

Norfolk Boreas Offshore Wind Farm

Appendix 21.1

Norfolk Vanguard Land Use and Agriculture Consultation Responses

Environmental Statement

Volume 3

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Glossary of Acronyms

ALC	Agricultural Land Classification
CoCP	Code of Construction Practice
CPRE	Campaign to Protect Rural England
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
FRA	Flood Risk Assessment
NFU	National Farmers Union
OCoCP	Outline Code of Construction Practice
PEIR	Preliminary Environmental Information Report
PRoW	Public Rights of Way
SMP	Soils Management Plan
SoS	Secretary of State
VWPL	Vattenfall Wind Power Limited

Glossary of Terminology

The project	Norfolk Boreas Wind Farm including the onshore and offshore infrastructure.
Onshore project area	The area of the onshore infrastructure (landfall, onshore cable route, accesses, trenchless crossing zones and mobilisation areas; onshore project substation and extension to the Necton National Grid substation and overhead line modifications).
Onshore cable route	The up to 35m working width within a 45m wide corridor which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.

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1 Introduction

1. Consultation is a key driver of the Environmental Impact Assessment (EIA) process, and throughout the lifecycle of the project, from the initial stages through to consent and post-consent.
2. Vattenfall Wind Power Limited (VWPL) (the parent company of Norfolk Boreas Limited) is also developing Norfolk Vanguard, a 'sister project' to Norfolk Boreas. Due to the proposed strategic development of both Norfolk Vanguard and Norfolk Boreas (Chapter 5 Project Description), much of the pre-application consultation undertaken as part of Norfolk Vanguard is also relevant to Norfolk Boreas. Such consultation has directly influenced Norfolk Boreas and has been taken into consideration and integrated into the EIA process.
3. In addition, information submitted as part of the Norfolk Vanguard examination, up to Deadline 5 (20th March 2019), has also been considered where relevant.
4. This appendix contains the relevant information from Norfolk Vanguard which have been used to inform the Norfolk Boreas assessment for land use and agriculture.

2 Consultation responses Norfolk Vanguard

5. Table 2.1 summarises the consultation that has been undertaken for Norfolk Vanguard that is relevant to and has informed the development of Chapter 21 Land Use and Agriculture of the Norfolk Boreas Environmental Statement (ES) and provides details of how it has been taken into consideration.

Table 2.1 Norfolk Vanguard Land Use and Agriculture Consultation Responses

Consultee	Norfolk Vanguard Document / date received	Comment	Response / where addressed in the Norfolk Boreas ES (Chapter 21)
Secretary of State (SoS)	Scoping Opinion / November 2016	In addition to detailed baseline information to be provided within topic specific chapters of the ES, the Secretary of State would expect the ES to include a section that summarises the site and surroundings. This would identify the context of the proposed development, any relevant designations and sensitive receptors. This section should identify land that could be directly or indirectly affected by the proposed development and any associated auxiliary facilities, landscaping areas and potential off site mitigation or compensation schemes that are to be included as part of the proposed development.	Baseline information is provided in section 21.6. Chapter 22 Onshore Ecology, Chapter 28 Onshore Archaeology and Cultural Heritage and Chapter 29 Landscape and Visual Impact Assessment provide further detailed information on site, surroundings, designations and sensitive receptors.
SoS	Scoping Opinion / November 2016	With regards to Table 3.24, the Secretary of State considers that Water Resources and Flood Risk also have the potential to have effects on Land Use.	This is addressed in section 21.9 where inter-relationships between land use and other topics are identified and considered. Chapter 20 Water Resources and Flood Risk also considers these inter-relationships.
SoS	Scoping Opinion / November 2016	Careful consideration should be given to the siting of the onshore infrastructure in relation to agricultural land; the potential temporary and permanent loss of Agricultural Land Classification (ALC) land should be assessed within the ES. The potential effects on soil quality should be considered and relevant mitigation measures proposed.	Impacts on agricultural activities in relation to ALC-graded land are discussed in sections 21.7.4.2 and 21.7.5.2. Chapter 4 Site Selection and Assessment of Alternatives provides further information on the considerate siting of project infrastructure.

