

Norfolk Boreas Offshore Wind Farm

Statement of Common Ground

National Farmers Union

(Version 3)

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Glossary of Acronyms

ALO	Agriculture Liaison Officer
CAAV	The Central Association of Agricultural Valuers - Local group formed of the majority of the land agents representing affected land interests, collectively known as the Land Interest Group (LIG).
CfD	Contracts for Difference
CIA	Cumulative Impact Assessment
CLA	Country Land and Business Association Limited
CoCP	Code of Construction Practice
DAS	Design and Access Statement
DCO	Development Consent Order
dDCO	Draft Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
HOTs	Heads of Terms
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
Km	Kilometres
LIG	Land Interest Group
MW	Megawatt
NFU	National Farmers Union
OCoCP	Outline Code of Construction Practice
OLEMS	Outline Landscape and Ecological Management Strategy
OTMP	Outline Traffic Management Plan
PC	Parish Council
PEIR	Preliminary Environmental Information Report
PINS	The Planning Inspectorate
SoCG	Statement of Common Ground

Glossary of Terminology

Array cables	Cables which link wind turbine to wind turbine, and wind turbine to offshore electrical platforms.
Landfall	Where the offshore cables come ashore at Happisburgh South
Mobilisation area	Areas approx. 100 x 100m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400kV overhead lines.
Necton National Grid substation	The grid connection location for Norfolk Boreas and Norfolk Vanguard.

Offshore cable corridor	The corridor of seabed from the Norfolk Boreas site to the landfall site within which the offshore export cables will be located.
Offshore electrical platform	A fixed structure located within the Norfolk Boreas site, containing electrical equipment to aggregate the power from the wind turbines and convert it into a suitable form for export to shore.
Onshore cable route	The up to 35m working width within a 45m wide corridor which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.
Onshore project substation	A compound containing electrical equipment to enable connection to the National Grid. The substation will convert the exported power from HVDC to HVAC, to 400kV (grid voltage). This also contains equipment to help maintain stable grid voltage.
Trenchless crossing zone (e.g. HDD)	Areas within the onshore cable route which will house trenchless crossing entry and exit points.

1 INTRODUCTION

1. This Statement of Common Ground (SoCG) has been prepared between the National Farmers Union (NFU) and Norfolk Boreas Limited (hereafter the Applicant) to set out the areas of agreement and disagreement in relation to the Development Consent Order (DCO) application for the Norfolk Boreas Offshore Wind Farm (hereafter 'the project').
2. This SoCG comprises an agreement log which has been structured to reflect the topics of interest to the NFU with regard to the Norfolk Boreas DCO application (hereafter 'the Application'). The agreement logs (section 2) outline all topic specific matters agreed, not agreed and actions to resolve between the NFU and the Applicant.
3. The Applicant has had regard to the Guidance for the examination of applications for development consent (Department for Communities and Local Government, 2015) when compiling this SoCG. Matters that are not agreed will be the subject of ongoing discussion wherever possible to resolve or refine the extent of disagreement between the parties.

1.1 The Development

4. The Application is for the development of the Norfolk Boreas Offshore Wind Farm and associated infrastructure. The offshore wind farm comprises of a 725km² area located approximately 73km from the Norfolk coastline within which wind turbines would be located. Norfolk Boreas would have a maximum export capacity of 1,800 megawatts (MW). The offshore wind farm would be connected to the shore by offshore export cables installed within the offshore cable corridor from the wind farm to a landfall point at Happisburgh South, Norfolk. From there, onshore cables would transport power over approximately 60km to the onshore project substation at Necton, Norfolk.
5. Once built, Norfolk Boreas would have an export capacity of up to 1,800MW, with the offshore components comprising:
 - Wind turbines;
 - Offshore electrical platforms;
 - Offshore Service platform;
 - Met masts;
 - Measuring equipment (light detection and ranging (LiDAR) and wave buoys);
 - Array cables;
 - Interconnector cables or project interconnector cables; and
 - Export cables.

6. The key onshore components of the project are as follows:

- Landfall;
- Onshore cable route, accesses, trenchless crossing technique (e.g. Horizontal Directional Drilling (HDD)) zones and mobilisation areas;
- Onshore project substation; and
- Extension to the Necton National Grid substation and overhead line modifications.

