to space would r is it likely to





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			that the vehicles numbers will be significantly reduced to that of personnel numbers.
			The control and limitation of personnel traffic is secured in the Outline Travel Plan (OTP) [APP-700]. Within the OTP, specific targets relating to workforce trip rates or mode share have not been proposed as it is considered that the contractor will better inform this evaluation when the workforce quantum and demographic has been refined. Final targets and associated measures will be discussed and agreed with NCC during the production of the final OTP secured through dDCO Requirement 21 (1) (b). In the interim, the OTP establishes a framework of measures to be adopted aimed at reducing single car occupancy, supported by robust monitoring, enforcement and governance.
			Request for compensation for Cawston High Street residents The Applicant provided a response to the request for compensation measures in Cawston during the meeting with CPC held on the 21st July 2020. The Applicant's response to the points raised is documented in the Position Statement of the meeting [REP13-019] on page 7 and 8 'Additional Mitigation Measures' and 'Community Benefit' and in Appendix 1 Meeting Notes. However, a summary of the response to the specific mitigation requested is provided below; • The measures proposed for Old Railway Gatehouse are specific to the circumstances experienced at that location and are not considered to be applicable for Cawston. • The vibration assessments undertaken [see Clarification Note REP8- 028] concluded a non- significant impact and that the levels are much lower than those which would cause structural damage. Therefore, no mitigation is required or





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			 The Applicant will look to deliver a wide range of community benefits which may include some benefits in-kind such as improved community amenities, which may include help with external maintenance of properties. However, such benefits are delivered voluntarily and are not material to the planning process.
Q5.14.1.4	The Applicant	 a) With reference to Action point 4 [EV14-005] provide an update on how Hornsea Project Three's commitment to adopt the revised HIS that has now successfully been through the road safety audit [REP5-055] could be legally secured in the dDCO for the Proposed Development. b) Can the Applicant provide a likely timescale for the signing of the Design Interaction and Co-Operation Agreement stated in the SoCG with Orsted [REP9-026]. Will the design Interaction and Co-operation agreement include a commitment from Hornsea Project Three to implement the revised HIS for link 34 [REP5-055]? 	 a) The Applicant understands that HP3 intend to submit an updated Outline Construction Traffic Management Plan (OCTMP) to the Secretary of State which will include details on the revised HIS for Cawston, as developed by Norfolk Boreas. The implementation of the revised HIS by HP3 will therefore be secured through the HP3 OCTMP and their dDCO Requirement 18 (1). b) Discussions are ongoing with Orsted regarding the Design Interaction and Co-Operation agreement however the document will not be agreed and signed after the examination closes. As detailed above, the implementation of the revised HIS will be secured through the submission of an updated OCTMP by HP3 to the Secretary of State prior to final determination of the HP3 application.
Q5.14.1.5	The Applicant	Monitoring and enforcement of the HIS It is stated [REP10-016, para 173] in the Specific Cawston Village Monitoring and Intervention Regime that further intervention measures will be agreed with NCC, to be implemented on validation of a driver compliance issue, including a reduction in the cumulative HGV cap (239 HGV movements) by ensuring Norfolk Boreas and Hornsea Project Three traffic demand does not overlap, and incrementally reducing the volume of traffic passing through Cawston from 239 HGV movements through	 a) Review of camera footage by the Applicant and NCC would confirm the nature of the compliance issue, whether it is as a direct result of construction traffic demand, and determine appropriate intervention. b) Details of how the monitoring would work in practice would be agreed with NCC pre-commencement and secured in the final TMP. The broad processes would be: i. Camera locations to be agreed in consultation with NCC and CPC; ii. Daily review of footage by the Applicant with a requirement to report anything of note to NCC;





