



Norfolk Boreas Offshore Wind Farm Applicant's Comments on Deadline 17 Submissions

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Deadline 18

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Glossary of Acronyms

AEoI	Adverse Effect on Integrity
AOE	Alde-Ore Estuary
BEIS	Department for Business, Energy & Industrial Strategy
CfD	Contracts for Difference
CSIMP	Cable Specification, Installation and Monitoring Plan
DCO	Development Consent Order
dDCO	Draft Development Consent Order
DML	Deemed Marine Licence
EIA	Environmental Impact Assessment
ExA	Examining Authority
HHW	Haisborough, Hammond and Winterton
FFC	Flamborough and Filey Coast
GW	Gigawatts
MMO	Marine Management Organisation
NE	Natural England
NSAG	Necton Substation Action Group
ОСоСР	Outline Code of Construction Practice
OLEMS	Outline Landscape and Ecological Management Strategy
OTMP	Outline Traffic Management Plan
PVA	Population Viability Analysis
RAG	Red, Amber, Green
RSPB	Royal Society for the Protection of Birds
RUK	Renewables UK
SAC	Special Area of Conservation
SIP	Site Integrity Plan
SoS	Secretary of State
SPA	Special Protection Area
TWh	Terawatt-hours
TWT	The Wildlife Trusts





1 Applicant's Comments on Deadline 17 Submissions

1. This document contains the Applicant's comments on submissions by Interested Parties at Deadline 17 of the Norfolk Boreas Examination.





1.1 REP17-005 Necton Parish Council, Deadline 17 Submission

Summary of Submission

Necton Parish Council believe that the mitigation proposed for both Vanguard and Boreas is completely inadequate. Necton Parish Council request an alteration to the mitigation to include 10m high earth banks covered with mature trees.

Reference is made to the Norfolk Vanguard examination not considering cumulative impacts, the Norfolk Vanguard judicial review and adoption of the Offshore Transmission Network.

Applicant's Comments

The Applicant has continued to respond to concerns raised by Necton Parish Council and other interested parties (see responses to REP17-011 and REP17-016 below) regarding the landscape mitigation for the onshore project substation and previously stated the landscape mitigation measures, embedded in the indicative plans for the onshore project substation (APP-492, APP-495, APP-503, APP-508) are sufficient to mitigate potential landscape and visual impacts experienced in the local area, under Scenario 1 (Norfolk Vanguard and Norfolk Boreas) and Scenario 2 (Norfolk Boreas alone).

Furthermore, in response to concerns over the landscape mitigation the OLEMS [REP14-021] has been updated to include;

'During the development of the landscape management scheme for the onshore project substation and the National Grid substation extension, the use of bunding and level changes will be given further consideration as part of the overall detailed design in consultation with Breckland Council. There will also be consideration regarding opportunities to extend the currently proposed new areas of woodland planting, potentially into parts of those areas currently identified for species rich grassland, and providing these do not compromise improvements to the provision for bio-diversity.'

and to provide further details on size of 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





Summary of Submission	Applicant's Comments
	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.'
	As detailed in the Applicant's comments on responses to the ExA's further written questions [REP6-014] Q2.5.2.2 and again in the Applicant's comments on the ExA's fourth written questions [REP11-007] in response to Q4.9.6.4 the creation of 10m bunds are not appropriate and should not be included in the DCO.
	The Applicant informed the ExA of the judicial review claim in respect of the Norfolk Vanguard decision in response to the ExA's Fifth Written Questions [REP14-036], Q5.16.0.5. As the Applicant explained, that claim is being vigorously defended by both the Secretary of State, as defendant, and Norfolk Vanguard Limited, as interested party. The Norfolk Vanguard DCO is valid, and will remain valid unless and until quashed by the Court. Accordingly, the making of the claim is of no relevance to the ExA in making its recommendation to the Secretary of State. The Applicant's responses to the ExA's Fifth Written Questions [REP14-036], Q5.16.01 also recognised that the cumulative assessment with the Norfolk Boreas onshore project substation was specifically not considered by the Norfolk Vanguard ExA. However, it is very clear that the cumulative impacts of Norfolk Boreas and Norfolk Vanguard have been the subject of detailed consideration during the course of the Norfolk Boreas examination, and to the extent that it is necessary to secure mitigation for cumulative impacts considered as part of the Norfolk Boreas examination, the correct approach is to secure this in the dDCO for Norfolk Boreas. Finally, as the Applicant has explained in previous submissions any potential offshore transmission network will not be available in the timescales required for either Norfolk Vanguard or Norfolk Boreas, and therefore this is not an alternative which is relevant to Norfolk Boreas.





1.2 REP17-006 Mulbarton Parish Council, Deadline 17 Submission

Summary of Submission

Mulbarton Parish Council present a review of the methodology by which past grid connection points seem to have been assigned, with reference to a report on the feasibility of offshore transmission recently issued by National Grid.

Mulbarton Parish Council conclude that past assignment of grid connection points may not have taken full account of cumulative impacts, or the potential effects on local communities.

Applicant's Comments

The Applicant refers to the following previous submissions which respond to issues raised in relation to the grid connection, including those previously raised by Mulbarton Parish Council;

- Comments on Deadline 16 submissions [REP17-003] Section 1.6 response to Mulbarton Parish Council on broad range of topics regarding renewable energy;
- Comments on Deadline 14 submissions [AS-080] onshore grid capacity and offshore transmission links;
- Response to the ExA's Fifth Written Questions [REP14-036] at Q5.4.0.10 on proposals for offshore transmission links.
- Comments on Deadline 10 and other submissions [REP11-008] Section 1.3 on offshore transmission.
- Response to the ExA's Third Written Questions [REP7-017] at Q3.7.0.1 on grid connection.
- Response to the ExA's Further Written Questions [REP5-045] at Q2.7.0.1 on grid connection.
- Comments on Relevant Representations [AS-024] Item 4 Selection of grid connection.

There have been no significant developments since the Applicant's previous responses and therefore the Applicant's position remains unchanged.

The Applicant would again refer to Appendix 4.3 Strategic Approach to Selecting a Grid Connection Point [APP-539] which outlines the grid connection process which was conducted in conjunction with National Grid to ascertain the most economic and efficient electrical connection system for Norfolk Vanguard and Norfolk Boreas and the Applicant's Environmental Impact Assessment (EIA) ES Chapter 33 Onshore Cumulative Impacts [APP-246] which includes a full assessment of cumulative impacts.