Consultee	Norfolk Vanguard Document / date received	Comment	Response / where addressed in the Norfolk Boreas ES (Chapter 21)
SoS	Scoping Opinion / November 2016	The potential for sterilisation of land along the cable route should be assessed within the ES, including interrelated socioeconomic effects.	The potential impacts of land sterilisation are discussed in section 21.7.5.2.
SoS	Scoping Opinion / November 2016	The Scoping Report identifies the Norfolk Coast Path, Public Rights of Way and Cycle Trails. Norfolk County Council's response (see Appendix 3 of this Opinion) identifies a number of long distance trails which should be acknowledged e.g. Paston Way and the Weavers Way. Appropriate cross reference should be made to the tourism and recreation chapter of the ES.	The potential impacts on Public Rights of Way (PRoW) are discussed in Chapter 30 Tourism and Recreation.
SoS	Scoping Opinion / November 2016	The Secretary of State welcomes the proposal for a Soils Management Plan and recommends a draft is provided with the DCO application. The relationship of this plan to other relevant plans should also be specified (e.g. if it is to be appended to any CoCP, CEMP [Construction Environment Management Plan] or similar).	The principles on which the final Soils Management Plan (SMP) will be based prior to construction will be included in the Outline Code of Construction Practice (OCoCP) which has been submitted as part of the DCO submission alongside this ES. Mitigation measures in relation to soils and drainage are considered in sections 21.7.4.1 and 21.7.5.1.
Natural England	Scoping Opinion / November 2016	Soil and Agricultural Land Quality Impacts from the development should be considered in light of the Government's policy for the protection of the best and most versatile (BMV) agricultural land as set out in paragraph 112 of the National Policy Planning Framework (NPPF). We also recommend that soils should be considered under a more general heading of sustainable use of land and the ecosystem services they provide as a natural resource in line with paragraph 109 of the NPPF.	This has been included in section 21.6.4.1. and referred to in Table 21.1. Mitigation measures in relation to soils and drainage are considered in sections 21.7.4.1 and 21.7.5.1.

Consultee	Norfolk Vanguard Document / date received	Comment	Response / where addressed in the Norfolk Boreas ES (Chapter 21)
Campaign to Protect Rural England (CPRE)	PEIR / December 2017	The potential temporary and permanent loss of Agricultural Land Classification land should be assessed within the ES. At this PEIR stage it is estimated to be 21% of the temporary strip along a 60km route.	Impacts on agricultural activities in relation to ALC-graded land are discussed in sections 21.7.4.2 and 21.7.5.2.
CPRE	PEIR / December 2017	The NSIP process, and the misuse of the Rochdale Envelope, are particularly weak in recognising the wider benefits of ecosystem services; and minimising impacts on biodiversity and providing net gains in biodiversity, where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.	Soil resources in the context of ecosystem services and natural capital are discussed in section 21.6.4.1. Impacts related to biodiversity and ecological networks are discussed in Chapter 22 Onshore Ecology.
Norfolk County Council	PEIR / December 2017	The report indicates that the onshore project area will largely be located on rural, agricultural land. Therefore, the majority of the project shall be located within areas where there are no existing formal surface water drainage systems, other than agricultural land drains and ordinary watercourses. Risk to any nearby properties should also be considered.	Potential impacts to drainage are discussed in sections 21.7.4.1 and 21.7.5.1. A Flood Risk Assessment (FRA) has also been carried out and can be found in Appendix 20.1 FRA of Chapter 20 Water Resources and Flood Risk.
Norfolk County Council	PEIR / December 2017	The County Council would wish to see that any drainage strategies contain maintenance and management plans detailing the activities required and who will adopt and maintain the surface water drainage features for the lifetime of the development.	Drainage mitigation measures are discussed in sections 21.7.4.1 and 21.7.5.1.
North Norfolk District Council	PEIR / December 2017	The District Council is aware, through the delivery of earlier offshore wind cable routes across North Norfolk, that there might be different impacts on farm businesses of compensation payments made to tenant farmers, relative	Potential impacts on agricultural activities and proposed mitigation measures including plans for private agreements between Norfolk Boreas

