

Norfolk Vanguard Offshore Wind Farm

DCO Non- Material

Change 2

Response to Points of Clarification Letter

Developer: Norfolk Vanguard Limited and Norfolk Vanguard East Limited
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Photo: Kentish Flats Offshore Wind Farm

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Glossary of Acronyms

DCO	Development Consent Order
DESNZ	Department for Energy Security and Net Zero
EIA	Environmental Impact Assessment
ES	Environmental Statement
NMC	Non-Material Change
SoS	Secretary of State

1 Introduction

1. On 29 June 2023 Norfolk Vanguard Limited and Norfolk Vanguard East Limited (the Applicant) submitted an application for a Non-Material Change to the Norfolk Vanguard DCO (known as Non-Material Change 2 or NMC2).
2. On 21 July 2023 the Secretary of State (SoS) for the Department for Energy Security and Net Zero (DESNZ) issued a letter to Norfolk Vanguard Limited, Norfolk Vanguard East Limited and Vattenfall Wind Power Ltd as the developer for both projects, requesting clarification on a number of separate issues. This document provides clarification on those points.

2 Definition of ‘drills’ and ‘drilling rigs’

3. The SoS requested the following:

“The Secretary of State notes that various documents provided and referenced as part of the Application refer to both ‘drills’ and ‘drilling rigs’. It is also noted that the 2023 Application states that the Norfolk Vanguard project (“Vanguard”) would have six drills in total (four operational, two reserves) whilst the Norfolk Boreas project (“Boreas”) would have three drills total (two operational, one reserve) (paragraphs 7 and 36, Supporting Statement).

*The **Applicant** and/or **Vattenfall** should clarify the exact definitions of the terms ‘drills’ and ‘drill/drilling rigs’ “*

4. The Applicants’ response is as follows:

For the purposes of this NMC (Norfolk Vanguard NMC 2) a “drill” is defined as the process of drilling a narrow bore (approximately 600mm in diameter) (through which a duct will be installed), from the landfall compound under the cliff and intertidal area to an exit point offshore.

For the purposes of this NMC a “drilling rig” or “drill rig” is the machine that is used to undertake the process of establishing the bore (a drill) using the process of drilling.

5. Although not defined as such, the above terminology is used in the same way within the Norfolk Vanguard Environmental Statement (ES). The Applicant also would like to make clear that should the first four drills be successful then the two reserve drills would not be required.

3 Concurrent drilling activity

6. The SoS requested the following:

The 2023 Application states that two ‘drilling rigs’ could be in concurrent operation at landfall for Vanguard (Table 2 and paragraph 36, Supporting Statement). The 2023 Application also evidences the Boreas Environmental Statement (“ES”) Chapter 25: Noise and Vibration¹ to state that with “two drill rigs working concurrently as would be the case with this NMC the impact would be the same as that assessed in the cumulative assessment for Norfolk Boreas” (Table 2, Supporting Statement). The Boreas ES also highlights that Vanguard and Boreas could conduct landfall duct installation concurrently, known as Option B (ES paragraph 67).

The Applicant and/or Vattenfall should clarify the total number of ‘drills’ and/or ‘drilling rigs’ that it is proposed would be operating concurrently across all projects, confirming whether or not the total number would be no more than two across Vanguard alone, or in combination with Boreas.

7. The Applicants’ response is as follows:
8. There would be no more than two drilling rigs in concurrent operation either under the Norfolk Vanguard Development Consent Order (DCO) alone or cumulatively under both the Norfolk Vanguard DCO and the Norfolk Boreas DCO. No more than two drilling rigs in concurrent operation have been assessed by the Environmental Impact Assessments (EIA) or are considered in the NMC2 supporting statement. Due to the fact that no more than two ‘drilling rigs’ would be in operation at the same time a maximum of two ‘drills’ could occur at the same time.
9. The two concurrent drilling operations could either comprise two under the Norfolk Vanguard DCO or could comprise one under the Norfolk Vanguard DCO and one under the Norfolk Boreas DCO. However as stated above and within the NMC2 application and within the Norfolk Boreas ES no more than two drilling operations would occur at any one time across the Norfolk Projects combined.
10. The SoS also requested the following under the same heading:

“The Applicant and/or Vattenfall should further clarify the basis upon which they state at paragraph 7 that the cumulative impacts across Vanguard and Boreas are anticipated to be less than initially predicted.”