1.2 Consultation with NFU

7. The NFU is the national body representing the interests of landowners and farmers across the United Kingdom.
8. This section briefly summarises the consultation that the Applicant has had with the NFU. For further information on the consultation process please see document 5.1, Consultation Report (APP-027).
9. Table 1 provides an overview of meetings and correspondence undertaken with NFU.

1.2.1 Pre-Application

10. The Applicant has engaged with the NFU on the project during the pre-Application process, both in terms of informal non-statutory engagement and formal consultation carried out pursuant to Section 42 of the Planning Act 2008.
11. There has also been over 50 rounds of individual correspondence via phone and email between the NFU/Land Interest Group (LIG) and the Vattenfall Land Manager, regarding the drafting of the Heads of Terms (HoTs) between January 2018 and May 2018.

1.2.2 Post-Application

12. The NFU submitted a Relevant Representation to the Planning Inspectorate on 23rd August 2019.
13. Discussions with the NFU (alongside the LIG) are on-going in the post-application phase and this SoCG is a live document that will be updated as consultation on the project progresses.

2 STATEMENT OF COMMON GROUND

14. Within the sections and tables below, the different topics and areas of agreement and disagreement between the NFU and the Applicant are set out.

2.1 Land Use and Agriculture

15. The project has the potential to impact upon farm land and farming businesses. Chapter 21 of the Norfolk Boreas ES provides an assessment of the significance of these impacts.
16. Table 2 provides an update on the points raised through the relevant representation submitted by the NFU and the areas of agreement (common ground) and disagreement.

Table 1 Summary of Norfolk Boreas Specific Consultation with NFU/CLA/CAAV/LIG

Date	Contact Type	Recipients	Topic
Pre-Application			
10.09.2018	Meeting	NFU Applicant LIG	A site meeting at Necton with NFU, LIG, A landowner represented by LIG and the Applicant.
23.08.2019	Representation	PINS	NFU submitted a relevant representation to PINS for Norfolk Boreas.
Post-Norfolk Boreas - Application			
05.08.19	Meeting/Conference Call	NFU Applicant LIG	A meeting and conference call held between the Applicant, lead members of the LIG, the LIG solicitors and the NFU to discuss the private agreement documentation and outstanding concerns.
August, September, October, November 2019	Emails and calls	NFU, LIG, LIG Solicitors, Applicant.	Throughout August and September there were numerous email and telephone exchanges between the Applicant and the LIG/LIG solicitors. The purpose of these ongoing discussions was to reach agreement on the precedent form of the Option Agreement and the Deed of Easement. The NFU have been party to a number of these discussions and the NFU and LIG are working together to resolve outstanding concerns with the Applicant. As of the start of October 2019, the Applicant has agreed the template form of the private agreement documentation and this addresses a number of the concerns raised.
20 th February 2020	Meeting	NFU, LIG, Applicant	A meeting to discuss the outstanding points in the SOCG ahead of Deadline 6.

Table 2 Agreement Log

Topic	Summary of NFU position	Summary of Norfolk Boreas Limited position	Final position
<p>Consultation and Engagement</p>	<p>- There have been constructive and proactive face to face meetings with Vattenfall and their agents. Heads of terms were sent out May 2018 and some of these have been signed by landowners who are in agreement to the principles of the scheme set out. But in the last few months further specific details have been requested in regard to the build for the voluntary agreements. Negotiations are still on going.</p> <p>The format of the precedent Option Agreement and Deed of Easement have now been agreed but there are a few outstanding matters which still need to be covered off in the voluntary agreements in regard to specific build details. 29.11.19</p> <p>The NFU understands that there are a few general issues to be agreed and inserted in to the documents for all parties 11.12.19</p> <p>The NFU understands that negotiations regarding the Option Agreements and Deeds of Easement are still ongoing. 04.03.20</p> <p>The NFU and LIG are concerned that now there is the possibility of the option to deliver the two projects in up to 4 phases and therefore 4 easements. A request has been made for a joint managing agent so that all agents, landowners and occupiers going forward would only need to deal with the managing agent as one point of contact. 07.04.2020</p>	<p>At the time of writing (04 November 2019), there have been 80 landowners who have signed the heads of terms (HoTs) for an option agreement out of the 100 parties affected with a further two in agreement in principle and preferring to move to the Option documentation rather than sign the HoTs.</p> <p>It is also the Applicant’s understanding that the format of the precedent Option Agreement and Deed of Easement have now been agreed with the NFU/LIG and therefore these matters are agreed.</p> <p>The outstanding matters referred to will continue to be discussed as the Option Agreements and Deeds of Easement are agreed by individual parties.</p> <p>The Applicant is negotiating a small number of minor changes to the draft Option Agreement and Deed of Easement as a result of aligning the property agreements with the DCOs for both Norfolk Vanguard and Norfolk Boreas projects, which includes the option to deliver the two projects in up to 4 phases (and up to 4 easements). Discussions are currently ongoing, however the Applicant remains confident that a swift resolution can be found and the Option Agreements can be completed in the coming months. 18.03.20</p>	<p>Coloured item remains under discussion</p>