1.3 REP17-008, Marine Management Organisation (MMO), Comments on responses to Deadline 16

Summary of Submission	Applicant's Comments
The MMO's position has remained consistent throughout examination that any decision on AEoI should be made at the consenting stage and not pushed forward to a later date by the discharging of plans post consent. Although The Wildlife Trust advises they do not want to defer the HRA conclusions to the post consenting stage, the MMO believes adding an additional condition to the DML to undertake an in-combination assessment or review of the site condition could defer these conclusions.	The Applicant has maintained its position that it is in agreement with the MMO (and Natural England) that any decision on AEoI should be made at the consenting stage and not deferred to the discharging of plans post consent. As the Applicant explained in its response [REP17-003] to TWT's comments [REP16-031], two alternative conditions have been proposed and one of those alternatives requires the MMO to be satisfied that the plan provides such mitigation as is necessary to avoid AEoI on the HHW SAC. The Applicant considers that this addresses TWT's concern, without deferring considerations of AEoI.
In terms of project refinement, for the HHW SAC the MMO notes that the Applicant has proposed 2 options to the SoS to take into account the final design and ensure the impacts are within the worst-case scenario assessed within the EIA. Option 1 is the HHW SAC Site Integrity Plan (SIP) with a Grampian Condition and Option 2 is the HHW SAC Cable Specification, Installation and Monitoring Plan (CSIMP) with a plan submission condition prior to construction beginning.	The CSIMP is also the Applicant's (and Natural England's (see the SoCG with Natural England for confirmation REP16-010)) preferred option, however the Applicant has continued to include a SIP and its Grampian condition within the dDCO to allow for the eventualities that the ExA wish to recommend this option to the SoS or that the SoS wishes to maintain consistency with the Norfolk Vanguard DCO and therefore include it.
The MMO's understanding is that the purpose of discharging of documents post consent is not to postpone a decision on AEoI but to agree the fine detail of the proposed works covered by the plans, the issue of no AEoI already having been considered and made during examination.	
As the CSIMP and relevant condition does not include reference to AEoI our view is that this document is the preferred and most appropriate option to capture all details and information required for the HHW SAC.	
The MMO reiterates HHW SAC SIP and Grampian condition is not appropriate as the condition refers to AEoI. The MMO believes that this condition would require a detailed review of the site's integrity in relation to AEoI at post consent stage when discharging the plan. It is the MMO's view that any decision on AEoI should be made at the consenting stage.	
The MMO does not believe an alternative DML condition as requested by The Wildlife Trust is required.	For the reasons set out above, the Applicant does not consider that it is necessary to make any further changes to the dDCO (which has been submitted at Deadline 18) as a result of TWTs [REP16-031] submission.





1.4 REP17-010 Natural England's response to the Applicant's responses to the Examining Authority's Sixth round of Written Questions and Deadline 16 Response

Summary of Submission

Introduction

Natural England welcomes the additional information provided by the Applicant in REP16-003 regarding the in principle compensation measures for the impacts of the Norfolk Boreas proposal on Flamborough and Filey Coast (FFC) SPA kittiwake. We consider that taking into consideration the time available to the Applicant, a fairly comprehensive compilation and analysis of the information has been provided.

However, there remain some areas of uncertainty or where further detail is required. Natural England's strong preference is to leave as little as is possible regarding the compensatory measures to the post-consent period, and highlight that the level of specific detail provided will be a key factor with respect to confidence in the success of the measures. We acknowledge the limited time available to the Applicant before the close of the Examination, and recognise the effort already made in REP16-003 to refine the proposals. In this context, we welcome the necessary commitment by the Applicant to undertake the relevant feasibility studies of other artificial kittiwake nest sites in 2021 in order to assesses the likely success of any proposals for such sites should compensation measures be required. We also welcome the proposed assessment of urban Tyneside kittiwake nesting sites in summer 2021, and consider that this should also assess the extent to which availability of nesting space is a limiting factor on population growth in this location, in order to better understand the potential scale of nest site provision that will deliver compensatory measures here.

We also welcome the Applicant's amendment of the draft DCO/DML condition wording to provide flexibility regarding the potential nature of compensatory/adaptive measures, rather than referring solely to artificial structures. This ensures that the compensatory measures/adaptive management can extend to the delivery of other possible options. This should include addressing any issues identified with prey availability, which may well prove to be a limiting factor in the medium-long term, should measures such as e.g. improved

Applicant's Comments

The Applicant welcomes Natural England's comments on the additional information presented in REP16-003. Further responses to specific points made by Natural England are provided below.

However, the Applicant considers it is important to note that the points raised by Natural England (and considered by the Applicant in the following rows) are ones of refinement to the proposed compensation (for example the overall length of additional nesting ledges to be constructed and hence the number of pairs to be accommodated), rather than matters of fundamental disagreement, and that as such these will be straightforward to address post-consent, and only in the case that the compensation is required by the Secretary of State.





Summary of Submission	Applicant's Comments
management of sand-eel stocks become a more readily deliverable compensatory measure within the timeframes required.	
1. Identification of potential/suitable locations for nest site provision Natural England welcomes the consideration of spatial factors and the RAG status assessment, together with the inclusion of figures showing potential structure locations, kittiwake foraging ranges, sand-eel and sprat grounds and offshore wind farm locations. Whilst potential onshore coastal locations of Lowestoft and the Tyne have been identified, no further potential offshore locations other than within the Norfolk Boreas order limit have been considered or discussed, although the option of an offshore location is still included by the Applicant. Therefore, our previous concerns raised in REP9-046 regarding increased potential for collision risk to birds at a potential offshore colony remain outstanding.	The Applicant welcomes natural England's comments on this section which are supportive of the Applicant's proposals. The Applicant again confirms agreement with Natural England that a review of existing kittiwake colonies is appropriate to ensure the most effective measures are applied.
In terms of the potential coastal locations identified by the Applicant, we welcome that the Applicant has been in contact with the local ringing group who monitor the Lowestoft colonies. Potential constraints/opportunities to implementing artificial nest sites in all potential areas identified (i.e. the Tyne as well as Lowestoft), together with potential offshore areas (if these are to be considered further) should be explored through more detailed local feasibility assessments. These should draw upon local knowledge and monitoring where possible e.g. Tyne Kittiwakes Partnership as well as the Kessingland Ringing Group. We acknowledge the limited time available to the Applicant before the close of the Examination, therefore we welcome the commitment by the Applicant in Section 1.5 of REP16-003 to undertake a feasibility review of other artificial kittiwake nest sites (both in the vicinity of the proposed nest sites and more widely).	
We note the information from the local Lowestoft ringing group that the Lowestoft wall has been abandoned due to fox and large gull predation, and that it has been indicated that simple modifications could be made to the existing structure which would be expected to enable successful breeding at this location to recommence (e.g. adding an overhang to prevent large gull access and installing barriers to foxes). Therefore, we welcome the Applicant's commitment in REP16-003 that the provision of such measures, once the feasibility is determined, would be included in any proposals by the Applicant for provision of additional nest sites at Lowestoft (or any other) location and that any lessons to be learned about minimising	





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predation risk would also be applied to the design of new structures. It is critical that compensatory measures are given the best possible chance of succeeding rather than relying on modifications at a later date.