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Number		targeted intervention informed by monitoring and consultation with the Highway Authority. a) What do you mean by "to be implemented on validation of a driver compliance issue"? b) Provide any further information on how this monitoring programme would work in practice. Update the OTMP accordingly. c) Could this have a knock-on effect on the duration of the project, in particular the HGV profiles through Cawston, the worst case scenario that has been assessed in the ES or any other ES parameters?	 iii. On receipt of a complaint immediate review of footage and report back to NCC as to action taken; and iv. Live feed shared with NCC. This process has been included in the updated OTMP (Version 6) submitted at Deadline 14. c) As explained in the Applicant's response to Q5.14.1.1, the revised HGV traffic data from HP3, submitted by the Applicant at Deadline 13 [ExA.AS-4.D14.v1], confirms that overall HGV demand will be reduced without the need to extend the construction programme or impact on any other parameters on which the cumulative assessment was based. The data also identifies longer periods when average peaks represent much reduced daily HGV demand, allowing flexibility to reassign deliveries within the assessed peak parameters. The
			continuous monitoring technology would also be used to identify periods where HGV demand could be re-assigned.





14.2 Oulton

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.14.2.1	The Applicant	Old Railway Gatehouse Confirm the steps that have been made to seek approval from the residents of Old Railway Gatehouse for the proposed additional mitigation [REP10-016]?	As noted in REP11-007, the Applicant spoke with the residents of Old Railway Gatehouse on the 7th May 2020 and a summary of the call was sent to the residents on the 8th May 2020 as a record of that discussion. The Applicant acknowledged the views of the residents in relation to the project, and a key outcome of the discussion was that the Applicant agreed to consider extending the physical alterations to include the northern side of the property and acoustic glazing of all windows, including the skylight windows. The Applicant committed to continue to engage with the residents to reach a mutually acceptable form of enhanced measures.
			The Applicant provided further clarification on the effect that the proposed measures would have in terms of noise reduction experienced by the residents of the Old Railway Gatehouse on the 8 th July 2020. On the 31 st July 2020, the Applicant visited the Old Railway Gatehouse to discuss the proposed measures in further detail.
			Following this visit the Applicant proposed that the measures discussed were included in a revised version of the OTMP. The Applicant met with the residents of Old Railway Gatehouse on the 18 th August 2020 and has agreed this approach. The measures agreed are:
			 Acoustic glazing throughout all windows on the property 2m acoustic barrier to the east and south of the property.
			In addition, the Applicant has engaged with Hornsea Project Three to explain the measures proposed and to request that Hornsea Project Three also commit to these measures, such that the residents can be assured, that whatever the order of construction of the projects the agreed measures will be implemented at the property. The updated





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			Norfolk Boreas OTMP with the agreed proposals has been submitted at Deadline 14.

14.3 Link 69 Little London Road in North Walsham from the B1145 Lyngate Road to an access point 210m east

PINS	Question is	Question:	Applicant's Response:
Questio	n addressed to:		
Numbe			
			No Questions

14.4 Outline Access Management Plan and Access to Works Plan

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions





15 Water Resources and Flood Risk

15.0 Water Resources and Flood Risk

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.15.0.1	The Applicant	Drafting change in OCoCP regarding watercourse crossings: Correct the drafting of the OCoCP para 150 [REP8-003] regarding scheme for each watercourse crossing "will be submitted to and approved by the relevant planning authority in consultation" with "Norfolk County Council, the Environment Agency, relevant" drainage "authorities and".	The corrections have been made in the OCoCP (now paragraph 154) and the updated OCoCP Version 6 has been submitted at Deadline 14.
Q5.15.0.2	National Farmers Union (NFU) and Land Interest Group (LIG)	Wording of the OCoCP regarding private agricultural water supplies: Does NFU wish to add anything further in response to the Applicant's representation regarding Private Water Supplies [REP13-015]?	

