

Norfolk Vanguard Offshore Wind Farm

Norfolk Vanguard Limited

Natural England Position Statement at Deadline 7

Applicant: Norfolk Vanguard Limited
Document Reference: ExA; AS; 10.D7.22

Deadline 7
Date: 02 May 2019
Author: Royal HaskoningDHV

Photo: Kentish Flats Offshore Wind Farm



Table of Contents

1	Introduction	1
2	Offshore Ornithology	2
2.1	Assessment Methods.....	2
2.2	Impact Assessment Findings – Norfolk Vanguard alone	2
2.3	Cumulative Impact Assessment.....	3
2.4	Habitats Regulations Assessment.....	3
2.5	Responses to Deadline 6 submissions.....	5
2.6	Updates since Deadline 6	6
2.7	Summary	7
3	Benthic Ecology	8
4	Onshore Ecology	10
4.1	Unresolved issue: One year of survey data in relation to Broadland SPA / Ramsar site wintering birds.....	10
4.2	Unresolved issue: Sediment management measures in relation to the River Wensum	13
	Appendix 1 - Natural England’s Position (18 March 2019).....	17
	Appendix 2 – Norfolk Vanguard Clarification Note (15 April 2019).....	27

1 INTRODUCTION

1. The Applicant and Natural England have continued to engage on the outstanding issues summarised in the Statement of Common Ground (SoCG) submitted at Deadline 1 (Rep1 - SOCG - 13.1) and which was subsequently updated at Deadline 5 (Rep5-007) to further reflect areas which had been resolved and those which remained outstanding, with a view to progressing the latter matters and reaching common ground.
2. This document provides the Applicant's position at Deadline 7 (May 2019) regarding matters relating to offshore ornithology, benthic ecology and onshore ecology that are subject to ongoing discussions with Natural England.

2 OFFSHORE ORNITHOLOGY

3. Those aspects identified as 'Not Agreed' in the SoCG with Natural England submitted at Deadline 5 are summarised below; following each outstanding issue the steps taken by the Applicant to address Natural England's concerns have been provided.

2.1 Assessment Methods

- Use of migration free breeding months for assessment of impacts for gannet and lesser black-backed gull;
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included estimates of seasonal collisions summed using both the migration-free breeding months and the full breeding months.
- Methods for assessing cumulative / in-combination construction impacts (in relation to red-throated diver disturbance during cable installation);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included consideration of cumulative / in-combination impacts with cable installation for Hornsea Project Three.
- Species and methods for assessment of cumulative / in-combination displacement impacts (this related to Natural England's request for inclusion of additional wind farms for auks and the addition of cumulative assessment of gannet displacement);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included additional assessment of auk and gannet displacement.
- Methods used in the migrant collision risk modelling assessment (this related to Natural England's request for additional information on methods used in the assessment, although Natural England acknowledged that these would not alter the conclusions);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.18) which provided the additional clarification requested.

2.2 Impact Assessment Findings – Norfolk Vanguard alone

- Conclusion on the magnitude of operational displacement effects at Norfolk Vanguard West (and East and West combined) for red-throated diver (Natural England considered these to be moderate adverse when assessed using their preferred precautionary methods which is based on 100% displacement and 10% mortality);
 - The Applicant has not provided further assessment of this aspect as assessment was provided in the Deadline 1 submission

(ExA;WQApp3.1;10.D1.3) which included both Natural England's preferred precautionary rates and the Applicant's preferred evidence based rates. The different conclusions reached by Natural England and the Applicant relate to the application of these different rates. Using the Applicant's preferred evidence based methods the conclusions is for a minor adverse impact.

2.3 Cumulative Impact Assessment

- Wind farms included in the cumulative assessment (this related to Natural England's request for addition of three Scottish wind farms and also the uncertainty regarding impacts from other projects currently in Examination);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included the extra wind farms identified for inclusion in the cumulative assessment and provided summed totals with, and without, the inclusion of Hornsea Project Three, following Natural England's advice on this matter.
- Conclusions of cumulative displacement assessment (this related to Natural England's request for 'like for like' assessment for red-throated diver, inclusion of additional wind farms for guillemot and razorbill as noted above, omission of gannet from the assessment, summing errors and estimates used for some wind farms);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included the extra wind farms identified for inclusion in the cumulative assessment (as noted above), with corrected totals and the addition of gannet cumulative displacement assessment.
- Conclusions of cumulative collision risk assessment (this related to Natural England's request for inclusion of additional wind farms as noted above, reference to Potential Biological Removal (PBR) and Population Viability Analysis (PVA) conducted under previous guidance);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included the extra wind farms identified for inclusion in the cumulative assessment (as noted above), removal of references to PBR and making reference to PVAs conducted following Natural England's current guidance.

2.4 Habitats Regulations Assessment

- List of species from Special Protection Areas (SPAs) screened in for assessment (this related to Natural England's request to include Flamborough and Filey Coast (FFC) SPA auk and gannet displacement, Outer Thames SPA for red-throated diver

disturbance and potentially Farne Islands SPA and Coquet Island SPA for auk displacement);

- The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included assessment of displacement for razorbill, guillemot, puffin and gannet from FFC SPA both for the project alone and in-combination and red-throated diver displacement from Outer Thames SPA.
- The Applicant did not include assessment of displacement for non-breeding auks from Farne Islands SPA (393km from Norfolk Vanguard) or Coquet Island SPA (363 km from Norfolk Vanguard) as the potential for connectivity is extremely low and any apportioned impacts would be negligible.
- Conclusion of no Adverse Effect on Integrity (AEOI) for lesser black-backed gull from Alde-Ore Estuary (AOE) SPA (due to Natural England's disagreement on collision methods, population estimates, apportioning rates and references to older PVA outputs);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) based on agreed collision risk modelling methods and provided further evidence on appropriate reference populations and apportioning to the AOE SPA and with reference to an updated PVA developed specifically for this assessment (ExA; AS; 10.D6.16).
- Conclusion of no AEOI for gannet from FFC SPA (due to Natural England's disagreement on breeding season months, collision methods, references to older PVA outputs and omission of displacement effects);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) based on agreed collision risk modelling methods, using both the migration free and full breeding months, with reference to updated PVA (conducted in line with current Natural England guidance) and including assessment of displacement for Norfolk Vanguard alone and in-combination.
- Conclusion of no AEOI for kittiwake from FFC SPA (due to Natural England's disagreement on breeding season apportioning, collision methods and references to older PVA outputs);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) based on agreed collision risk modelling methods, using both the migration free and full breeding months, with further analysis and consideration of appropriate breeding season apportioning and with reference to updated PVA (conducted in line with current Natural England guidance).