We note that there is currently a range of interest in the creation of artificial nests sites for kittiwakes from other parties. We therefore welcome the commitment from the Applicant in REP16-003 that where other parties have an interest in the creation of erecting artificial nest structures for kittiwakes the Applicant will seek to engage with them to work collaboratively and strategically where appropriate.

Given the declines identified in breeding kittiwake in Kent and the uncertainty over whether a breeding kittiwake population still persists in the county, we agree with the Applicant that this option is not progressed further.

Regarding Dunbar we agree with the Applicant that this is not considered as a suitable location for the current proposal, although the information included regarding this location is useful in terms of the wider understanding of the nesting behaviour and requirements of this species in urban locations.

2. Assessment of evidence regarding potential recruits

We note that Ruffino et al. (2020) identified a significant shortage of evidence regarding the quantification of the pool of potential recruits in the North Sea. Whilst the analysis in REP16-003 regarding potential recruits carries some weight, it remains unclear to what extent the proposed compensatory measures will provide 'new' recruits to the breeding population that otherwise would not have bred in that year, or the provision of superior nesting locations than otherwise might have been available, leading to improved productivity of birds that would otherwise have failed in their breeding attempt or experienced low levels of success. It is of course possible that both mechanisms would be in operation.

We welcome that for the purposes of calculating the number of nest spaces required, the Applicant has taken a precautionary option to use the difference in productivity between that which is currently being achieved at FFC SPA, as a large colony with high competition for prey resources currently experiencing low productivity, and that predicted at a new colony, i.e. the assumption being that the new structure supports birds that could manage to nest elsewhere but would be obliged to do so in locations where productivity is sub-optimal. However, we do

The Applicant notes Natural England's concern with regard to this calculation, however as noted previously, the Applicant considers this to be a matter of detail which would ultimately have a comparatively small effect on the final compensation that would be undertaken. For example, if the new colony achieved a slightly lower average productivity of 1.1 or 1.0 chicks per nest, the number of nests required (all other aspects of the calculation in REP16-003 the same) increases from 100 to 120-150 (using the average Norfolk Boreas mortality prediction of 14) and from 200 to 240-300 (using Natural England's precautionary preference for the upper 95% confidence interval mortality estimate). An expansion in nesting capacity provision of these magnitudes could be readily achieved at the locations under consideration. Final agreement on the nesting capacity to be provided would be determined through consultation with Natural England, if this compensation is required by the SoS. It is also important to remember the various levels of precaution in these calculations, not least that they are based on the upper 95% confidence estimate of collisions (a value with a 2.5% probability of being accurate).





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not consider that it is safe to assume that productivity at any artificial colony created by the Applicant will be 1.2 chicks per nest. We note that the assumed productivity figure of 1.2 chicks per nest is the highest productivity figure from the data presented in REP16-003 for existing artificial sites (Lowestoft average 1.1 chicks per nest for 2010-17; Tyne artificial sites averaged 0.96 chicks per nest for 2010-19 and over 1 chick per nest at some of the structures within that group of sites; Dunbar averaged 1.2 chicks per nest for 1991-2007). We also note that as no evidence is presented for productivity of kittiwakes breeding on artificial structures offshore. Given the above we consider a rate of 1.2 chicks per nest is overly optimistic, which in turn indicates that the Applicant's predicted requirement to provide up to 200 nests is unlikely to be sufficiently precautionary.

3. Detailed calculations of number of nests required

The central predicted collision impact from Norfolk Boreas of 14 predicted adult kittiwake collisions per annum from FFC SPA is an estimation which is underpinned by a number of assumptions, several of which have considerable uncertainty associated with them. We therefore welcome that the Applicant's calculations in REP16-003 include consideration of the number of nests required to compensate for up to the upper range of predicted collisions from Norfolk Boreas (based on the upper 95% confidence interval of bird density), i.e. up to 28 collisions of adult birds per annum, in accordance with Natural England's advice on the matter.

We do not agree with the Applicant's assertion that colonisation of any structures at Lowestoft or the Tyne would be effectively 100%. Firstly, this is because there is evidence that bespoke structures are not always colonised – for example one of the 'kittiwake towers' on the Tyne was not colonised and was demolished, and at least one of the structures at Boulogne has not been used. In addition, the current predator and site abandonment issues at the Lowestoft wall (as noted by the Applicant in REP16-003) would need to be addressed before there could be any confidence in 100% colonisation at this site. Secondly, it appears to be the case that artificial structures infrequently reach full occupation levels, meaning that the number of nest spaces provided is unlikely to equate to the number of kittiwakes nesting. It is therefore not appropriate to assume that even if all structures drew in breeding kittiwakes they will in due course be fully occupied. We also remain unsure whether the assessment realistically reflects the likely rate of colonisation

The Applicant considers that the various sources of precaution applied by Natural England (many of which the Applicant considers to be additive in nature and therefore likely to result in over-precaution when combined) have been given due consideration in REP16-003 and are reflected in the scale of compensation proposed.

The Applicant has acknowledged that artificial sites vary in their success rates, and for this reason proposed the feasibility study, the primary purpose of which is to determine as far as possible, the reasons for these variations and to ensure that the compensation for Norfolk Boreas learns from these examples to ensure a high probability of success. The Applicant welcomes Natural England's support for this study and the suggested aspects to be included in the study.

As noted above, the degree of compensation required, including any over-compensation, is subject to the SoS determining that any compensation is in fact required. Then it will be for the Applicant and stakeholders to determine the magnitude required, including allowance for over-compensation. The plan for how this is undertaken has to be provided at least 12 months prior to any offshore construction, and it is expected that there will be periods of consultation with Natural England and other relevant organisations (e.g. the RSPB) prior to this which will lead to agreement on the necessary scale.