¹ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000411-6.1.25%20Environmental%20Statement%20Chapter%2025%20Noise%20and%20Vibration.pdf>

11. The Applicants' response is as follows:
12. The statement made in paragraph 7 relates to the fact that under both DCOs there will now be only three offshore export cable bundles installed. The DCOs for Norfolk Boreas and Norfolk Vanguard allow for up to four offshore export cable bundles to be installed in total (two export cable bundles per DCO). Due to the reduction in marine export cables across the Norfolk Projects from four to three the overall impacts within the marine environment would be reduced in terms of magnitude of effects. However as there is no proposed change to the Norfolk Boreas DCO (under which only one export cable bundle will be installed) this reduction in impacts is not relied upon within the Norfolk Vanguard NMC2 application.

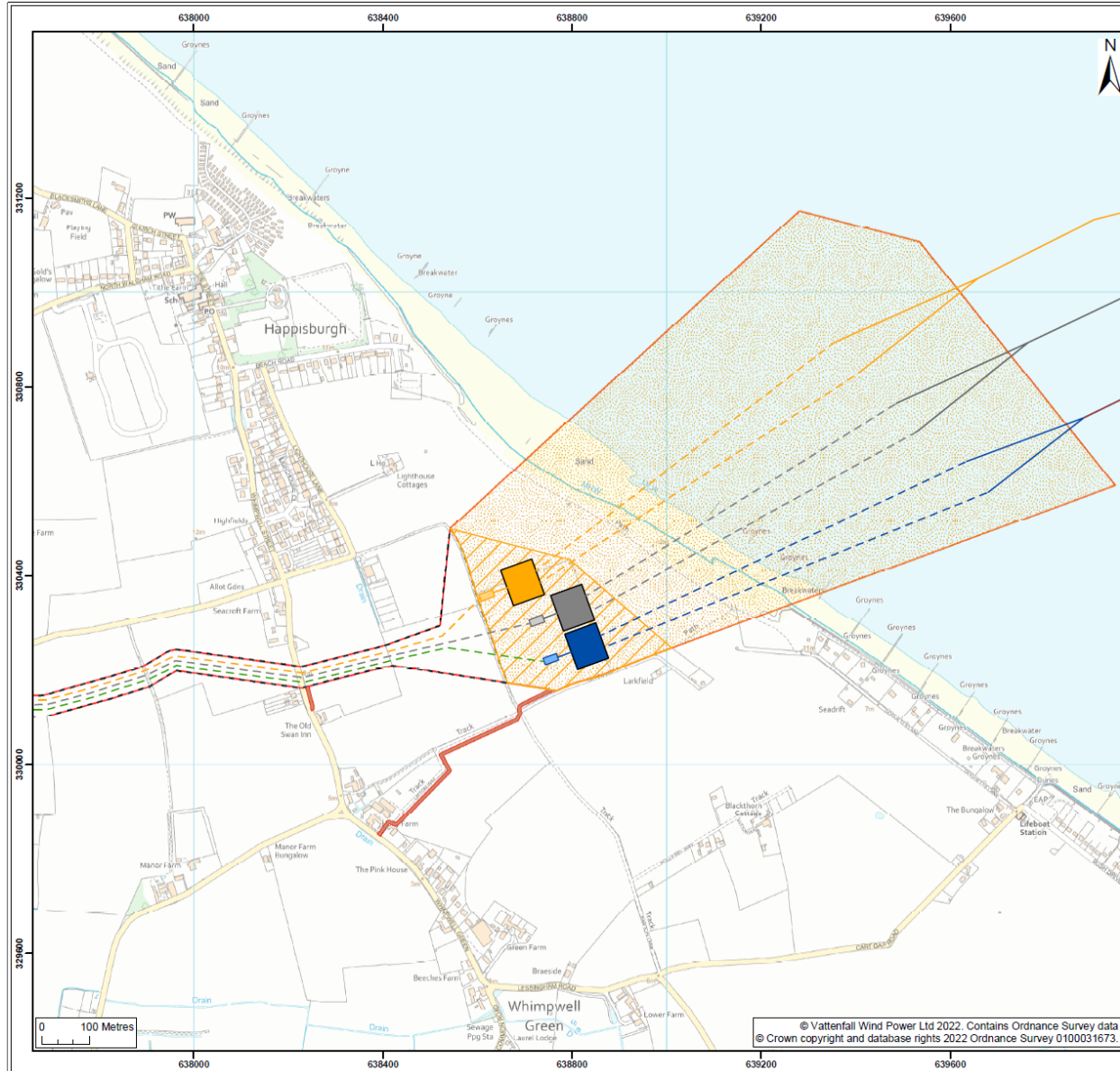
4 Plan showing landfall layout

13. The SoS requested the following:

The Secretary of State notes that Figure 2 of the 2023 Application (Supporting Statement) appears to show physical cross-over between the landfall compounds of Vanguard with those of Boreas, which are shown in Figure 4.7 of the Boreas ES². The Applicant should provide a plan showing the layout at landfall which combines all details for both Vanguard and Boreas.

14. The Applicants' response is as follows:
15. It is important to note that Figure 4.7 of the Norfolk Boreas ES shows "indicative" landfall compound locations and that the DCOs allow for these to be located anywhere within the Landfall compound zone. The same applies to Figure 2 of the NMC2 application. Some further detailed design work has occurred in order to progress the NMC2 application; however, the exact locations of the landfall compounds will only be confirmed at the point at which the Landfall Method Statements (secured through Requirement 17 of the Norfolk Vanguard and Norfolk Boreas DCOs) are approved.
16. The Applicant has provided a plan below showing an indicative layout at landfall which combines landfall infrastructure under the Norfolk Vanguard and Norfolk Boreas DCOs. This was not included within the NMC2 Supporting Statement as the application is only to change the Norfolk Vanguard DCO and it was considered that it may cause confusion to include Norfolk Boreas infrastructure given that there is no equivalent NMC application to change the Norfolk Boreas DCO.