- Conclusion of no AEOI for red-throated diver from Greater Wash SPA (due to Natural England's disagreement on displacement and mortality rates and request to assess in-combination construction with Hornsea Project Three);
 - The Applicant provided an updated assessment at Deadline 6 (ExA; AS; 10.D6.17) which included assessment using both Natural England's preferred precautionary rates and the Applicant's preferred evidence based rates, consideration of 'like for like' cumulative assessment and in-combination assessment of potential disturbance and including displacement due to cable installation coinciding with that for Hornsea Project Three.
- Conclusion of no AEOI for little gull from Greater Wash SPA (due to Natural England's disagreement on collision methods);
 - The Applicant provided an updated collision predictions assessment for the project alone, estimated using Natural England's preferred methods, at Deadline 6 (ExA; AS; 10.D6.17). Collision predictions remain very low and this has confirmed the original findings of the Habitats Regulations Assessment that there will be no Adverse Effect on the Integrity of the Greater Wash SPA for the project alone. However as requested by Natural England an in-combination assessment will be presented at Deadline 7.
- Proposed Ornithological Monitoring Plan (Natural England requested further discussions to explore mitigation options);
 - The Applicant has not conducted any further discussions on this topic with Natural England. However, in response to Natural England's requests, the Applicant has undertaken a review of the project layout designs in order to further mitigate impacts (this was submitted in ExA;CRM;10.D6.5.1_CRM at Deadline 6.5 and is summarised below). The Applicant has also provided additional mitigation designed to minimise red-throated diver disturbance from operations and maintenance vessels. This is included in the latest draft Development Consent Order (see schedule 9 and 10, condition 14(1)(d)(vi)) and will also be included in the Project Environmental Management Plan to be submitted at Deadline 7.

2.5 Responses to Deadline 6 submissions

4. The Applicant received preliminary responses from Natural England on 17th April to its Deadline 6 submissions (ExA; AS; 10.D6.15, ExA; AS; 10.D6.16, ExA; AS; 10.D6.17, ExA; AS; 10.D6.18). Natural England also informed the Applicant that final responses to these documents will be submitted at Deadline 7. In the preliminary responses (and also repeated during a call between the Applicant and Natural England on the 23rd April), Natural England confirmed that they no longer had any outstanding issues with the collision risk modelling methods for Norfolk Vanguard and that their remaining concerns

with the migrant non-seabird collision risk assessment had been addressed and therefore they were in agreement with the Applicant's conclusions (of no significant impacts or AEOI) on migrant non-seabirds.

The preliminary responses from Natural England will be reviewed and addressed as appropriate in submissions made by the Applicant at Deadline 7.

2.6 Updates since Deadline 6

5. During the examination for the Project, requests have been made by Natural England and the Royal Society for the Protection of Birds (RSPB) to explore options to mitigate potential seabird impacts from the Project. In order to provide additional mitigation to further minimise collision risk, the Project Design Envelope has undergone additional review in relation to the worst case scenario for the wind turbine layout within the site (see National Policy Statement EN-3 para 2.6.108). The worst case wind turbine layout is now based on the following maximum proportion of turbines which could be installed in either offshore site (NV East and NV West) with two alternative scenarios, (a) and (b):
 - a. The maximum proportion of turbines in NV West would be two-thirds (with one-third in NV East); or
 - b. The maximum proportion of turbines in NV East would be half (with the other half in NV West).
6. These maxima replace the previous worst case assumption that all of the turbines would be installed in either the Norfolk Vanguard East or West sites and this commitment will be included in the draft DCO to be submitted at Deadline 7.
7. The Applicant has provided an updated assessment to include the above mitigation on 16 April 2019 (Deterministic Collision Risk Modelling for revised layout scenarios (ExA; CRM; 10.D6.5.1). This updated assessment was also shared with Natural England and the RSPB.
8. The worst case collision prediction for each relevant species is dependent on their relative abundance across the two sites, however in all cases significantly lower collisions are estimated than those presented in the Collision Risk Modelling Update submitted at Deadline 6 (Ex; AS; 10.D6.15), with an average reduction in collision mortality of 34%.
9. The Applicant considers this to be a significant reduction of impacts through the provision of further mitigation, and notes that this mitigation has been provided despite the conclusion of the original assessment of non-significant collision risks for the project alone.

10. Incorporation of the Project alone collision risks into updated cumulative and in-combination assessments will be provided at Deadline 7, together with updated Integrity Matrices which will reflect the updated assessments.

2.7 Summary

11. The Applicant considers that the updated assessments submitted at Deadline 6 and the collision risk modelling for the revised layout submitted on 16 April 2019 (ExA; CRM; 10.D.6.5.1) represent a significant step in reducing the potential impacts of the Norfolk Vanguard Offshore Wind Farm and have been provided in response to requests from Natural England and the RSPB to explore potential mitigation options to minimise collision impacts from the Project. These steps provide additional confidence in the original conclusions presented in the ES and subsequent submissions that impacts on offshore ornithology from the Norfolk Vanguard Wind Farm at a project alone and cumulative level (EIA) are not significant and the project alone and in-combination will not cause any Adverse Effects on the Integrity of any relevant SPAs.

3 BENTHIC ECOLOGY

12. As discussed at Issue Specific Hearing (ISH) 4, through working with Natural England, the Applicant has commissioned an interim cable burial study for the section of the offshore cable corridor that overlaps with the Hammond and Winterton (HHW) Special Area of Conservation (SAC). The interim cable burial study has been submitted at Deadline 7 in Appendix 1 of the Outline HHW SAC Site Integrity Plan (SIP). The study is based on the Norfolk Vanguard survey data collected in 2016 which includes geophysical survey data with 100% coverage in the HHW SAC as well as grab samples and vibrocores. This has provided confidence to the Applicant that at least 95% of the cable length within the HHW SAC can be buried. On this basis, the Applicant has offered a reduction in cable protection for potential unburi ed cable within the HHW SAC from 10% to 5%, in addition to cable protection for essential cable crossings. The revised volume and area of cable protection has been updated in the draft DCO as submitted on 16 April 2019 as well as being reflected in the Outline HHW SAC SIP submitted at Deadline 7.
13. As discussed, in the Applicant's Deadline 4 submission, the Applicant proposed that mitigation associated with the HHW SAC is secured in a single plan (the Norfolk Vanguard HHW SAC SIP) and through a separate condition (Condition 9(1)(m) in the transmission asset DMLs (Schedules 11 and 12)).
14. The wording of the DCO condition (Schedules 11 and 12, Condition 9(1)(m)) allows a conclusion of no Adverse Effect on Integrity (AEol) to be made through the commitment from the Applicant that the relevant activity cannot commence until the Marine Management Organisation (MMO) in consultation with Natural England is satisfied that there would be no AEol. The condition states:

"The licensed activities, or any phase of those activities must not commence until a site integrity plan which accords with the principles set out in the outline Norfolk Vanguard Haisborough, Hammond and Winterton Special Area of Conservation Site Integrity Plan has been submitted to the MMO and the MMO (in consultation with the relevant statutory nature conservation body) is satisfied that the plan provides such mitigation as is necessary to avoid adversely affecting the integrity (within the meaning of the 2017 Regulations) of a relevant site, to the extent that sandbanks and Sabellaria spinulosa reefs are a protected feature of that site."
15. The Applicant provided a draft Outline HHW SAC SIP to Natural England and the MMO for review on 3rd April 2019.
16. A conference call was then held with Natural England and the MMO on the 11th April 2019 to discuss feedback and written comments were received from Natural England on 17th April.