Topic	Summary of NFU position	Summary of Norfolk Boreas Limited position	Final position
<p>HVDC Cables and Converter Station</p>	<p>- It has been clarified by Vattenfall that they have and are applying for a DCO on HVDC cables and this will involve building a converter substation. The laying of HVDC cables should hopefully reduce the impact on land operations and farm businesses as the easement width required will be less and it is likely that only a small number of link boxes will be required which are situated on the surface of the ground.</p> <p>It is stated that the commitment to HVDC will reduce the maximum duration of the cable pull phase. We would still like clarification on this taking into consideration the cable pull time on the Vanguard scheme as it is the overall length of time that will impact the landowners and occupiers that is of concern. 29.11.19</p> <p>See Vattenfall response below under Construction and Funding 11.12.19</p>	<p>The commitment to HVDC technology minimises environmental impacts through a reduction in the cable working width and permanent easement, removes the requirement for a cable relay station and reduces the maximum duration of the cable pull phase thereby reducing the impact on land operations and farm businesses.</p> <p>The maximum duration for cable pulling has reduced from a potential six year period under a previously consulted upon HVAC solution, to a maximum four year period under a committed to HVDC solution. This is a reduction of 2 years as a result of the HVDC commitment. For completeness, these timescales consider both Norfolk Vanguard and Norfolk Boreas under Scenario 1.</p>	<p>Agreed</p>
	<p>Landowners are requesting further information on the converter substation which is to be sited near to the National Grid substation at Necton. We understand that the converter station is needed to convert the current from DC back to AC to enter the National Grid substation. Further information has been requested on the size of the proposed building, the height, what the building will look like and the external cladding. It is understood that the building may be 25m high.</p> <p>As requested we would like further information on the size of the proposed building, the height, what</p>	<p>Issues raised regarding the suitability of the Necton location for the onshore project substation include: site selection and landscape and visual impacts. These issues have been considered in part or in full within the following submission documents:</p> <ul style="list-style-type: none"> • ES Chapter 4 Site Selection and Assessment of Alternatives (document 6.1.4, APP-217) <ul style="list-style-type: none"> ○ Including application of the Horlock Rules; • ES Appendix 4.3 Strategic Approach to Selecting a Grid Connection Point for Norfolk Boreas and Norfolk Vanguard (document 6.3.4.3, APP-539) • ES Chapter 29 Landscape and Visual Impact Assessment (document 6.1.29, APP-242) <ul style="list-style-type: none"> ○ Mitigation measures are detailed within the Outline 	<p>Coloured item remains under discussion</p>