² <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000427-6.2.4.7%20Environmental%20Statement%20Figure%204.7%20Landfall%20location.pdf>



Legend:

<ul style="list-style-type: none"> Norfolk Vanguard West Indicative Location for Marine Cable Norfolk Vanguard West Indicative Location for Ducts Norfolk Vanguard West Indicative Temporary HDD Drilling Compound Indicative Location of Norfolk Vanguard West Transition Joint Pit Norfolk Boreas Indicative Temporary HDD Drilling Compound Indicative Location of Norfolk Boreas Transition Joint Pit Norfolk Boreas Indicative Location for Marine Cable Norfolk Boreas Indicative Location for Ducts 	<ul style="list-style-type: none"> Norfolk Vanguard East Indicative Temporary HDD Drilling Compound Indicative Location for Norfolk Vanguard East Transition Joint Pit Norfolk Vanguard East Indicative Location for Marine Cable Norfolk Vanguard East Indicative Location of Onshore Duct Norfolk Vanguard East Indicative Temporary HDD Drilling Compound Indicative Location of Norfolk Vanguard East Transition Joint Pit Norfolk Vanguard East Indicative Location for Marine Cable Norfolk Vanguard East Indicative Location for Ducts
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Landfall Infrastructure Forming the Non-Material Change Application

- Norfolk Vanguard East Indicative Location for Marine Cable
- Norfolk Vanguard East Indicative Location for Ducts

Project: Norfolk Vanguard Report: Norfolk Vanguard Non-Material Change

Title: Indicative Locations of Norfolk Vanguard and Norfolk Boreas Infrastructure within the Landfall Zone

Figure: 3 Drawing No: PB5640-011-024-003

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
04	26/07/2023	JR	DT	A3	1:8,000
03	26/05/2023	JT	DT	A3	1:8,000

Co-ordinate system: British National Grid EPSG: 27700

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5 Temperature of onshore cables

17. The SoS requested the following:

The Applicant should clarify whether the positive and negative cables will be re-bundled in ducts for the 60km between the landfall zone and the onshore project substation at Necton, and whether these onshore ducts will be made of similar material to the ducts used at landfall. The Secretary of State notes that the 2023 Application states that the insulating material for the ducts at landfall may degrade when the cables are bundled (paragraph 13, Supporting Statement).