17. The Applicant has submitted an Outline HHW SAC at Deadline 7 (document reference 8.20). This reflects the following key updates that the Applicant has made in response to the comments from Natural England and the MMO:

- Further details on the importance of using a SIP to provide a framework for agreeing the management measures relating to works in the HHW SAC;
- Further details on the process that will be undertaken post consent in finalising the SIP and addressing areas of uncertainty;
- Inclusion of the worst case scenario for works in the Haisborough, Hammond and Winterton SAC;
- Cross referencing to the assessments that have been provided in the Information to Support HRA report (document 5.3);
- Clearly stating the consequences in the unlikely event that it cannot be agreed with the MMO, in consultation with Natural England, that there is no adverse effect on the integrity of the HHW SAC i.e.:
 - Construction cannot commence;
 - Norfolk Vanguard Limited must consider alternatives;
 - If no alternatives can be identified that can be agreed with the MMO, in consultation with Natural England, Norfolk Vanguard Limited would be required to submit a DCO variation or a Marine Licence application.
- Inclusion of the interim cable burial study as an Appendix to the HHW SIP which, as discussed above provides evidence that at least 95% cable burial will be achievable in the HHW SAC. The Applicant maintains that this study, combined with various firm commitments demonstrated in the Outline HHW SAC SIP (document 8.20, submitted at Deadline 7) and the wording of the DCO, allow a conclusion of no AEoI to be made at the pre-consent stage.

18. Discussions between the Applicant and Natural England in relation to the Outline HHW SAC SIP are on-going. The Applicant intends to submit a final version of the Outline HHW SAC SIP at Deadline 8.

4 ONSHORE ECOLOGY

19. During the Issue Specific Hearing on Environmental Matters (ISH6) on 24 April 2019, the Examining Authority (ExA) requested a position statement regarding outstanding issues to the further clarification note provided to Natural England by the Applicant (dated 15 April 2019) in relation to onshore ecology (Action Point 27). A copy of Natural England's comments received on 18th March 2019 is included as Appendix 1 and a copy of the clarification note provided to Natural England on 15th April 2019 is provided as Appendix 2.
20. The Applicant is awaiting formal comments from Natural England on the content of the clarification note provided on the 15th April 2019. This document sets the Applicant's current position on these unresolved issues.

4.1 Unresolved issue: One year of survey data in relation to Broadland SPA / Ramsar site wintering birds

- Clarification Note issued to Natural England on 'Other Outstanding Issues' – 27.02.2019
- Telecon to discuss content of clarification note – 27.02.2019
- Natural England's advice received – 18.03.2019 (Appendix 1)
- Further Clarification Note on 'Outstanding unresolved issues identified by NE' issued – 15.04.2019 (Appendix 2)

4.1.1 Natural England's response

"Further information required to determine impacts on designated sites/landscapes.

Broadland SPA/Ramsar site: This site was scoped out of the HRA on the basis that there was evidence of low levels of wintering birds associated with the SPA/Ramsar using the study area. However, this may have been due to the cropping regime at the time of survey. We requested that this point was taken account of by including additional measures, e.g. survey and/or WeBS data and information about predicted crop patterns at the time of the proposed work. We suggested that the Outline Landscape and Ecological Management Strategy (OLEMS) is amended to include further survey and provide suitable mitigation measures if required.

Natural England would expect to see an assessment of cropping rotation and how this may impact bird species present across several years so as to assess whether or not the low numbers of birds was due to the cropping regime of that particular year or genuinely represents low usage of those areas. Until this has been done Natural England cannot agree with the conclusions regarding wintering birds at Broadland SPA / Ramsar."

4.1.2 Applicant's approach

21. The Applicant has considered Natural England's suggestion that further survey / assessment / mitigation may need to be identified in relation to wintering birds utilising

arable land within 5km of Broadland SPA (and within 300m of the Norfolk Vanguard Order limits).

22. It was agreed with Natural England during the Evidence Plan Process (Norfolk Vanguard - Onshore Wintering Bird Surveys Survey Methodology Approach Update Response February 2017 (Document Reference: PB4476.003.038) that one year of baseline surveys was appropriate. As part of this agreement Natural England recommended reviewing local cropping patterns to provide evidence as to how this may have influenced the survey findings and in turn whether this was representative for the available habitat during construction.
23. The potential for local cropping patterns to influence the findings of the surveys was considered. Whilst some fields were recently ploughed, the majority of crops in place over winter within the wintering bird survey area (winter crop, fallow grass) provided suitable foraging habitat for pink-footed geese, and as such the survey results recorded over winter in 2016/2017 represented a robust estimate of the use of these habitats by qualifying features of the Broadland SPA and Ramsar site, i.e. that there are low levels of wintering birds associated with the SPA / Ramsar using the study area.
24. Irrespective of the findings from the 2016/2017 survey, the Applicant committed to wintering bird mitigation throughout the onshore project area to account for changes in cropping patterns, which are set out in Paragraph 224 and 225 of the Outline Landscape and Ecological Management Strategy (Document Reference: 8.7). This includes a commitment to not undertake winter works in any one area in consecutive years.
25. In addition, the area of arable land located within 5km of the Broadland SPA and Ramsar site, and within the onshore project area, is approximately 20ha. This represents less than 0.5% of the available arable land within 5km of the Broadland SPA and Ramsar site (see paragraph 196 of ES Chapter 23 Onshore Ornithology for further information), and therefore the use of the mitigation measures set on in the Outline Landscape and Ecological Management Strategy (Document Reference: 8.7) are considered appropriate.
26. However, the Applicant acknowledges the concerns raised by Natural England and proposes the following further measures to provide Natural England with confidence in the conclusions reached, i.e. no adverse effect on integrity to Broadland SPA / Ramsar.
27. **Measure 1:** The Applicant will undertake a second year of wintering bird surveys post-consent. These surveys would aim to replicate as far as possible the surveys undertaken during 2016/2017. The surveys would involve:
 - Six monthly (October to March inclusive) road-transect surveys;
 - Survey area comprising farmland within the Order limits (and up to 300m buffer) that sits within 5km of Broadland SPA / Ramsar;

- All swan and goose species will be recorded;
- A transect route and the regular 'stop and scan' points will be selected, swans and geese flying over will also be counted and the flight line mapped;
- Key species: whooper swan; Bewick's swan, pink-footed goose (also bean goose and white-fronted goose are part of the assemblage); and
- Activity i.e. feeding or non-feeding (roosting, resting, preening, bathing and vigilance/alert).

28. The OLEMS provided for Deadline 7 has been updated to include these commitments.

29. Should the second year of wintering bird surveys confirm that there are low levels of wintering birds associated with the SPA / Ramsar using the study area then no further restrictions would be applied beyond those already set out in the OLEMS.

30. **Measure 2:** To be implemented if the second year of wintering bird surveys indicate significant numbers of wintering birds are present within the Order limits (and up to 300m buffer) within 5km of the Broadland SPA / Ramsar site.

31. Should intrusive works be programmed between November and January (inclusive), only one of the two sections of the onshore project area located within the Broadland SPA / Ramsar study area (see Figure 1 below) would be worked on at any one time.



Figure 1: Broadland SPA / Ramsar study area (black dashed line) and onshore project area (red line). Red arrows indicate two separate sections of the onshore project area located within the Broadland SPA / Ramsar study area.

32. Proposed restrictions:

- November to January inclusive – Intrusive work will only take place in one of the two sections where the onshore project area intersects with the SPA / Ramsar study area.
- February to October inclusive – The above restriction does not apply i.e. works can progress in both sections simultaneously.

33. This additional mitigation would ensure that the potential extent of foraging habitat subject to disturbance effects during construction would be limited to at most a 1.7km length of the onshore cable route.
34. This working restriction mirrors the commitment made by Hornsea Project Three on arable land for pink-footed geese associated with the North Norfolk Coast SPA.
35. The updated OLEMS provided for Deadline 7 has been updated to include these commitments.