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	<p>will the building look like and the external cladding . Further how will the building be sited at the location so that it fits into the landscape. The proposed site is sloping and is the highest point in the area. If the converter station is to be 25m in height this is very high and will stand out in the surrounding area. Therefore details are requested of the detailed landscape planting. 29.11.19</p> <p>Still to receive response and details from Vattenfall as requested in meeting/conf call on Wednesday 4th December 2019. 11.12.19</p> <p>At a meeting with Vattenfall on the 20.02.20, Vattenfall suggested that the site will be cut and filled at the mid point to minimise the landscape impact. The NFU would like to receive confirmation on this and for this to be confirmed in the design guide.</p> <p>It is stated that the design Guide has two key elements, detail steps to minimise visual impacts ,which will include presenting layout and proposed landscaping mitigation and to present aspects of the design which could be influenced. We believe that it is possible to influence the landscape planting i.e. type of trees and shrubs to be planted. We would like to see that the landowners directly affected by the substation site are also consulted on as key stakeholders in regard to landscape planting, and the colour of the building and the fencing.</p>	<p>Landscape and Ecological Management Strategy (OLEMS; document 8.7, APP- 698);</p> <ul style="list-style-type: none"> • Chapter 1.6.11 of the Consultation Report (document 5.1, APP-027) - Siting the onshore project substation away from as many homes as possible, while still within a practicable distance from the existing 400kV National Grid substation • Chapter 1.6.12 of the Consultation Report - Commitment to planting in key areas as early as possible • Chapter 3.5 of the Consultation Report - Early Project definition, site selection and refinement • Chapter 14 of the Consultation Report - Phase IIb non-statutory consultation workshops • Chapter 17 of the Consultation Report - Overview of phase 0 - phase IIb non-statutory consultation and influence on the project • Chapter 18.7 of the Consultation Report - Summary of responses to Norfolk Vanguard Section 47 and regard had by Vattenfall Wind Power Limited • Chapter 28.2.11 of the Consultation Report - Learnings from the Norfolk Vanguard examination process and community representations • Appendix 3.1 of the Consultation Report - Hearing Your Views I (document 5.1.3.1, APP-028) • Appendix 3.2 of the Consultation Report - Hearing Your Views II (document 5.1.3.2, APP-029) • Appendix 3.3 of the Consultation Report - Hearing Your Views III (document 5.1.3.3, APP-030) • Appendix 3.4 of the Consultation Report - Hearing Your Views IV (document 5.1.3.4, APP-031) • Appendix 4.2 of the Consultation Report - FAQ documents (document 5.1.4.2, APP-033) • Appendix 12.7 of the Consultation Report - Phase I non-statutory public exhibition materials (document 5.1.12.7, APP-092) • Appendix 12.9 of the Consultation Report - Phase II non-statutory public exhibition materials (document 5.1.12.9, APP-094) 	

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	<p>It is the NFU’s understanding from the last hearing that the electrical equipment will be the colour silver. 4.03.20</p> <p>The NFU now agrees that wording ‘will include’ relevant landowners is acceptable at paragraph 76 in the DAS.</p> <p>The NFU is still not happy with the wording in paragraph 66 which only states ‘some involvement’ in terms of local preferences to colour and material. The NFU understands that the construction material serves a functional purpose and also include structural requirements and so the Applicant would identify any optionality of construction material if available. The NFU would like to see that this is consulted on taking into account functional and structural requirements.</p> <p>The NFU sees that there is no reason to not have full engagement with local preferences in regard to colour and finish.</p> <p>The NFU welcomes that it has been stated that the Applicant would welcome the opportunity to share local knowledge. We would like a stronger reference that the landowners and local community affected will be consulted on native species for the planting used in the landscape design in paragraph 70 in the DAS. 07.04.2020</p>	<ul style="list-style-type: none"> • Appendix 13.2 of the Consultation Report - March 2017 newsletter (document 5.1.13.2, APP-096) • Appendix 14.2 of the Consultation Report - June 2017 newsletter (document 5.1.14.2, APP-126) • Appendix 14.8 of the Consultation Report - Necton substation workshop presentations (document 5.1.14.8, APP-132) • Appendix 18.3 of the Consultation Report - Phase III non-statutory public exhibition materials (document 5.1.18.3, APP-137) • Appendix 22.13 of the Consultation Report - Consultation Summary Document (document 5.1.22.13, APP-172) • Appendix 22.14 of the Consultation Report - Formal consultation exhibition boards (5.1.22.14, APP-173) • Appendix 24.1 of the Consultation Report - Section 42 responses (document 5.1.24.1, APP-180) • Appendix 25.1 of the Consultation Report - Section 47 responses (document 5.1.25.1, APP-181) • Appendix 28.4 of the Consultation Report - February 2019 newsletter (document 5.1.28.4, APP-195) <p>The Applicant’s written summary of the Applicant’s oral case at issue specific hearing 3 (onshore) [REP4-013] provided a number of annotated images, visualisations, topographical maps and a summary of the maximum dimension parameters secured with the dDCO with respect to the onshore project substation.</p> <p>The Applicant also outlined that the final design of the onshore project substation will largely be dictated by the technical requirements of the equipment which will include aspects such as the necessary physical separation of equipment for electrical clearance, accessibility for installation and maintenance and the necessary materials to construct and support the equipment such as concrete, steel and aluminium. Some aspects of the onshore project substation may have the opportunity for influence on the design appearance once technical requirements have been fully accounted for. Those are the elements which are not defined by</p>	