Summary of Submission Applicant's Comments

and then increase for bespoke structures: whilst some colonies may show immediate and rapid colonisation, this may be more likely to be the case where the existing nest sites have or are being removed.

We acknowledge that there does seem to be a trend towards artificial nest locations being more productive than natural sites. However, it does not appear to be a clear cut distinction, and productivity probably depends on a range factors irrespective of whether the sites are natural/artificial. This highlights the need to determine what are the key factors in this, and how best to design any structure and its location to optimise these.

We note that in the UK compensatory measures have generally been provided with a 'multiplier' that expresses the likelihood of success of the measure in question. 1:1 compensation rates have only been accepted where there is a high degree of confidence in the measure e.g. creation of a readily-created habitat. Elsewhere ratios for habitat creation have been e.g. 2:1 or 3:1. The provision of artificial nest structures away from the impacted SPA as a compensatory measure is a novel one, and as noted above there is some uncertainty regarding how the measure will operate. A 1:1 ratio would also not take account of variability in demographic rates (age of first breeding, and proportions at 2-10 years, breeding success in first year, survival to first breeding).

Compensatory measures should be designed to deliver compensation at a ratio that would give the Secretary of State sufficient confidence that the impacts will be addressed, drawing on previous compensation cases whilst also reflecting the precedent-setting nature of the compensation proposed, not least it taking place away from the impacted SPA. In this context we question whether the provision of 200 nests will provide sufficient confidence in the compensatory measures being successful in the light of evidence indicating that some structures fail to attract breeding kittiwakes and that full colonisation is rarely achieved. This is all the more likely to be the case with respect to locations where such structures are not already in place and for offshore locations.

In REP16-003 the Applicant notes that in practice it may be appropriate to aim to increase breeding numbers by over 100 pairs at more than one location and that adding new nesting sites at two artificial colonies would be more robust than doing so at only one. Natural England is in agreement with the principle of multiple





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structures/locations, as this would help minimise the risk of one structure failing to be colonised, which would improve confidence in the measures being successful.	
The Applicant once again raises in REP16-003 their considerations of over precaution in the collision assessments (namely regarding avoidance rate, nocturnal activity, flight speed, breeding season apportionment and use of the upper predicted figure of the range of predictions). We again refer the ExA to our previous responses on these matters (REP4-039, REP4-040, REP4-043, our response to ExA second round question 2.8.4.4 in REP5-077; REP7-048 regarding kittiwake flight speeds; our response to ExA third round question 3.8.4.1 in REP7-049; our response to Rule 17 request point R17.1.2 in REP13-038).	
4. Detailed description of structure We welcome the proposed study at existing artificial colonies in summer 2021 to assess the nest sites selected and their associated breeding success, though the lessons learnt from this may only be applicable to an onshore structure. As noted above, we also recommend this study examines the extent to which nest availability is a limiting factor in the vicinity of the Tyne colonies.	The Applicant welcomes Natural England's support for the proposed review study which will be used to inform subsequent colony designs. If this compensation is required by the SoS the Applicant will conduct further consultation with Natural England in order to ensure the study is as comprehensive and targeted as possible.
We welcome the Applicant's addition regarding this feasibility study to subparagraph (3) of the draft condition which secures compensation for the FFC SPA in Section 5.1 of REP16-003 and that the Applicant states that this will be included in the final draft DCO to be submitted at Deadline 18. It will be important that this study includes identification of features required in particular locations or particular structures (e.g. it is suggested that mammalian predation is an issue with the Lowestoft wall structure, indicating predator exclusion measures may be needed here). There should also be a more comprehensive review of bespoke structures and reasons for their success/failure, in order to inform the detailed designs.	
5. Delivery mechanisms	The Applicant welcomes Natural England's comments on this aspect.
As noted above, we welcome the commitment to undertake a feasibility review of other artificial kittiwake nest sites (both in the vicinity of the proposed nest sites and more widely) and which assesses the likely success of the proposals through	





Ennancing Society logether	
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the proposed addition to sub-paragraph (3) of the draft condition which secures compensation for the FFC SPA in Section 5.1 of REP16-003 and that the Applicant states that this will be included in the final draft DCO to be submitted at Deadline 18.	
With regard to prey availability, as noted above we welcome the Applicant's amendment of the draft DCO/DML condition wording to provide flexibility regarding the potential nature of compensatory/adaptive measures, rather than referring specifically to artificial structures.	
6. Monitoring and Adaptive Management	The Applicant welcomes Natural England's support for the proposed monitoring,
We welcome the Applicant's commitment to undertaken monitoring and adaptive management where required. We agree with the Applicant's proposal that where existing ringing or other monitoring is being carried out in the general area by other parties, additional monitoring should augment this, but where monitoring is currently not being undertaken it would function as a stand-alone package of works. We welcome the Applicant's commitment that the monitoring study design would be developed and agreed with Natural England, with the monitoring results provided for discussion.	and confirms that these studies would be discussed and agreed with Natural England. It is agreed that the monitoring is very likely to include the measures identified by Natural England, and these data will help to inform consideration of the degree of success achieved The Applicant also welcomes Natural England's support for the inclusion of adaptive management in this respect, in order that the lessons learned can be applied and the compensation outcomes maximised.
Long-term monitoring of artificial nest sites will be necessary to assess their effectiveness and thereby identify the need for adaptive management should the level of occupation and/or chicks fledged be lower than calculated. In addition to nest numbers and productivity, monitoring should also attempt to identify whether the artificial nest sites are providing recruits into other colonies, for example by colour ringing. Diet studies would help identify whether prey availability is proving to be a limiting factor. Occupancy and productivity monitoring should also be carried out at local colonies to ensure that the provision of artificial nest sites is indeed growing the population in that area rather than just shifting its distribution, and that the productivity rates at the new colony are not being achieved at the expense of those at the existing colonies.	
Adaptive management is a critical part of a compensation package of this nature.	

Should colonisation of the new structure(s) not occur (as has been the case in some locations) or take place at slower rates or lower levels than anticipated, or if productivity is not sufficient to provide enough recruits into other populations, the





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causes of these need to be identified through monitoring and measures identified and implemented. These would extend beyond maintaining the structure and could involve additional ledges or structures, changing position of structure, and addressing any issues identified with prey availability, which may well prove to be a limiting factor in the medium-long term.	