4.1.3 Should no qualifying features of the Broadland SPA and Ramsar site be found during the second year of surveys

36. Should no qualifying species be found then ex-situ habitats within the Order limits and HRA study area would remain screened out from further assessment, i.e. these habitats would be confirmed as not important for the qualifying features and **no potential adverse effect on the integrity** of Broadland SPA and Ramsar site.

4.1.4 Should qualifying features be recorded during the second year of surveys

37. Should qualifying species be found (presence in one year out of two surveyed) this would indicate qualifying species are sporadically utilising the ex-situ habitats within the Order limits and HRA study area.
38. In this scenario if the mitigation measures set out in the OLEMS and detailed in Measure 2 above are adhered to, then the ex-situ habitats within the Order limits and HRA study will, due to construction activities, only be rendered as sub-optimal foraging habitat for qualifying features for a maximum of one winter in every two, equivalent to the recorded estimated level of usage of these habitats by qualifying features based on the survey findings. In light of this, and the fact the effects are extremely localised, reversible and indirect, **no potential adverse effect on the integrity** of Broadland SPA and Ramsar site in relation to the conservation objectives for these sites is anticipated.

4.2 Unresolved issue: Sediment management measures in relation to the River Wensum

- Clarification Note issued to Natural England on 'Sediment Management at the River Wensum Crossing' – 27.02.2019
- Telecon to discuss content of clarification note – 27.02.2019
- Natural England's advice received – 18.03.2019 (Appendix 1)
- Further Clarification Note on 'Outstanding unresolved issues identified by NE' issued – 15.04.2019 (Appendix 2)

4.2.1 Natural England's response

"Most concerns withdrawn.

However further information is required regarding some elements. Following receipt of further information on 27 February 2019 Natural England is broadly satisfied that the specific issues we have raised in previous correspondence relating to the assessment of sediment management at the River Wensum crossing have been resolved. However, further clarification is still required with regards to:

1. Restoration plan outside of functional floodplain

We would expect the detailed design to demonstrate that reseeded of bare ground within the River Wensum catchment would not have a detrimental effect on water quality within the River Wensum SAC. If a negative impact on water quality cannot be ruled out at the detailed design stage then turf stripping may be necessary within a wider area of the catchment, not just the floodplain. Natural England look forward to commenting on the detailed design;

2. Reinstatement of work areas

Whilst the clarification note states that 'any damage to ground conditions caused by vehicle tracking will be rectified prior to the reinstatement of topsoil/turf', there are no details on how this will be done. Natural England would request further information in this regard; and

3. Number of HDD's

Natural England expects confirmation on the exact number of HDD crossings to be provided in the detailed scheme and programme which will include site specific water course crossing. Please note that whilst this clarification note broadly allays Natural England's concerns with regards to impacts on River Wensum SAC / SSSI we would defer to the Environment Agency with regards to its suitability to allay any concerns regarding flood risk. Therefore, Natural England recommends that this clarification note is also provided to the Environment Agency for comment if this hasn't already been done."

4.2.2 Applicant's approach

4.2.2.1 Restoration plan outside of the functional floodplain

39. The Applicant confirms that restoration of habitats within the River Wensum catchment will be captured within the detailed scheme and programme of watercourse crossings which will be produced by the Applicant post-consent, which is secured through DCO requirement 25. Whilst the exact nature of these measures will be agreed in consultation with Natural England and the Environment Agency post-consent, the Applicant would like to clarify for Natural England at this stage how the Applicant intends to approach grassland reinstatement outside of the functional floodplain.

40. The Applicant will employ the measures for turf stripping and reinstatement of grassland within the functional floodplain, as set out in the Applicant's clarification note (dated 27 February 2019), for all grassland habitats located within 10m of any watercourse within the River Wensum catchment. This mitigation measure is being proposed to ensure that grassland adjacent to all watercourses is managed so as to reduce the risk of sediment

release into the tributaries of the River Wensum by reinstating a 10m buffer strip of re-laid turf adjacent to each watercourse.

41. The outline Code of Construction Practice (oCOCp) (DCO document: 8.1) provided at Deadline 7 has been updated to reflect this further commitment.
42. In light of the negligible risk of the proposed works affecting local groundwater and hydrology conditions following implementation of the mitigation measures outlined above, **no potential adverse effect on the integrity** of the River Wensum SAC in relation to the conservation objectives for *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation and Desmoulin's whorl snail is anticipated.

4.2.2.2 Reinstatement of work areas

43. Natural England has requested further information in relation to rectification of soil damage caused by vehicle tracking prior to the reinstatement of topsoil/turf. The Applicant will follow Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2009) during all land reinstatement. Specifically, measures set out in the Code for the relief of soil compaction will be adhered to. These measures include using a tractor-drawn subsoiler or excavator fitted with a single rigid tine to break-up the compacted ground. The exact measures selected would be determined on a site by site basis depending on local ground conditions and informed by a detailed soil survey undertaken post-consent. The oCOCp provided at Deadline 7 has been updated to reflect this clarification.
44. In light of the negligible risk of the proposed works affecting local groundwater and hydrology conditions following implementation of the mitigation measures outlined above, **no potential adverse effect on the integrity** of the River Wensum SAC in relation to the conservation objectives for *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation and Desmoulin's whorl snail is anticipated.

4.2.2.3 Number of HDDs

45. The number of HDDs will be confirmed in a scheme of watercourse crossings to be submitted post-consent. This will include the design, mitigation and restoration of each watercourse crossing. The scheme will be submitted to and approved by the relevant planning authority in consultation with Natural England. This is secured through DCO Requirement 25.
46. The Sediment Management clarification note has also been provided to the Environment Agency (25.03.2019). The flood risk aspects outlined within the note have been captured within the Statement of Common Ground between the Applicant and The Environment Agency submitted at Deadline 4 (Rep2-SOCG-6.1) and all points related to flood risk are agreed between the two parties.

47. In light of the negligible risk of the proposed works affecting local groundwater and hydrology conditions following implementation of the mitigation measures outlined above, **no potential adverse effect on the integrity** of the River Wensum SAC in relation to the conservation objectives for *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation and Desmoulin's whorl snail is anticipated.

APPENDIX 1 - NATURAL ENGLAND'S POSITION (18 MARCH 2019)

Date: 18 March 2019
Our ref: 275160
Your ref: Sediment Management at the River Wensum crossing



Royal Haskoning DHV on behalf of Norfolk Vanguard Ltd.

BY EMAIL ONLY

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

Dear Gemma,

Planning consultation: Norfolk Vanguard Offshore Windfarm Clarification Note - Sediment Management at the River Wensum crossing
Location: Norfolk

Thank you for your consultation on the above dated 20 February 2019 which was received by Natural England on 27 February 2019. The following advice is provided under Natural England's Discretionary Advice Service (DAS).

Clarification Note: Sediment Management at the River Wensum Crossing

Most concerns withdrawn. However further information is required regarding some elements. Following receipt of further information on 27 February 2019 Natural England is broadly satisfied that the specific issues we have raised in previous correspondence relating to the assessment of sediment management at the River Wensum crossing have been resolved. However, further clarification is still required with regards to:

1. Restoration plan outside of functional floodplain;
2. Reinstatement of work areas; and
2. Number of HDD's

Within the Relevant Representations of Natural England dated 31 August 2018 we raised several concerns with regards to the assessment on River Wensum SAC / SSSI. The Sediment Management at the River Wensum Crossing clarification note attempts to address each of these concerns; so, for ease of tracking, this advice letter has been broken down by each comment and whether or not through provision of the clarification note Natural England's concerns can be withdrawn.