18. The Applicants' response is as follows:

19. The Applicant can confirm that the positive and negative cables will not be bundled onshore, they will be housed in separate ducts which are spaced apart and therefore neither the ducts nor the cables will experience any degradation in insulating material due to temperature. This layout (cables in separate ducts) was assessed within the Norfolk Vanguard ES and therefore consented under the DCO.

6 Impact of increased number and length of marine trenching

20. The SoS requested the following:

The Applicant should clarify the text in parenthesis at the end of paragraph 17 of the 2023 Application (Supporting Statement) and direct the Secretary of State to the sections of the Environmental Statement which refer to marine trenching. The Applicant should also further explain its position in respect of the additional 0.7% disturbance offshore, as referred to in pages 20 and 21 of the 2023 Application (Supporting Statement), explaining the cause of this disturbance as well as clarifying what specific activities will take place on the seabed area that is contained within the landfall region and on approach to the landfall region.

21. The Applicants' response is as follows:

22. The Norfolk Vanguard DCO application was based on two bundled cables (each bundle consisting of a positive and negative cable which are also known as the flow and return cables) approaching two ducts at landfall (as described in section 5.4.12.1.1 *Export cables* of the ES). Due to the need for the positive and negative cables to be separated at an offshore location (as illustrated in Figure 2 of the NMC2 Supporting Statement), four single cables would now approach the ducts, and these would be buried separately within the seabed. Therefore, although there would be no increase in the length of marine cable installed there would be a requirement to increase the area disturbed by the cable burial process and this would be over a distance of (up to) 1,500m (1.5km). The Norfolk Vanguard ES assessed the disturbance caused by the installation of up to 400km of marine export cable which

equated to disturbance over 200km (due to the bundling of the positive and negative cables) within the offshore cable corridor. The additional disturbance from the cable burial process over 1.5km represents an increase of approximately 0.7% from that assessed within the ES.

23. For clarity, there would be no increase in the total length of actual cable installed, which is secured as 400km in Requirement 5 of the Norfolk Vanguard DCO, rather a small increase in the area of disturbance during the cable burial process due to the separation of cables from the bundle.
24. As explained above, the cause of the additional disturbance is the act of installing the separate cables within the seabed on the approach to landfall. The installation techniques and methods used to install marine cable (i.e. the specific activities which will take place on the seabed) within the additional (up to) 1,500m of seabed would be exactly the same as those described within the ES (specifically in sections 5.4.12.1 *Offshore cable corridor* and 5.4.13 *Cable Installation Methods* of the ES) and will be the same as those used to bury export cables within the rest of the offshore cable corridor. Therefore, as installation techniques and methods will not change, and because the additional length of cable burial only represents a very small increase in the overall area of disturbance it would not represent a change in magnitude of any impact.

7 Volume of drill arisings

25. The SoS requested the following:

*“The 2023 Application states that there will be an increase to the maximum volume of drill arisings (paragraph 18, supporting statement). It also states that there will be no change to the volume noted (400,624m³) within Schedule 9, Part 3 (1)(f) of the DCO (row 28, Table 1, Supporting Statement). The **Applicant** should clarify whether there would be an increase in drill arisings associated with the 2023 Application.”*

26. Row 28, Table 1 of the Supporting Statement refers to the drill arisings created as a result of offshore turbine foundation installation within the offshore wind farm site. This is controlled by the Deemed Marine Licences which only relate to offshore activities. As drilling activity at landfall will be conducted from an onshore location the arisings from these drilling activities are not controlled by the Deemed Marine Licence.
27. There would be an increase in onshore drill arising associated with the 2023 Application however there are no restrictions set within the DCO for the total amount of drill arisings onshore. The environmental impacts of drill arisings are controlled through the assessment of traffic impacts associated with the disposal of those arisings and through the assessment of noise associated with that traffic. As

set out in the Supporting Statement for NMC2 increases in drill arisings do not result in a change to the conclusion of the traffic and noise impacts.