16 General

16.0 General

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:		
Q5.16.0.1	Breckland Council; Broadland DC; North Norfolk DC; Norfolk CC; Cawston Parish Council; Holme	SoS Decisions and letters regarding other NSIPs The Applicant has set out its view on the implications on the Proposed Development of the Norfolk Vanguard decision and the SoS Hornsea Three letter [REP13-025]. Points were also made at ISH5 [EV14-004]. a) Provide the ExA with any views you			
Applicant's Re	Applicant's Responses to the Examining Norfolk Boreas Offshore Wind ExA.WQ-5.D13.V1				

Applicant's Responses to the Examining Authority's Fifth Round of Written Questions

Farm





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.16.0.2	Hale Parish Council; Necton Parish Council; Oulton Parish Council; The NFU; NSAG; Mulbarton Parish Council; The Environment Agency; Other IPs may wish to comment The Applicant	have which do not accord with the Applicant's opinion as set out in the above document and particularly Appendix 2, which sets out the relevance of the SoS Norfolk Vanguard decision on the Proposed Development, topic by topic. b) Any other matters arising as a result of the SoS Decisions and letters regarding other NSIPs, which you wish to draw to the ExA's attention should be set out here, stating implications and actions you would wish to see. Note: HRA responses do not need to be given here, as there are specific questions elsewhere. Implications for the Proposed Development of any decisions	There are no other points, not already submitted to the Examination,
Q5.16.0.2	тпе Аррисапі	and/ or letters on other offshore wind farms Set out any points, not already submitted to this Examination, that you consider would be important and relevant to the SoS decision for the Proposed Development.	which the Applicant considers to be important or relevant to the SoS decision.
Q5.16.0.3	The Applicant; Other Interested Parties	As it is now over a year since the application for the Proposed Development was submitted, set out any points additional to those in your application, on the need for the Proposed Development that you consider would be important and relevant to the planning balance case for the SoS decision. Other parties may wish to comment.	Further to the evidence provided in Chapter 2 of the ES, Need for the Project [APP-215] submitted with the Application in June 2019, the Applicant also provided further information on the need for the project within section 5 (IROPI) of the Applicant's In Principle Habitats Regulations Derogation Provision of Evidence [REP7-024]. Additional points of relevance in REP7-024 include: • New evidence of the harmful effects of anthropomorphic expediated climate change and the positive effects on both humans and the natural worlds of deploying non-greenhouse gas emitting technologies to mitigate these impacts including: • The World Meteorological Organisation (WMO) reported that between 2001 and 2010 extreme weather events





PINS Question	Question is addressed to:	Question:	Applicant's Response:
Number			
			caused more than 370,000 deaths worldwide (including a large increase in heatwave deaths from 6,000 to 136,000) — 20% higher than the previous decade (DECC, 2014). These are widely attributed to climate change and there is a clear need to reduce the occurrence of such events in the future. Climate change effects such as flooding have potential to impact on mental health and provide other indirect impacts as a result of disruption to critical supplies of utilities such as electricity and water (Health Protection Agency, 2012) as well as reducing crop yield and driving up food prices. 2019 was the second hottest year globally since records began in 1880 (Copernicus Climate Change service, 2020). Extreme heat as well as extreme storm events caused by global warming are a significant risk to public safety and therefore there is a clear need to reduce the occurrence of such events. The switch to renewable sources of energy has both air quality and associated human health benefits. A recent study has demonstrated the significant beneficial impacts on human health from decarbonisation, stating that "estimates suggest that overall around 3.5 million or so premature deaths from air pollution worldwide could be prevented annually from phasing out fossil fuels at today's population. If all sources of air pollution from human activities could be eliminated, our estimates show that more than five million premature deaths from air pollution would be prevented annually." (LSHTM, 2019). The recent EU funded Strategic Environmental Assessment North Sea Energy (SEANSE) project has assessed the impact of climate change on key bird species (Rijkswaterstaat Zee & Delta, 2020) and concluded that changes in prey availability due to climate change is the