1. Restoration of the site should be undertaken sensitively: deep turf stripping and reinstatement is more appropriate than natural regeneration or reseeded.

Most concerns withdrawn. However further information is required regarding some elements. Following receipt of further information on 27 February 2019 Natural England is broadly satisfied that the specific issues we have raised in previous correspondence relating to restoration of the site have been resolved. However, some further clarification is required.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'Works to facilitate the trenchless crossing of the River Wensum may take place within the River Wensum floodplain north of Penny Spot Beck which we advised should be avoided as it is part of a Countryside Stewardship agreement to improve the site integrity of the River Wensum SAC. We are content with the mitigation proposed if this location has to be used, i.e. works will take place outside of the winter period (October – February inclusive) (para 1166). However, restoration of this site*

should be undertaken sensitively: deep turf stripping and reinstatement is more appropriate than natural regeneration or reseeded. We would be happy to agree a restoration plan when more information is known.'

Natural England welcomes the commitment that, within the functional floodplain, where a topsoil strip is required for existing grassland located within the functional floodplain, this will be undertaken using a turf cutter and these turf rolls will be retained and reinstated after the works are complete (approximately eight weeks). Natural England also welcomes the commitment to store removed topsoil and turf outside of the functional floodplain.

However, Natural England note that a similar practice will not be employed in areas outside of the functional floodplain. In these areas where surface vegetation has been removed (with the exception of arable crops), this will simply be reseeded to prevent future runoff. Reseeding will only be effective when carried out in suitable growing conditions, otherwise it risks extended periods of bare ground, liable to erosion. The applicant has committed to providing a detailed scheme and programme which will include site specific water course crossing, with consultation with Natural England. We would expect the detailed design to demonstrate that reseeded of bare ground within the River Wensum catchment would not have a detrimental effect on water quality within the River Wensum SAC. If a negative impact on water quality cannot be ruled out at the detailed design stage then turf stripping may be necessary within a wider area of the catchment, not just the floodplain. Natural England look forward to commenting on the detailed design.

2. Sediment Control and reinstatement of work areas

Most concerns withdrawn. However, further information is required regarding some elements. Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to sediment control have been resolved. However, some further clarification is required with regards to reinstatement of work areas.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'There is insufficient detail in the Code of Construction Practice (CoCP) for measures to safeguard the designated site in relation to sediment control and reinstatement of all work areas.'* and

'Details of actual methods employed are needed in relation to sediment control, and reinstatement of all work areas.'

The clarification note provides sufficient details with regards to sediment control and therefore Natural England withdraw their concerns in this regard.

However, whilst the clarification note states that 'any damage to ground conditions caused by vehicle tracking will be rectified prior to the reinstatement of topsoil/turf', there are no details on how this will be done. Natural England would request further information in this regard.

3. Permanent Access Tracks

Concerns withdrawn Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to permanent access tracks have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'Location of permanent access tracks is not provided and is needed. These would require the retention and maintenance of sediment and surface water control measures.'*

Natural England welcomes the confirmation in the clarification note that there are no new permanent

access tracks required for operation across the functional floodplain with existing tracks and roadways being utilised for access where possible. Temporary construction accesses within the functional floodplain will only be required if the third trenchless crossing compound (north of Penny Spot Beck) is used.

However, Natural England notes that if the third compound is chosen it is still not known what the temporary new construction accesses will be formed of (e.g. protective matting (geotextile), temporary metal road or permeable gravel aggregate). Norfolk Vanguard Ltd. has committed to providing a detailed scheme and programme which will include site specific water course crossing, with consultation with Natural England. Natural England would expect further detail to be provided as to the location of temporary access (this is not illustrated In Figure 1 in the Clarification Note), design, materials, and post construction reinstatement. Natural England looks forward to receiving and commenting on the site specific crossing plan.

In addition, it should be noted that Natural England advises that if possible the area north of Penny Spot Beck should be avoided as it is part of a Countryside Stewardship agreement to improve the site integrity of the River Wensum SAC.

4. Further detail on the ongoing management of silt traps and screens and decommissioning / disposal of retained sediment

Concerns withdrawn

Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to management of silt traps and decommissioning/disposal of retained sediment have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'Further detail on the ongoing management of silt traps and screens and decommissioning/disposal of retained sediment is required.'*

The clarification note confirms that the sediment traps will be monitored weekly (visual inspection) during the trenchless crossing works (with increased monitoring during inclement weather) and when required the traps can be pumped via settling tanks to remove sediment, based on a pre-defined level / depth of sediment. When the interceptor drains and associated sediment traps are decommissioned any standing water within the drains would be pumped out to settling tanks as described in the clarification note. Sediment that has settled out within the interceptor drain would be left in place. Soils would be replaced in the reverse order that they were removed and turf reinstated.

Natural England welcomes this confirmation and are satisfied that the clarification note provides sufficient information to withdraw our concerns in this regard. Natural England looks forward to receiving the updated CoCP, with mitigation measures as outlined in the clarification note included.

5. Interceptor Drains

Concerns withdrawn

Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to interceptor drains have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'Interceptor drains are an important part of sediment control and therefore need to be combined with sediment management measures in 11.1.1 Para 103'.*

Natural England welcomes the confirmation in the clarification note that the surface water drainage introduced in advance of construction will include interceptor drains for surface water flows and that

these interceptor drains will include areas for the settlement of sediment (sediment traps). Natural England therefore withdraw our concerns in this regard.

6. Detailed management and monitoring procedures should be provided in the CoCP in case of 'breakout'

Concerns withdrawn

Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to the need for detailed management and monitoring procedures in case of 'breakout' have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'In addition, detailed management and monitoring procedures should be provided in the CoCP in case of 'breakout' (where the drilling fluid leaves the bore and escapes into the surrounding substrate).'*

The clarification note provides a brief overview of the steps that will be in any break-out contingency plan, including measures to ensure drilling stops once a breakout is reported (there will be a drop in pressure at the drill head).

As bentonite is an inert substance Natural England's preference is to consider allowing natural processes to winnow the substance away over more intrusive/damaging options. However, should a more proactive approach be required then the following can also be considered:

- Where appropriate, deploy measures to contain the breakout, for example sand bags, to minimise the extent of any smothering. However, sandbags shouldn't be placed where they will cause significant damage to vegetation or sediment.
- Measures to remove the released bentonite if a significant volume of material is contained – for example pumped back to the bentonite lagoon within the trenchless crossing compound, or pumped to the interceptor drains, or pumped to the mobile settling tanks that will be used for managing sediment traps.

The exact specification for the contingency plan will be informed by further ground investigation and the specific design of the trenchless crossing.

Natural England welcome the commitment to ensure a break-out contingency plan is included in the final CoCP and will provide further advice, if necessary, when this and the crossing site specific plans are produced.

7. Number of HDD's if location north of Penny Spot Beck is used

Further information required to determine impacts on designated sites/landscapes.

Following receipt of further information on 27 February 2019, there remains insufficient information to enable Natural England to provide a substantive response to this consultation. We expect this to be provided in the site specific crossing plan.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'It is unclear whether there would be 2 HDD's or 1 if the location north of Penny Spot Beck is used.'*

The clarification Note states that 'two trenchless crossings may be required due to local ground conditions, i.e. one to cross the Wensum north of the Penny Spot Beck, and a second one to cross the Penny Spot Beck.

Natural England expects confirmation on the exact number of HDD crossings to be provided in the detailed scheme and programme which will include site specific water course crossing.