1.5 REP17-011 Necton Substation Action Group, Deadline 17 Submission

Summary of Submission

Necton Substation Action Group (NSAG) would like to take the opportunity to reiterate these concerns which they believe have not been adequately addressed, with regards to;

- 1. Cumulative effects must not be underestimated
- 2. Mitigation
- 3. Fire and Toxic Smoke Dangers
- 4. Alternative connections
- 5. Fitting in with the landscape
- Wildlife
- 7. Enhancement of Areas
- 8. Traffic

Applicant's Comments

1. Cumulative effects must not be underestimated The Applicant's Environmental Impact Assessment has undertaken a full assessment of potential cumulative impacts both for onshore (ES Chapter 33 Onshore Cumulative Impacts [APP-246]) and offshore (ES Chapter 34 Offshore Cumulative Impacts [APP-247]). This includes potential cumulative impacts with Norfolk Vanguard, Hornsea Project Three and the existing Dudgeon substation, amongst others.

2. Mitigation

The Applicant refers to the response provided to REP17-005 above from Necton Parish Council regarding landscape mitigation, use of high earth bunds and the size of the proposed mitigation planting.

As detailed in the Applicant's comments on the ExA's fourth written questions [REP11-007] in response to Q4.9.6.4, the options for lowering the ground level or lowering buildings into the ground / slope were considered and discounted, would require a huge amount of earthworks and would fundamentally alter the character of the local landscape.

3. Fire and Toxic Smoke Dangers

The Applicant refers to the Applicant's response to the ExA's further written questions [REP5-045] at Q2.13.4.3, Comments on Deadline 16 submissions [REP17-003] Section 1.8 and Comments on Deadline 15 submissions [AS-081] Section 1.5 where it has responded on concerns raised regarding fire and smoke risk. As stated, the design and operation of substations are regulated and controlled to the





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	highest health and safety standards; and operators are required to develop emergency response plans and crisis management procedures as part of the process. Under these controls and regulations fire risk, and therefore the risk posed by both fire spread and smoke, are minimal.
	4. Alternative connections The Applicant refers to the response to REP17-006 above in section 1.2 regarding the alternative offshore transmission network. To clarify Norfolk Boreas (and Norfolk Vanguard) have a design life of 30 years and will not become obsolete by 2030. Any future changes to grid connections will not impact existing projects.
	5. Fitting in with the landscape The Applicant responded on the points regarding large earth bunds and changes to ground levels in the Applicant's comments on the ExA's fourth written questions [REP11-007] in response to Q4.9.6.4 including why these are not appropriate.
	6. Wildlife The Applicant refers to the Comments on Deadline 14 submissions [REP14-039] Section 1.14 where it has responded to concerns raised regarding the Red Kites. To clarify, the Applicant stated that no red kites were recorded during the Extended Phase 1 Habitat Surveys nor breeding bird surveys undertaken to inform the Norfolk Boreas EIA, because as stated in REP13-046 (NSAG) their presence in the vicinity of Necton was only recently identified.
	Any potential impact on bats has been considered as part of the Environmental Impact Assessment and appropriate mitigation secured in the OLEMS [REP14-020] as agreed with Natural England.
	7. Enhancement of Areas As detailed in the OLEMS [REP14-020] and the OCoCP [REP14-012] any potential opportunities for enhancement in areas such as biodiversity and watercourse crossings will be explored.
	8. Traffic The Applicant refers to the Comments on Deadline 16 submissions [RE17-003]

Section 1.4, where it has responded to the recent query from a local resident regarding traffic. The OTMP [REP14-022] details measures and controls to be





Summary of Submission	Applicant's Comments
	implemented to mitigate any potential impacts of traffic, as agreed by Norfolk County Council and Highways England.
The submission quotes directly from the work of two leading figures from the anti-wind campaign group the "Renewable Energy Foundation".	The Applicant notes that the UK Government position on offshore wind does not align with the work of the Renewable Energy Foundation, as clearly demonstrated by the Prime Minister's speech of 6th October, 2020. The announcement confirms the mandated policy of the winning 2019 Conservative Party manifesto to make the UK a world leader in green energy, and to power all UK homes using renewable energy from offshore windfarms by 2030 (40GW by 2030).
	Dramatic reductions in the cost of offshore wind are evident in recent CfD auctions – and are driven by technological advances, stable regulatory frameworks and sector maturation. Offshore wind met the target of £100/MWh by 2020 four years early and the last auctions cleared at £39/MWh, below electricity costs forecasted by the Department for Business, Energy and Industrial Strategy (BEIS) - it is estimated that the technology will pay back to bill payers at the current pricing levels. Evidence from the BEIS document on electricity costs and load factors (published in August 2020) does not align with the claims quoted in the NSAG submission. https://www.gov.uk/government/publications/beis-electricity-generation-costs-2020
	Not only is renewable electricity cheap, it is also clean, and will enable decarbonisation of other sectors through greater electrification including transport and heat.
	The "Energy Trends" report (https://www.gov.uk/government/statistics/energy-trends-september-2020) published by BEIS show renewables provided 45% of Great Britain's electricity between April and June up from 36% in Q2 2019. The report states while overall demand was lower in Q2 due to the effects of the COVID 19 pandemic, renewable generation increased and non-renewable generation decreased during this period.
	The Q2 statistics follow the highest ever quarterly share of renewable generation (47%), recorded in Q1 this year. Renewable electricity generation was 70.9 TWh in the first half of 2020, an increase of 22% on the 58.2TWh in the first half of 2019.





Summary of Submission	Applicant's Comments
	Low carbon (renewables plus nuclear) accounted for 62.1% of electricity generation in the first half of the year.
	Offshore wind is backed by the renewable energy industry. For an accessible description of the cost trajectory of offshore wind see also https://www.renewableuk.com/news/470678/Record-breaking-renewables-auction-provides-biggest-step-yet-towards-net-zero-emissionshtm
	Renewable UK have also issued a green economic recovery report: https://www.renewableuk.com/news/515999/Recommendations-for-a-Green-Economic-Recovery.htm Published in July, this report makes a number of recommendations to assist our economy get back on track following the initial effects of COVID 19. The Prime Minister has indeed made some moves (highlighted in the October 2020 announcement) to promote a green recovery with renewables at its heart, including crucially, up to doubling the capacity of renewable energy in the next Contracts for Difference auction, in order to accelerate the decarbonisation of the economy, enhance our position as a world leader in the low carbon technologies of the future and deliver benefits to local communities across the UK. The RUK report suggests this action could secure over £20bn of new investment and support over 12,000 new jobs in the immediate construction of new wind farms. Norfolk Vanguard and Norfolk Boreas constitute approximately one third of maximum capacity eligible to bid into AR4. Should they proceed to construction, these projects would make a multibillion pound contribution to this investment, focussed in the East of England.