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			current pressure which appears to have the largest impact on kittiwake and lesser black-backed gull at the wider North Sea level. This is likely to be responsible for a substantially greater effect than impacts resulting from any other activity (including collision risk). • The declaration of climate emergency by the UK government in May 2019 and the subsequent amendments to The Climate Change Act 2008 (2050 Target Amendment) Order 2019 which commits the UK to a net reduction in greenhouse gas emissions (against the 1990 baseline) to net zero; a reduction of 100% by 2050; • The Government's statutory body's Progress Report on reducing emissions for 2019 (CCC, 2019) which found that actions outlined in the 2018 Progress Report to Parliament (CCC, 2018) were falling significantly behind where they should be and therefore rapid progress within the industry is required to meet the governments targets. • TCE's Round 4 Information Memorandum published in 2019 illustrates how there is only a very small level of contingency in capacity if it is assumed that all Round 3 Wind Farms and Extensions will be consented and successfully achieve a CfD in order to enable the UK to meet the 2030 30GW target (The Crown Estate, 2019). In this context it is worth noting that, at the time of the announcement of ZDAs in 2010, Round 3 was expected to provide 32GW in total, yet in 2020 the capacity of operational OWFs (from all leasing rounds to date) is only 8.5GW with the last six Round 3 OWFs currently in planning, totalling approximately 10GW; • The current Government's response has been to include in its manifesto, a target to deliver 40GW of installed offshore wind generating capacity by 2030 – increasing the target set by the previous administration and the Offshore wind sector by 10GW. These factors clearly illustrate the political will to





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			ensure offshore wind will be the backbone of the clean, reliable, affordable energy system that will power an economy with net zero carbon emissions.
			Consent and construction of the Norfolk Boreas Project would make a significant contribution to all of the needs listed above. Further information on the significance of this contribution is provided in section 5.5 of REP7-024.
			Further to the need identified within the IROPI case, as listed above, the UK economy has now shrunk by up to 25% (Financial Times, 2020) due to the COVID-19 Pandemic with the number of people claiming out-of-work benefits the highest it has been for twelve years (BBC 2020). As recently presented by industry leaders to the House of Commons Environmental Audit Committee, the commitment to green energy and in particular offshore wind offers a significant boost to the UK economy: According to Orsteds Benj Sykes, the offshore wind industry is the 4 th largest investor in UK infrastructure – set to invest £50bn in the UK economy over the course of this decade (reNEWS 2020). This will lead to the creation of a significant number of jobs: the sector estimates that offshore wind could support 27,000 direct jobs across the UK by 2030 (BEIS, 2020) with thousands more employed in the wider supply chain and the CEBR (2012) estimated that, by 2030, offshore wind could increase GDP by 0.6% and support 173,000 jobs at a time when these are badly needed. Green energy such as offshore wind could drive the Covid-19 recovery.
			The Offshore Wind Industry Council will be investing £100 million in grants to keep UK supply chain companies at the forefront of innovation products and services. Offshore wind is revitalising coastal counties and communities across the UK, with emerging "offshore wind clusters" of business, innovation and higher education institutions which are transforming parts of the UK which might otherwise have





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			been associated with low economic growth. There is certainly an appetite and huge potential for an East of England Cluster – focused around the O&M hub that is growing around Great Yarmouth and Lowestoft ports. As the developer of the two largest offshore wind projects in the southern North Sea, and with potential Operations and Maintenance presence at Lowestoft and Great Yarmouth, the Applicant is an important contributor to the delivery of the East of England offshore wind O&M cluster. This ambition is set out in various local policies and plans, including the New Anglia Local Economic Partnership's Local Industrial Strategy (New Anglia 2020) and in the region's Covid-19 Economic Recovery Restart Plan. While the Applicant's projects remain in development and investment is concomitant with this status, the Applicant continues to work effectively with local and relevant National stakeholders to ensure the local and regional supply chain can continue to prepare for the opportunities the projects promise should they proceed to, construction and operation (Vattenfall 2020) and (Energy focus 2020). The Applicant is also continuing to engage actively with skills providers in the region, providing opportunities for young people and also for those wishing to transfer into the sector (Eastern Daily Press, 2020) In summary since the Application was made in June 2019 the evidence base (which was already extensive) supporting offshore wind and the Norfolk Boreas project as an efficient and cost-effective solution to reduce the impacts of climate change, energy shortfall and unemployment has increased significantly at a global, national and regional level. Much of this evidence has been captured within the Applicant's attention since that submitted at Deadline 7 has also been included within this response.
Q5.16.0.4	The Applicant	Comments on Deadline 13 submissions There were a number of submissions at Deadline 13 in lieu of	a) and b) The Applicant refers to the Applicant's comments on Deadline 13 submissions [ExA.ASR.D14.V1] submitted at Deadline 14,
		attendance at the OFHs in July published under [EV-13] and	where the Applicant has provided responses to topics raised in





PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		other submissions, including post hearing submissions under [REP13]. a) Provide responses to these if they raise matters not already addressed in your response to OFHs [REP13-014] and [REP13-015]. b) Provide response to any other matters raised in Deadline 13 submissions, not already addressed elsewhere.	submissions made by interested parties at Deadline 13 which are not already covered by the responses to OFH2 [REP13-014] or OFH3 [REP13-015].
Q5.16.0.5	The Applicant; Interested Parties	Additional information The Applicant and Interested Parties are invited to submit any additional information to assist the ExA in reaching its recommendation to the SoS not covered previously in the Examination, or in the responses provided above.	A claim for judicial review was issued on 13 August 2020 by Mr Ray Pearce, seeking the quashing of the Norfolk Vanguard DCO on one ground related to whether the Examining Authority and SoS's approach to consideration of cumulative effects with Norfolk Boreas was lawful. Both the SoS, as Defendant, and Norfolk Vanguard Limited, as Interested Party, have indicated to the Claimant their intention to contest the claim. Until such time as the Court rules on the Grounds of Claim put forward, the Norfolk Vanguard DCO remains valid. The mere fact of the claim having been issued is therefore of no relevance to the ExA in reaching its recommendation to the SoS.

16.1 Environmental Statement (ES)

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			No Questions





16.2 Waste management, ground conditions and contamination

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
Q5.16.2.1	The Applicant; Breckland Council; The Environment Agency	Securing radiological investigation in OCoCP: Signpost where in the OCoCP a radiological investigation by a specialist contractor in the site area that may have been affected by the 1996 plane crash is secured, as stated in [REP13-015] response to OFH3.	In the OCoCP Version 5 [REP10-012] submitted at Deadline 10 paragraph 102 confirmed that further ground investigation would be undertaken in the area of the historic military plane crash in line with the Phase 1 Risk Assessment: "Ground investigation and further assessment of potential contamination should be undertaken in accordance with the recommendations of the Phase 1 Preliminary Risk Assessment (Chapter 19 Ground Conditions and Contamination of ES, Appendix 19.2, document reference 6.3.19.2) including in the areas of potential made ground at the dismantled railways lines and historic military jet crash area. The Environment Agency will be consulted on any proposed ground investigation and further assessment and any refined Conceptual Site Model prior to construction." To provide further clarification paragraph 102 in the OCoCP has been updated to state; 'In the area of the historic military jet crash this will include a radiological investigation by a specialist contractor.' The updated OCoCP (Version 6) has been submitted at Deadline 14.





REFERENCES

BBC (2020) Unemployment rate: How many people are out of work (11 August 2020) available at: https://www.bbc.co.uk/news/business-52660591

BEIS (2019) Contracts for difference scheme for renewable electricity generation

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/79907 4/Allocation_Round_3_Allocation_Framework___2019.pdf

BEIS (2020) Policy paper: Offshore wind Sector Deal; Updated 4 March 2020 available at: https://www.gov.uk/government/publications/offshore-wind-sector-deal/offshore-wind-sector-deal#fn:8

Centre for Economics and Business Research (2012). Economic Impact of Offshore Wind. Available at: http://www.cebr.com/reports/economic-impact-of-offshore-wind/

Committee on Climate Change (2019). Reducing UK Emissions 2019 Progress report to Parliament. Available at: https://www.theccc.org.uk/wp-content/uploads/2019/07/CCC2019-Progress-in-reducing-UK-emissions.pdf