Please note that whilst this clarification note broadly allays Natural England's concerns with regards

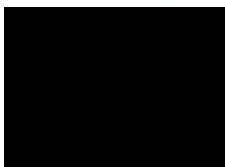
to impacts on River Wensum SAC / SSSI we would defer to the Environment Agency with regards to its suitability to allay any concerns regarding flood risk. Therefore, Natural England recommends that this clarification note is also provided to the Environment Agency for comment if this hasn't already been done.

For any queries relating to the content of this letter please contact me using the details provided below.

☒ The advice provided in this letter has been through Natural England's Quality Assurance process.

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely,



Jessica Taylor
Marine Lead Adviser
E-mail: Jessica.Taylor@naturalengland.org.uk
Telephone: 0208 225 8234

Date: 18 March 2019
Our ref: 275160
Your ref: Outstanding Issues Clarification Note



Royal Haskoning DHV on behalf of Norfolk Vanguard Ltd.

BY EMAIL ONLY

Customer Services
Hornbeam House
Crewe Business Park
Electra Way
Crewe
Cheshire
CW1 6GJ

T 0300 060 3900

Dear Gemma,

Planning consultation: Norfolk Vanguard Offshore Windfarm Other Outstanding Issues Clarification Note
Location: Norfolk

Thank you for your consultation on the above dated 27 February 2019 which was received by Natural England on 27 February 2019. The following advice is provided under Natural England's Discretionary Advice Service (DAS).

Other Outstanding Issues Clarification Note:

1. Sand martins at Happisburgh

Concerns withdrawn

Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to the assessment of impacts to sand martins at Happisburgh Cliffs have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that '*Sand martin are known to nest in Happisburgh Cliffs which may be affected by noise, vibration and 24hr working (i.e. works involving lighting). It would be preferable to avoid the breeding season during construction. However, the stated distance between nest sites and landfall (130m), Chapter 25 Onshore Noise and Vibration Table 25.17 Predicted distances at which vibration levels may occur, shows that some vibration may be felt at this distance and the significance of this for birds should be evaluated. We agree that lighting should follow good practice guidance for wildlife.*'

The clarification note dated 27 February 2019 confirms that none of the activities potentially giving rise to a vibration effect are anticipated within the landfall works area, with the running track leading up to the landfall compound approximately 450m from the cliff edge. Natural England is therefore satisfied that under the current project design there is no pathway for vibration effects to impact upon sand martin nests at the landfall.

However, please note if the project design changes Natural England would expect this issue to be revisited.

2. One year of survey data in relation to Broadland SPA / Ramsar site wintering birds

Further information required to determine impacts on designated sites/landscapes

Following receipt of further information on 27 February 2019 there remains insufficient information to enable Natural England to provide a substantive response to this consultation. Therefore, Natural England is not satisfied that the specific issues we have raised in previous correspondence relating to the need for one year of survey data in relation to Broadland SPA / Ramsar site wintering birds have been fully resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that *'Broadland SPA/Ramsar site: This site was scoped out of the HRA on the basis that there was evidence of low levels of wintering birds associated with the SPA/Ramsar using the study area. However, this may have been due to the cropping regime at the time of survey. We requested that this point was taken account of by including additional measures, e.g. survey and/or WeBS data and information about predicted crop patterns at the time of the proposed work. We suggest that the Outline Landscape and Ecological Management Strategy (OLEMS) is amended to include further survey and provide suitable mitigation measures if required.'*

Natural England agrees with the assertion in the clarification note that it was agreed during the Evidence Plan Process (Norfolk Vanguard - Onshore Wintering Bird Surveys Survey Methodology Approach Update Response February 2017 (Document Reference: PB4476.003.038) that one year of baseline surveys was appropriate.

However, during the same plan meeting Natural England suggested that the reason that no focal species selected from the qualifying species of the Broadland SPA and Ramsar site for the agricultural land transect (Bewick's Swan, Whooper Swan, Bean Goose, Greylag Goose, Pink-footed Goose and White-fronted Goose) were recorded may be linked to crop rotations. Crop rotations may mean that crops that the birds will feed on may not have been grown in these fields in that particular survey year. However, in another year if such crops were grown, then higher numbers of birds may be recorded in these fields. Natural England therefore questioned whether this was representative for the available habitat during construction and recommended that consideration was given to this.

The clarification note states that the potential for local cropping patterns to influence the findings of the surveys was considered and that whilst some fields were recently ploughed the majority of crops in place over winter within the wintering bird survey area (winter crop, fallow (grass)) would still provide suitable foraging habitat for pink-foot geese. Therefore it was concluded that the survey results recorded over winter in 2016/2017 provided a robust estimate of the use of these habitats by qualifying features of the Broadland SPA and Ramsar site, i.e. that there are low levels of wintering birds associated with the SPA / Ramsar using the study area.

Natural England welcomes the commitment to not undertake winter works in any one area in consecutive years to attempt to account for changes in cropping patterns for wintering birds to use different habitats for foraging and resting on an inter-annual basis.

However, as per our original query, Natural England would expect to see an assessment of cropping rotation and how this may impact bird species present across several years so as to assess whether or not the low numbers of birds was due to the cropping regime of that particular year or genuinely represents low usage of those areas. Until this has been done Natural England cannot agree with the conclusions regarding wintering birds at Broadland SPA / Ramsar.

3. Use of the 300m disturbance buffer in relation to designated sites

Concerns withdrawn

Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to the use of the 300m disturbance buffer in relation to designated sites have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'For the assessment of noise disturbance on birds which are features of designated sites, we suggest designated sites within 500m are screened in for assessment, namely River Wensum SSSI; Dereham Rush Meadow SSSI; Dillington Carr, Gressenhall SSSI. However, it is stated in Chapter 25 Onshore Noise and Vibration (Table 25.3 Consultation responses) that 'no sites are located within the noise and vibration study area'. However, Figure 25.1 Noise and Vibration Study Area rather confusingly does not appear to show a noise and vibration study area. However in the report, Dillington Carr, Gressenhall SSSI and Dereham Rush Meadows SSSI are scoped out from further assessment as they are located more than 300m from the onshore project area (paragraph 169) but we are unclear as to how this distance criteria was derived. Therefore, no detailed assessment of noise on bird features appears to have been carried out, i.e. noise modelling. We advise that a detailed noise assessment is carried out for sites within 500m of the project area and mitigation provided for any impacts identified or evidence is provided to demonstrate that there will be no additional noise experienced from construction at the designated site boundary.'*

Natural England has reviewed all documents submitted as part of this application and which are relevant to this point and can confirm that we agree with the use of 300m as a disturbance buffer in relation to noise disturbance on birds which are features of onshore designated sites. Natural England, therefore withdraw our concern in this regard.

4. Grade 3 Agricultural Land Classification (ALC) soils need to be split to allow an assessment of impact to Best and Most Versatile (BMV) to be undertaken

Concerns withdrawn

Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to the Agricultural Land Classification have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'Grade 3 ALC soils need to be split into Grade 3a and Grade 3b, so that the assessment of loss of BMV land can be properly made (Table 21.10). The amount of BMV land that would be permanently lost to the development, i.e. by buildings etc., and the time it would take for the recovery of soils that are disturbed by the construction should be quantified in the ES.*

We note that the total permanent land take for the footprint of the onshore project substation and National Grid substation extension zone is approximately 10.5ha according to the worst case scenario (Table 21.16). These will be on ALC grades 2 and 3 land; the amount of BMV land should be estimated.'