1.6 REP17-012 Royal Society for Protection of Birds, Deadline 17 Written Submission

Summary of Submission	Applicant's Comments
1. Summary of the RSPB's key concerns at Deadline 16 regarding compensation packages	The Applicant provides a response to the RSPB's Deadline 16 submission in REP17-003. The Applicant would like to draw attention to the RSPB's comment that:
	'The number of further agreements, consents and permissions that will be required to deliver the proposed compensation measures post-consent is profoundly worrying.'
	with respect to this point the Applicant would like to specifically draw attention to their response in REP17-003:
	'The Applicant has addressed this point through revisions to the DCO which now make it a condition that the compensation (if required by the SoS) must be agreed and provided prior to wind farm operation.'
	Consequently, since the compensation (if required) must be in place prior to wind farm operation (the point at which the predicted impacts would commence) this aspect has been addressed. It should also be noted that this condition has been agreed with Natural England (REP17-010).
2. The RSPB's further comments on the Applicant's compensation packages	Additionality
b) Proposed compensation measures for lesser black-backed gull from the Alde- Ore Estuary SPA	The Applicant notes that the RSPB appears to have provided comments on additionality which refer to a previous version of this condition. The updated version, (provided to the RSPB on 5 th October) allows for measures to be undertaken outside the SPA and widens the measures to predator management measures (rather than just provision of fencing as stated in the earlier version). Furthermore, the Applicant has made a further revision to the condition in response to the RSPB's comments which has been agreed with Natural England, as follows:
	2.—(1) No later than 12 months prior to the commencement of any offshore works, a strategy for the delivery of measures to compensate for the predicted loss of adult lesser black-backed gull from the Alde-Ore Estuary Special Protection Area as a result of the authorised project 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.





Enhancing Society Together	
Summary of Submission	Applicant's Comments
	The Applicant considers these revisions have addressed the RSPB comment:
	'The search for compensation must explicitly start outside the SPA.'
	The Applicant also provided comments on this in REP17-003.
	Targeted
	The RSPB is concerned that the proposed measures may not address all the factors which may determine the success of any proposed compensation. In response, the Applicant draws attention to the fact that the monitoring requirement for the compensation also requires the Applicant to take further steps to improve effectiveness, should this be identified as a concern. Therefore, if additional measures are required these will be identified and implemented through this process.
	Effective
	The RSPB is concerned that specific monitoring has not been provided, however the Applicant draws attention to the requirement in the DCO to provide a strategy for monitoring and reporting on effectiveness no less than 12 months prior to the commencement of any offshore works. By that stage, the details of the compensation measures (if required by the SoS) will have been much more clearly agreed with the relevant stakeholders and this will consequently enable identification of appropriate, targeted monitoring. It is not appropriate to list all possible monitoring options at this stage, in the knowledge that at least some are unlikely to be useful or required.
	Technical feasibility
	As noted previously by the Applicant, it has not been possible in the time available, to reach agreements with landowners such that a location for compensation measures could be identified, and nor does the Applicant consider it reasonable to expect any landowners to engage on this matter at this stage (REP17-004). However, there is considerable precedent for predator control measures as means

to safeguard ground nesting birds and the principles are therefore not in question.





Summary of Submission	Applicant's Comments
	Extent
	The Applicant considers it to be pertinent to note that the predicted impact of Norfolk Boreas on the lesser black-backed gull population at Alde Ore Estuary SPA is estimated as two collisions per year. The Applicant considers that achieving compensation for such a small magnitude of effect, even allowing for a degree of over-compensation, will not present a challenge and therefore it is not essential that this is determined prior to consent.
	Location
	The Applicant has addressed this point above and also in the revised DCO.
	Timing
	The Applicant considers that the RSPB's statement that 'compensation requirements are identified, agreed and secured <u>before</u> consent is granted' has been achieved. As noted above, whilst it has not been possible to address questions of landownership within the time available, and nor does the Applicant consider it to be reasonably expected that landowners should engage with this process at present, the condition securing compensation has been agreed with Natural England, and importantly it ensures that the compensation is delivered prior to wind farm operation (i.e. before the adverse effect could occur).
	Long-term implementation
	As noted under 'Extent', the magnitude of impact under consideration (up to two collisions per year) indicates that the population will recover rapidly and population modelling is not required to inform this. Since it would be a requirement to monitor the compensation, should the outcomes be less than that required, it will be the responsibility of the Applicant to undertake remedial action, and this is secured in the dDCO.
c) Proposed compensation measures for kittiwake from the Flamborough and Filey Coast SPA	The Applicant considers that the areas of uncertainty identified by the RSPB (design, location, scale, effectiveness, etc.) are all matters of refinement to the proposed compensation and not fundamental ones that indicate the compensation would be ineffective. Further comments on these points are provided below:





Summary of Submission	Applicant's Comments
	Additionality
	The Applicant has committed to undertaking monitoring, details of which must be included in the strategy to be submitted no less than 12 months prior to the commencement of any offshore works, and amongst other aspects this will be designed to investigate the question of additionality. If monitoring indicates that additionality has not been achieved then, since adaptive management is also a requirement in the DCO, it will be the Applicant's responsibility to undertake steps to rectify this situation.
	With respect to the RSPB's suggestion that the compensation must deliver the agreed number of breeding adults into the regional population each year, rather than specifically to the Flamborough and Filey Coast SPA, the Applicant does not consider this to materially affect the proposed measures and in no way detracts from the current proposals.
	Targeted
	No comment required.
	Effective
	The Applicant has provided several examples of kittiwake colonisation of artificial structures from the UK and elsewhere, and the success achieved by birds nesting at these locations. As has been acknowledged, there do appear to be variations in the reproductive success of different structures, and the Applicant has identified that a study will be undertaken to understand the causes of these differences, in order to maximise effectiveness. Therefore, the Applicant respectfully disagrees that these proposals are experimental in nature.
	Extent
	The Applicant disagrees that kittiwake populations require to produce 1.5 chicks per year to achieve stable growth. Indeed this figure, which is almost twice that estimated by Coulson (2011), the foremost expert on the species, appears at odds

with empirical evidence and observation. Indeed, a simple population modelling analysis using the Natural England PVA tool (see Appendix 1 for input parameters), reveals that kittiwake population stability is in fact achieved with a productivity rate of around 0.61 chicks per year. Furthermore, if a value of 1.5 is used (with all