Committee on Climate Change, (2018). Reducing UK emissions 2018 Progress Report to

Parliament. Available at: https://www.theccc.org.uk/publication/reducing-uk-emissions2018-progress-report-to-parliament/

Copernicus Climate Change service, (2020). Copernicus: 2019 was the second warmest year and the last five years were the warmest on record. Available at: https://climate.copernicus.eu/copernicus-2019-was-second-warmest-year-and-last-fiveyears-were-warmest-record

Department of Energy and Climate Change (2014). Climate Change Explained. Available at: https://www.gov.uk/guidance/climate-change-explained

Eastern Daily Press (2020) Supplement. in association with Vattenfall. Building back better available at: https://edition.pagesuite-

professional.co.uk/html5/reader/production/default.aspx?pubname=&edid=813ea93b-778e-4dfe-8f43-dcb8d4ac5f1e

Energy Focus (2020). Unlocking the potential of the UK's offshore wind industry. Available at: https://energyfocus.the-eic.com/renewables/unlocking-potential-uk's-offshore-wind-industry

Financial Times (2020) UK economy shrinks by record 20% in April

Available at: https://www.ft.com/content/f25dc58b-32c9-499d-af66-f677f20c53a2

Health Protection Agency (2012) Health Effects of Climate Change in the UK 2012 Current evidence, recommendations and research gaps. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachme nt_data/file/371103/Health_Effects_of_Climate_Change_in_the_UK_2012_V13_with_cov er_accessible.pdf

LSHTM, 2019. Rapid global switch to renewable energy estimated to save millions of lives annually. London school of hygiene and tropical medicine https://www.lshtm.ac.uk/newsevents/news/2019/rapid-global-switch-renewable-energyestimated-save-millions-lives-annually

New Anglia (2020) Major research and innovation programme for East Anglia's clean energy sector moves to next phase. Available at: https://newanglia.co.uk/major-research-and-innovation-programme-for-east-anglias-clean-energy-sector-moves-to-next-phase/

New Anglia (2020) Covid-19 Economic Recovery Restart Plan. Available online at: https://newanglia.co.uk/wp-content/uploads/2020/06/New-Anglia-LEP-NSU-Recovery-Plan-2020-FINAL.pdf

Norfolk and Suffolk Unlimited (2020). Covid-19 Economic Recovery Restart Plan. available at: https://newanglia.co.uk/wp-content/uploads/2020/06/New-Anglia-LEP-NSU-Recovery-Plan-2020-FINAL.pdf

RenewableUK (2020) Wind Energy Statistics Explained. Available at: https://www.renewableuk.com/page/UKWEDExplained





Renews (2020) Offshore wind should be 'backbone' of UK green recovery. UPDATE: Industry tells environmental audit committee about 'economic opportunities' offered by the sector. Available at: https://renews.biz/60759/offshore-wind-should-be-backbone-of-uk-green-recovery/

Rijkswaterstaat Zee & Delta (2020). Assessment of relative impact of anthropogenic pressures on marine species. Available at:

 $\frac{\text{https://www.google.com/search?q=Assessment+of+relative+impact+of+anthropogenic+pressures+on+marine\&rlz=1C1GCEU}{\text{ne}B841GB841\&oq=Assessment+of+relative+impact+of+anthropogenic+pressures+on+marine}\\ \frac{\text{ne}\&rlz=1C1GCEU}{\text{marine}\&aqs=chrome}.0.69i59.1013j0j7\&sourceid=chrome}\\ \frac{\text{ne}\&rlz=1C1GCEU}{\text{marine}\&aqs=chrome}\\ \frac{\text{ne}\&rlz=1C1$

The Crown Estate, (2019). Information Memorandum. Introducing Offshore Wind Leasing Round 4. https://www.thecrownestate.co.uk/media/3378/tce-r4-informationmemorandum.pdf

Vattenfall (2020) UK Wind Energy Supply Chain and Skills. available at: https://group.vattenfall.com/uk/what-we-do/our-projects/supply-chain