Natural England welcome the information supplied within the clarification note 'Other unresolved issues' provided 27 February 2019. We note that all Grade 3 land has now been assessed as best and most versatile agricultural land. We note the reassessment within the Errata document 9.4 and that the effects to BMV have been reassessed as minor adverse. Natural England confirm that our concerns with regard to Agricultural Land Classification and the assessment of impact to Best and Most Versatile (BMV) are withdrawn.

5. Topsoil should be reinstated where it originated

Concerns withdrawn

Following receipt of further information on 27 February 2019 Natural England is satisfied that the specific issues we have raised in previous correspondence relating to the need to ensure topsoil is reinstated where it originated have been resolved.

Within the Relevant Representations of Natural England dated 31 August 2018 we advised that: *'Topsoil should be reinstated where it originated. There are significant differences between topsoil in arable and grassland, valley bottom and valley sides and natural, semi natural and managed land.*

This will need clearly addressing in the SMP mentioned in Para 154.'

Natural England welcomes the commitment made in the clarification note to update Section 8 (soil management) of the Outline Code of Construction Practice (OCoCP) to confirm that topsoil will be stored adjacent to the excavated trench and will be reinstated where it originated in sequential order. Natural England, therefore, withdraw our concerns in this regard.

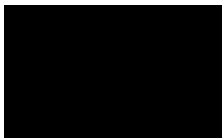
Natural England also welcome the commitment that the SMP will be produced post-consent in accordance with the principles set out in section 8 of the OCoCP.

For any queries relating to the content of this letter please contact me using the details provided below.

☒ The advice provided in this letter has been through Natural England's Quality Assurance process.

The advice provided within the Discretionary Advice Service is the professional advice of the Natural England adviser named below. It is the best advice that can be given based on the information provided so far. Its quality and detail is dependent upon the quality and depth of the information which has been provided. It does not constitute a statutory response or decision, which will be made by Natural England acting corporately in its role as statutory consultee to the competent authority after an application has been submitted. The advice given is therefore not binding in any way and is provided without prejudice to the consideration of any statutory consultation response or decision which may be made by Natural England in due course. The final judgement on any proposals by Natural England is reserved until an application is made and will be made on the information then available, including any modifications to the proposal made after receipt of discretionary advice. All pre-application advice is subject to review and revision in the light of changes in relevant considerations, including changes in relation to the facts, scientific knowledge/evidence, policy, guidance or law. Natural England will not accept any liability for the accuracy, adequacy or completeness of, nor will any express or implied warranty be given for, the advice. This exclusion does not extend to any fraudulent misrepresentation made by or on behalf of Natural England.

Yours sincerely,



Jessica Taylor
Marine Lead Adviser
E-mail: Jessica.Taylor@naturalengland.org.uk
Telephone: 0208 225 8234

APPENDIX 2 – NORFOLK VANGUARD CLARIFICATION NOTE (15 APRIL 2019)

**Clarification Note: Norfolk Vanguard
Outstanding issues raised by Natural England following
18 March DAS Responses**

**HaskoningDHV UK
Ltd.**

1 Unresolved issue: One year of survey data in relation to Broadland SPA / Ramsar site wintering birds

1.1 Natural England's position

Broadland SPA/Ramsar site: This site was scoped out of the HRA on the basis that there was evidence of low levels of wintering birds associated with the SPA/Ramsar using the study area. However, this may have been due to the cropping regime at the time of survey. We requested that this point was taken account of by including additional measures, e.g. survey and/or WeBS data and information about predicted crop patterns at the time of the proposed work. We suggest that the Outline Landscape and Ecological Management Strategy (OLEMS) is amended to include further survey and provide suitable mitigation measures if required.

Natural England would expect to see an assessment of cropping rotation and how this may impact bird species present across several years so as to assess whether or not the low numbers of birds was due to the cropping regime of that particular year or genuinely represents low usage of those areas. Until this has been done Natural England cannot agree with the conclusions regarding wintering birds at Broadland SPA / Ramsar.

1.2 Applicant's response

It was agreed with Natural England during the Evidence Plan Process (Norfolk Vanguard - Onshore Wintering Bird Surveys Survey Methodology Approach Update Response February 2017 (Document Reference: PB4476.003.038) that one year of baseline surveys was appropriate. As part of this agreement Natural England recommended reviewing local cropping patterns to provide evidence as to how this may have influenced the survey findings and in turn whether this was representative for the available habitat during construction.

The potential for local cropping patterns to influence the findings of the surveys was considered. Whilst some fields were recently ploughed, the majority of crops in place over winter within the wintering bird survey area (winter crop, fallow grass) provided suitable foraging habitat for pink-footed geese, and as such the survey results recorded over winter in 2016/2017 represented a robust estimate of the use of these habitats by qualifying features of the Broadland SPA and Ramsar site, i.e. that there are low levels of wintering birds associated with the SPA / Ramsar using the study area.

Irrespective of the findings from the 2016/2017 survey, the Applicant committed to wintering bird mitigation throughout the onshore project area to account for changes in cropping patterns, which are set out in Paragraph 224 and 225 of the Outline Landscape and Ecological Management Strategy (Document Reference: 8.7). This includes a commitment to not undertake winter works in any one area in consecutive years.

In addition, the area of arable land located within 5km of the Broadland SPA and Ramsar site, and within the onshore project area, is approximately 20ha. This represents less than 0.5% of the available arable land within 5km of the Broadland SPA and Ramsar site (see paragraph 196 of ES Chapter 23 Onshore Ornithology for further information), and therefore the use of the mitigation measures set on in the Outline Landscape and Ecological Management Strategy (Document Reference: 8.7) are considered appropriate.

However, the Applicant acknowledges the concerns raised by Natural England and proposes the following further measures to provide Natural England with confidence in the conclusions reached, i.e. no adverse effect on integrity to Broadland SPA / Ramsar.

Measure 1: The Applicant will undertake a second year of wintering bird surveys post-consent. These surveys would aim to replicate as far as possible the surveys undertaken during 2016/2017. The surveys would involve:

- Six monthly (October to March inclusive) road-transect surveys;
- Survey area comprising farmland within the Order limits (and up to 300m buffer) that sits within 5km of Broadland SPA / Ramsar;
- All swan and goose species will be recorded;
- A transect route and the regular 'stop and scan' points will be selected, swans and geese flying over will also be counted and the flight line mapped;
- Key species: whooper swan; Bewick's swan, pink-footed goose (also bean goose and white-fronted goose are part of the assemblage); and
- Activity i.e. feeding or non-feeding (roosting, resting, preening, bathing and vigilance/alert).

The OLEMS will be updated to include details of these further surveys.

Should the second year of wintering bird surveys confirm that there are low levels of wintering birds associated with the SPA / Ramsar using the study area then no further restrictions would be applied beyond those already set out in the OLEMS.

Measure 2: To be implemented if the second year of wintering bird surveys indicate significant numbers of wintering birds are present within the Order limits (and up to 300m buffer) within 5km of the Broadland SPA / Ramsar site.

Should intrusive works¹ be programmed between November and January (inclusive), only one of the two sections of the onshore project area located within the Broadland SPA / Ramsar study area (see Figure 1 below) would be worked on at any one time.