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Summary of Submission	Applicant's Comments
	other parameters unchanged) the NE PVA tool predicts population strong growth at 11% per year (Appendix 2) rather than a stable population. Therefore, the value of 0.8 can be seen as precautionary and allows for natural variations. The figure of 1.5 therefore appears to be based on flawed assumptions which do not correspond with the agreed methods for population modelling of this species.
	The Applicant considers that the calculations presented in REP17-003, which were based on advice received from Natural England, have incorporated a large degree of precaution and therefore provide a very robust degree of compensation for the predicted average of 14 collisions per year. However, this aspect notwithstanding, the Applicant considers that the RSPB's criticisms primarily relate to the amount of nest space provided. Since the difference between the RSPB estimates and the Applicant's estimates is actually expected to be relatively modest (i.e. within a few 10s to a hundred nests at most), this can be readily addressed through further consultation (if the compensation is required by the Secretary of the State) prior to

Location

finalisation of designs.

The Applicant has taken steps to identify suitable onshore locations and has received a letter of comfort from the Port of Lowestoft in support of these measures (appended to REP17-003). The Applicant has made a commitment that the compensation must be agreed and implemented prior to wind farm operation and therefore this addresses the RSPB's concern on this matter.

Timing

As noted above, the Applicant disagrees that the provision of nesting space is experimental for this species, therefore the RSPB's concern on this matter is unwarranted.

Long-term implementation

As noted under 'Extent', the magnitude of impact under consideration (14 collisions per year) indicates that the population will recover rapidly and population modelling is not required to inform this. Since it would be a requirement to monitor the effectiveness of the compensation, should the productivity recorded at the new colony(ies) be less than that considered





Summary of Submission	Applicant's Comments
	necessary, it will be the responsibility of the Applicant to undertake remedial action to address this.
d) Detailed comments on REP16-003: Norfolk Boreas Limited. Addendum to REP11-012 - In principle Habitats Regulations Derogation Provision of Evidence Appendix 1 Flamborough and Filey Coast Special Protection Area (kittiwake) in Principle compensation (Version 2)	The Applicant welcomes the RSPB's comments on REP17-003 and notes that these relate to potential refinements to the kittiwake compensation proposals, rather than fundamental reasons for why the compensation would not succeed. As such the Applicant does not consider these to detract from the compensation proposed. Due to the limited time available between Deadline 17 and Deadline 18 the Applicant has not been able to provide a response to every point raised in this section (although some have already been considered above). However, key points have been responded to in the following sections.
	Monitoring
	The Applicant welcomes the RSPB's suggestions for inclusion in the monitoring. These echo those proposed by Natural England and the Applicant, and will be given due consideration post consent if the compensation is required.
e) The absence of compensation measures for additional features where it is not possible to conclude no AEOI: gannet, guillemot, razorbill	The Applicant responded to this point in REP17-003 and previously in REP7-017.
3. Summary of the RSPB's position regarding the approach to securing compensation, including the proposed DCO conditions a) The RSPB's general comments on the issue of securing compensation	The Applicant considers that the RSPB's concern on this matter ('we do not think it is appropriate to leave so much detail for post consent considerations.') is addressed through the DCO, with the requirement that the compensation must be delivered prior to wind farm operation. The onus is therefore on the Applicant to provide the compensation or risk being unable to operate the wind farm.
The Proportionality Principle	The Applicant considers that this concern relates to the scale of compensation to be required (i.e. how much kittiwake nesting space is delivered) and that this can be determined and agreed post-consent if compensation is required. The difference between a proposal for 100 kittiwake nests and 200 while on the face of it appearing to be large, in fact amounts to an additional ledge on the side of a building or structure of around 50-60m and therefore is far from an insurmountable barrier as the RSPB's comments would suggest.
b) Specific comments on the draft DCO conditions relating to compensation measures for lesser black-backed gull from the Alde-Ore Estuary SPA.	In response to the RSPB's comments that the compensation objectives related to improving breeding success at the Alde-Ore Estuary SPA are too narrowly drawn, the Applicant has broadened condition 1(1) at Part 2 of Schedule 19 to refer to





Summary of Submission	Applicant's Comments
	measures to compensate for the predicted loss of adult lesser black-backed gull from the AOE SPA as a result of the authorised project. The measures referred to in paragraph (2) have also been broadened to 'predator management measures' as opposed to referring to 'predator proof fencing' specifically. Part 2 of Schedule 19 therefore now reads as follows:
	1. —(1) No later than 12 months prior to the commencement of any offshore works, a strategy for the delivery of measures to compensate for the predicted loss of adult lesser black-backed gull from the Alde-Ore Estuary Special Protection Area as a result of the authorised project 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 include predator management measures in accordance accord 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. The wording of this condition, and the latest amendment to address the RSPB's comments, has been agreed with NE.





Summary of Submission	Applicant's Comments
	In relation to the detailed drafting that the RSPB has put forward on the strategy connected to the proposed compensation, it is not considered necessary to include this level of detail within the condition. The Secretary of State will need to approve the strategy, in consultation with Natural England, and this mechanism will ensure that all necessary details are included in the strategy without the need to list such matters within the condition itself. Given the strategy must be submitted at least 12 months prior to commencement of offshore works, there is sufficient time to enable the Secretary of State to request that further details are included in the strategy should this be necessary. It is also appropriate to refer to the principles contained in the In principle document (paragraph (2) of the condition), as the matters referred to by the RSPB for inclusion in the strategy are largely noted in that document. This document is also the basis on which Natural England has agreed that such measures would form suitable compensation. Regard will need to be had to this document in preparing the strategy so that the principles agreed with Natural England are carried through to the strategy.
	In relation to timing, at paragraph (3) of the condition, the drafting set out above is considered appropriate given that no impact will occur prior to operation. In addition, the RSPB's proposal to refer to "prior to the start of construction wherever possible" (our underlining) does not contain sufficient certainty and is not sufficiently precise to be included.
	Both NE and the MMO agree with the Applicant's proposed condition for compensation, and that the level of detail secured in the condition is appropriate.
b) Specific comments on the draft DCO conditions relating to compensation measures for kittiwake from the FFC SPA.	As with the condition securing compensation for impacts on the AOE SPA, the RSPB has suggested that the condition should list a number of specific matters to be included in the strategy. Again, it is the Applicant's position that it is not necessary to refer to this level of detail within the condition. In particular, the Secretary of State, in consultation with Natural England, will need to approve the strategy and will therefore need to be satisfied that the details it contains are appropriate at the point of approval. In addition, many of the elements referred to are noted in the In-principle document referred to at paragraph (2) of the condition. As set out above in respect of the condition for the AOE SPA, it is appropriate to refer to this document, because the strategy will build upon the