Consultee	Norfolk Vanguard Document / date received	Comment	Response / where addressed in the Norfolk Boreas ES (Chapter 21)
		<p>to principal landowners, and would ask Vattenfall to carefully consider the interests of such farmers so that their businesses aren't disadvantaged through payments made to landowners without reference to the tenant farming enterprise.</p> <p>However, the District Council would also expect Vattenfall to liaise with farmers, landowners and their contracting partners in order to minimise the wider impact of the construction works programme on planting, harvesting operations etc in terms of vehicular access along very narrow roads, so that time critical operations such as harvesting around weather windows are not compromised.</p>	<p>Limited and relevant landowners/occupiers including tenants and contracting parties are discussed throughout section 21.7.4.</p> <p>Compensation will be payable to landowners through these private agreements subject to the landowner mitigating their losses (in line with the compulsory purchase compensation code) where possible.</p>
National Farmers Union (NFU)	PEIR / December 2017	<p>Detailed Design</p> <p>It is thought important that there is enough detail regarding the design so that landowners and occupiers can understand how the construction of the project will affect their agricultural businesses on a temporary basis during construction and on a permanent basis once construction is complete.</p>	<p>Details of the project during construction and operation are discussed in Chapter 5 Project Description.</p>
NFU	PEIR / December 2017	<p>Phasing of the Project</p> <p>The NFU would like to understand the construction timings in more detail if the project is carried in two or three phases. The greater the time to construct the project the greater the impact will be on agricultural businesses. It is understood that the longest time construction period may be for 6 years if the project is carried out through a three phase scenario. Some farm businesses will not be able to lose a strip of land from the business with all the associated problems of access to their remaining land for 6 years.</p>	<p>Details of the project during construction and operation, including programme and phasing scenarios, are discussed in Chapter 5 Project Description.</p>

Consultee	Norfolk Vanguard Document / date received	Comment	Response / where addressed in the Norfolk Boreas ES (Chapter 21)
		<p>A construction timetable needs to be clarified so that all landowners and occupiers can understand the impact the project is likely to have on their farming business.</p>	
NFU	PEIR / December 2017	<p>It is really important that this minimum [trench] depth can be achieved so that normal every day agricultural operations will not be affected like ploughing and sub soiling. A further discussion on duct depth is requested so that the interrelation to field drainage can be understood. We see that it has been stated that it is thought that the ducts at the 1.05m will be below field drainage.</p>	<p>Ducts would be buried to a minimum depth of 1.05m to top of ducts in normal 'agricultural' land, 1.2m 'deep ploughing' agricultural to top of duct and up to 20m at trenchless crossings.</p> <p>Potential impacts to drainage are discussed in sections 21.7.4.1 and 21.7.5.1.</p> <p>Chapter 20 Water Resources and Flood Risk also considers these inter-relationships.</p>
NFU	PEIR / December 2017	<p>Link boxes</p> <p>Clarification is needed on how many link boxes will be needed at the end of every run?</p> <p>It is requested that link boxes where possible are located in field boundaries or field corners to reduce the interference on farming operations.</p> <p>It is extremely important to have further design information on link boxes and the siting of them. This includes any link boxes that may be located in a cluster and how will they be marked/identified/fenced.</p>	<p>Link boxes will be sited alongside field boundaries where possible, to minimise the sterilisation of land parcels.</p> <p>Information on the number and details of identification of link boxes can be found in Chapter 5 Project Description.</p>