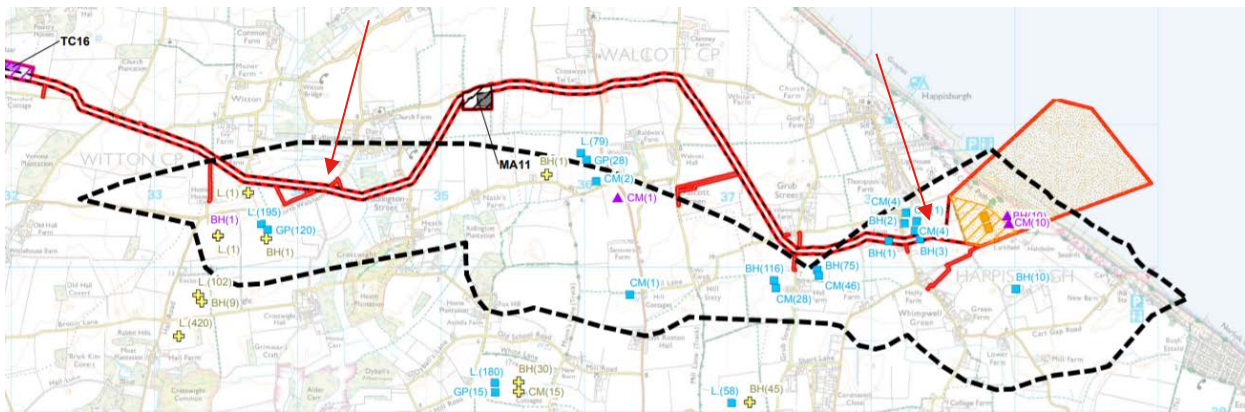


Figure 1: Broadland SPA / Ramsar study area (black dashed line) and onshore project area (red line). Red arrows indicate two separate sections of the onshore project area located within the Broadland SPA / Ramsar study area.

Proposed restrictions:

- November to January inclusive – Intrusive work will only take place in one of the two sections where the onshore project area intersects with the SPA / Ramsar study area.
- February to October inclusive – The above restriction does not apply i.e. works can progress in both sections simultaneously.

This additional mitigation would ensure that the potential extent of foraging habitat subject to disturbance effects during construction would be limited to at most a 1.7km length of the onshore cable route.

This working restriction mirrors the commitment made by Hornsea Project Three on arable land for pink-footed geese associated with the North Norfolk Coast SPA.

The OLEMS would be updated to include this commitment.

¹ Intrusive works include topsoil strip, trench excavation, trenchless crossings, introduction of mobilisation areas, introduction of running track and reinstatement of land. Use of the running track to maintain access would not constitute intrusive works.

2 Unresolved issue: Sediment management measures in relation to the River Wensum

2.1 Natural England's position

2.1.1 Restoration of the site should be undertaken sensitively: deep turf stripping and reinstatement is more appropriate than natural regeneration or reseeding.

Natural England welcomes the commitment that, within the functional floodplain, where a topsoil strip is required for existing grassland located within the functional floodplain, this will be undertaken using a turf cutter and these turf rolls will be retained and reinstated after the works are complete (approximately eight weeks). Natural England also welcomes the commitment to store removed topsoil and turf outside of the functional floodplain.

However, Natural England note that a similar practice will not be employed in areas outside of the functional floodplain. In these areas where surface vegetation has been removed (with the exception of arable crops), this will simply be reseeded to prevent future runoff. Reseeding will only be effective when carried out in suitable growing conditions, otherwise it risks extended periods of bare ground, liable to erosion. The applicant has committed to providing a detailed scheme and programme which will include site specific watercourse crossing, with consultation with Natural England. We would expect the detailed design to demonstrate that reseeding of bare ground within the River Wensum catchment would not have a detrimental effect on water quality within the River Wensum SAC. If a negative impact on water quality cannot be ruled out at the detailed design stage then turf stripping may be necessary within a wider area of the catchment, not just the floodplain. Natural England look forward to commenting on the detailed design.

2.1.2 Sediment Control and reinstatement of work areas

Whilst the clarification note states that 'any damage to ground conditions caused by vehicle tracking will be rectified prior to the reinstatement of topsoil/turf', there are no details on how this will be done. Natural England would request further information in this regard.

2.1.3 Number of HDD's if location north of Penny Spot Beck is used

The clarification Note states that 'two trenchless crossings may be required due to local ground conditions, i.e. one to cross the Wensum north of the Penny Spot Beck, and a second one to cross the Penny Spot Beck.

Natural England expects confirmation on the exact number of HDD crossings to be provided in the detailed scheme and programme which will include site specific water course crossing.

Please note that whilst this clarification note broadly allays Natural England's concerns with regards to impacts on River Wensum SAC / SSSI we would defer to the Environment Agency with regards to its suitability to allay any concerns regarding flood risk. Therefore, Natural England recommends that this clarification note is also provided to the Environment Agency for comment if this hasn't already been done.

2.2 Applicant's response

2.2.1 Restoration plan outside of functional floodplain

The Applicant confirms that restoration of habitats within the River Wensum catchment will be captured within the detailed scheme and programme of watercourse crossings which will be produced by the Applicant post-consent, which is secured through DCO requirement 25. Whilst the exact nature of these measures will be agreed in consultation with Natural England and the Environment Agency post-consent, the Applicant would like to clarify for Natural England at this stage how the Applicant intends to approach grassland reinstatement outside of the functional floodplain.

The Applicant will employ the measures for turf stripping and reinstatement of grassland within the functional floodplain, as set out in the Applicant's clarification note (dated 27 February 2019), for all grassland habitats located within 10m of any watercourse within the River Wensum catchment. This mitigation measure is being proposed to ensure that grassland adjacent to all watercourses is managed so as to reduce the risk of sediment release into the tributaries of the River Wensum by reinstating a 10m buffer strip of re-laid turf adjacent to each watercourse².

The outline Code of Construction Practice (oCOCPP) (DCO doc. 8.1) will be updated to reflect this further commitment.

² The majority of the watercourses within the Wensum catchment do not have a floodplain that extends beyond each watercourse's channel, hence 10m either side of all watercourses in the Wensum catchment is additional to the commitments already made for those that do have a functional floodplain.

2.2.2 Reinstatement of work areas

Natural England has requested further information in relation to rectification of soil damage caused by vehicle tracking prior to the reinstatement of topsoil/turf. The Applicant will follow Defra's *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* (2009) during all land reinstatement. Specifically, measures set out in the *Code for the relief of soil compaction* will be adhered to. These measures include using a tractor-drawn subsoiler or excavator fitted with a single rigid tine to break-up the compacted ground. The exact measures selected would be determined on a site by site basis depending on local ground conditions and informed by a detailed soil survey undertaken post-consent. The oCOCPP will be updated to reflect this clarification.

2.2.3 Number of HDDs

The Applicant can confirm that the exact number of HDD crossings will be provided to Natural England post-consent in the detailed scheme and programme secured through DCO Requirement 25.

Natural England requests that the clarification note, provided by the Applicant on 27 February 2019, detailing information including the number of HDDs, be provided to the Environment Agency to confirm any residual concerns they hold regarding flood risk during construction within the River Wensum floodplain.

As outlined during Issue Specific Hearing 4, the Applicant can confirm that a copy of the clarification note was provided to the Environment Agency and the flood risk elements are fully captured within the Statement of Common Ground (with the Environment Agency) submitted at Deadline 4. All flood risk aspects, including works within the functional floodplain, are now agreed between the Applicant and the Environment Agency.