Summary of Submission	Applicant's Comments
	principles it contains and this is the basis on which Natural England have agreed that the compensation proposed is appropriate.
	The same points (as for the AOE SPA condition) are raised by the RSPB on timing, and the Applicant's response above is equally applicable to kittiwakes, i.e. that no impact will occur prior to operation and this is therefore the appropriate trigger, and also that reference to "wherever possible" is not sufficiently certain or precise to be included.
	As with the AOE SPA condition, both NE and the MMO agree with the Applicant's proposed condition for compensation, and that the level of detail secured in the condition is appropriate.
4. Conclusions 4.1 As set out in paragraph 3.3 above, in addition to our detailed ecological concerns, the RSPB does not think, on the basis of the information before the Examination, the Secretary of State can be confident that there are "compensatory measures to ensure that the overall coherence of Natura 2000 is protected", nor be certain and confident at this stage that these can be secured in the future. Nevertheless, on a without prejudice basis, we have sought to suggest changes to the draft DCO conditions in order to address some of our concerns.	The Applicant strongly disagrees with the RSPB on this conclusion. Considerable evidence in support of the proposed compensation has been provided, despite the very limited time available, and any remaining aspects relate to refinements of the proposals. If compensation is required by the SoS, these refinements can be appropriately addressed following consent award, as secured through the dDCO conditions that compensation is delivered prior to wind farm operation. It should also be stressed that Natural England has reviewed and agreed that the relevant conditions appropriately secure the compensation measures (if required).

1.7 REP17-016 Colin King, Deadline 17 Submission

Summary of Submission	Applicant's Comments
Mr King wanted to take the opportunity to reiterate his concerns over the impact of the convertor hall and the noise level set.	The Applicant has continued to respond to and provide clarification on all the specific concerns raised by Colin King throughout the examination, this includes concerns raised regarding the onshore project substation including visualisations,
Mr King refers to the granting of the development consent for Norfolk Vanguard and provides copies of the questions submitted to BEIS regarding information detailed in the Norfolk Vanguard Examining Authority's Report of Findings and Conclusions and Recommendation to the Secretary of State.	substation model, landscape mitigation and operational noise and the grid connection. The Applicant refers to the following submissions where detailed responses have been provided on these matters, which also cover a number of matters raised in the questions submitted to BEIS:





Summary of Submission	Applicant's Comments
Mr King also provides an update from George Freeman M.P on the review of the integrated offshore connections.	 Comments on Deadline 16 submissions [REP17-003] Section 1.2 on convertor halls and the substation model. Comments on Deadline 15 submissions [AS-081] Section 1.2 on convertor halls and the substation model and operational noise. Comments on Deadline 13 submissions [REP14-039] Section 1.21 on accuracy of the visualisations, operational noise, landscape mitigation, and grid connection, and Section 1.22 on baseline noise surveys and sensitivity of receptors. Comments on Deadline 10 and other submissions [REP11-008] Section 1.9 on the substation model, operational noise, groundwater and drainage, HVDC decision, and landscape mitigation. Comments on Deadline 9 and other submissions [REP10-033] Section 1.22 on the landscape mitigation. Comments on Deadline 8 submissions [REP9-011] Section 1.4 on the operational noise and noise sensitivity, visualisations and land rights. Comments on Deadline 7 submissions [REP7-067] Section 1.20 on visualisations. Comments on Deadline 6 and other submissions [REP7-016] Section 1.11 on visualisations and additional cross sections. Comments on Deadline 5 submissions [REP5-091] Section 1.8 on baseline noise survey and visualisations Comments on Deadline 4 submissions [REP4-052] Section 1.17 on substation location and visualisations.
	The Applicant refers to the Applicant's comments on Responses to the ExA's fifth round of written questions [REP15-003] Q5.16.0.1 where it has responded on points raised by Mr King regarding the Norfolk Vanguard decision.
	The Applicant's position remains unchanged with regards to the grid connection as detailed in the Applicant's Response to Open Floor Hearing 2 [REP13-014] Reference 5.





1.8 REP17-018 Diana Lockwood, Deadline 17 Submission

Summary of Submission

Ms Lockwood provides a summary of the issues she has already raised but which still concern her;

- 1. Possible effects on mental, emotional and physical health
- 2. Technology becoming obsolete even before completion
- 3. Substations becoming redundant and the legacy of scarred landscape
- 4. Offshore Ring Main
- 5. Substations too close to homes
- 6. Cumulative effects of Norfolk Vanguard and Norfolk Boreas
- 7. Damage to and loss of wildlife eg Red Kite
- 8. Threat of terror attack
- 9. Legacy of the F16 plane crash of 1996

Applicant's Comments

The Applicant refers to the following submissions where it has responded previously on the concerns raised by Ms Lockwood;

- Applicant's comments on responses to Deadline 14 submissions [AS-080]
 Section 1.10 on landscape mitigation, cumulative impacts, noise, and design review; and
- Applicant's comments on written representations and additional submissions [REP3-007] (response to REP2-101), on cumulative impacts, risk of hazardous incident, substation location, groundwater, archaeological features, and visualisations.

The Applicant also refers to the following where they have provided responses on issues raised by Ms Lockwood;

- Response to REP17-005 above regarding cumulative impacts;
- Response to REP17-006 above regarding offshore transmission network;
- Responses to REP17-011 above regarding cumulative impacts, lifetime of the project, and alternative connections;
- Comments on Deadline 13 submissions [REP14-039] on health, red kites, connection points, and offshore transmission connections.
- Applicant's responses to Open Floor Hearing 3 [REP13-015] on cumulative impacts, operational noise and plane crash contamination;
- Applicant's response to the ExA's further written questions [REP5-045] at Q2.13.4.3 on fire and terrorism related incidents.
- Applicant's response to Open Floor Hearing [REP1-036] on risk of terrorism.