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NFU	PEIR / December 2017	<p>Land (Field) Drainage and Soils</p> <p>The NFU would like to agree standard terms of how field drainage will be treated in principle on every farm and for this wording to be taken forward and included in the Soil Management Plan and for this document to be certified as part of the Development Consent Order. The wording normally covers before, during and after construction. It will be important in places for field drainage to take place outside of the order limits and this will need to be agreed along with a local drainage consultant being taken on by Vattenfall at the pre –construction stage.</p> <p>Vattenfall must be prepared on behalf of all landowners and occupiers affected by the scheme to reinstate drainage systems to landowners’ reasonable satisfaction and to ensure that the drainage system is put back in a condition that is as least as effective as the previous condition.</p>	<p>Potential impacts on drainage and associated mitigation measures are discussed in sections 21.7.4.1 and 21.7.5.1. This includes the provision of a specialist drainage contractor to provide mapping and figures where appropriate prior to and post construction, to identify field drains and ensure their protection during construction.</p> <p>Handling and protection of soils and drainage systems will be managed through the SMP, which has been produced and submitted alongside this ES as part of the final DCO submission.</p>
NFU	PEIR / December 2017	<p>Soils</p> <p>Details of how soils will be treated and where stored during construction must be provided. Along with how sub and top soils will be kept separate and kept clean during the construction period.</p> <p>During very wet conditions and if soils are waterlogged construction should be stopped. Further it is important for Vattenfall to set out how after soil has been reinstated what measures will be put in place to bring the soil back to its condition and quality before the works took place. An after-care plan should be included in a Code of Construction.</p> <p>To enable the aftercare plan to be put in place Vattenfall must make sure that a record of condition is taken pre – construction including soil samples to determine the soil</p>	<p>Potential impacts on degradation of soils are discussed in sections 21.7.4.3, and section 21.7.4.4 discuss potential impacts regarding loss of soil resource. Information on soil types found in the project area is included in section 21.6.4. Handling and protection of soils, including measures such as the separate storage of topsoil and subsoil, and ceasing work during wet weather, will be managed through the SMP, which has been produced and submitted alongside this ES as part of</p>

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		<p>structure and the nutrients. This can then be used to set a soil target specification for each field on a holding. The soil target must also include yield records which can be provided by the landowner/occupier.</p> <p>The NFU would like to see draft documents [Code of Construction Practice and Soil Management Plan] as soon as further details are available and before the submission of the DCO.</p>	the final DCO submission. The final Code of Construction Practice (CoCP) will also include best practice measures for soil handling.
Costessy Town Council	PEIR / December 2017	Council has concerns that the proposed line will cross that of another recently proposed offshore wind farm: Hornsea Three, and is worried that there will be adverse effects from the crossing of two major lines which would not have occurred from a single line installation.	Potential cumulative impacts on soils and agriculture are considered in the CIA in section 21.8.
Natural England	ES Relevant Representations / June 2018	It should be noted that Grade 3 ALC soils need to be split into Grade 3a and Grade 3b, so that the assessment of loss of best and most versatile land (BMV) 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.	This has been reflected in the EIA methodology and to ensure appropriate precautionary measures are taken, all Grade 3 land is assumed to be Grade 3a and therefore of high sensitivity for the purposes of this assessment. The ALC grade land within the project area is discussed in section 21.6.3. The potential impacts are discussed in sections 21.7.4.2 and 21.7.5.2.
Natural England	ES Relevant Representations / June 2018	We note that there will be a medium to long term (5-10 years) loss of more than 20ha of the BMV agricultural land (ALC grades 1 and 2). Grade 3a should be added to BMV.	As above, all grade 3 land is assumed to be grade 3a. The potential impacts are discussed in sections 21.7.4.2 and 21.7.5.2.

Consultee	Norfolk Vanguard Document / date received	Comment	Response / where addressed in the Norfolk Boreas ES (Chapter 21)
Natural England	ES Relevant Representations/ June 2018	<p>“Topsoil from agricultural land may be treated as a single resource for stockpiling and reuse”</p> <p>This isn’t appropriate and 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.</p>	<p>This mitigation is no longer proposed for Norfolk Boreas. This will be reflected in the final COCP and an outline COCP (document reference 8.1) has been submitted as part of the DCO application.</p>

3 References

Norfolk Vanguard Limited (2018). Norfolk Vanguard Offshore Wind Farm Environmental Statement. Available online at:
<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/norfolk-vanguard/>.
Accessed 16/01/2019.