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		<p>technical requirements, namely the building and perimeter fencing and include different colour and colourisation options such as two-tone or single colour block.</p> <p>Design Process and Design Guide Once the onshore project substation designer and contractor have been appointed the provisional details on the layout, scale and design can be developed. This will then facilitate the development of a 'Design Guide'. The Design Guide has two key elements: 1) to detail the steps which have been undertaken to minimise visual impacts, which will include presenting the layout and proposed landscaping mitigation; and 2) to present the aspects of the design which could be influenced. The elements that can be influenced are colour of building and fencing.</p> <p>This Design Guide will then be shared with Breckland Council and other key stakeholders and interested parties such as Parish Councils, and will enable those parties to provide feedback on the options for those aspects of the design which can be influenced. The feedback on the Design Guide will then be considered and the final details of the design, layout, scale and approaches will be produced and submitted to Breckland Council for approval.</p> <p>Location of the Onshore Project Substation buildings (Micrositing / Zoning) The Applicant confirmed that the layout of the onshore project substation will be finalised once contractors are appointed. The exact landscape management measures will then be tailored around the final design of the onshore project substation. The Applicant confirmed that it is working with a range of potential contractors with respect to the onshore project substation. Although there are differences between the layouts being offered by different contractors, all options show the converter buildings being located to the northern end of the site (further away from Ivy Todd) with the outdoor electrical equipment located to the south of the site. The</p>	

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		<p>Applicant has not been in a position to refine the design or site layout further at this stage of the consent process.</p> <p>An indicative cut and fill assessment of the onshore project substation footprints has been conducted to understand the uniform platform level which can be achieved with a neutral cut and fill assessment. I.e. no material is imported or exported from the site and the platform level is achieved by moving higher ground within the footprint to the lower ground level. This cut and fill assessment has informed the ‘existing ground level’ of the onshore project substation footprints, as secured in the dDCO. This approach has been taken to recognise that the existing land is not currently level across the footprint and therefore to reflect a uniform ground level based on a neutral cut and fill.</p> <p>The DAS [REP5-012] has been updated to provide further information on the Design Guide including integration into the local landscape. The most effective way to integrate into the local topography is to minimise cut and fill by establishing the median in terms of site levels and using this to construct a level platform.</p> <p>Agreed. The DAS [REP5-012] states at para 72-75 that; ‘engagement could take place with, for example, relevant landowners, Necton PC, Holme Hale PC, closest residents, and other residents / resident’s groups likely to have an interest in determination of aspects that can help mitigate visual impacts as far as possible. Stakeholders would be refined in light of the information provided by the Design Guide, and in collaboration with Breckland Council.</p> <p>Following this, Breckland Council and the Applicant would determine what type of process would best enable the desired engagement – and deliver enhanced local understanding of the constraints and opportunities associated with different mitigation approaches, to help ensure the most locally appropriate and sustainable decisions are made with respect to any options highlighted in the Design Guide.</p>	

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		<p>The Applicant and Breckland Council would work together to deliver the process, and review its effectiveness – ensuring learning from previous engagement is taken on board.</p> <p>The feedback on the Design Guide would then be considered before the final details of the design, layout, scale and approaches are produced and submitted to Breckland Council for approval.’</p> <p>The Applicant is committed to engaging with all relevant stakeholders within this process including affected landowners and will revisit the wording in the DAS to make this clearer. An updated version of the DAS will be submitted at Deadline 7. 18.03.20</p>	
Construction and funding	<p>Landowners from the start were notified by Vattenfall that they would be looking to carry out the project as two schemes Vanguard and Boreas. Vanguard is to be constructed first, with underground cables being laid in ducts. At the same time ducts will be laid to take underground cables for the Boreas scheme. Vattenfall has stated that they will need at least 2 years to lay the ducts and cables for Vanguard. There then may be a gap of a year before the start of the Boreas scheme. Further clarification is needed from Vattenfall on timings of construction and how and when cables will be pulled for the Boreas scheme. For example will working areas just be needed for jointing bays on the Boreas scheme? Landowners do not yet understand what the interference will be from constructing Boreas following Vanguard.</p> <p>We first understand from Vattenfall that they did have the funding required for both schemes but confirmation on this is sought as during the examination of the Vanguard Scheme it became apparent that funding may be through CFD.</p>	<p>Final project timings for both Norfolk Vanguard and Norfolk Boreas cannot be provided until post-consent and subject to a Financial Investment Decision for the projects. This has been discussed with the LIG and detailed in the HOTs regarding compensation for compounds and working areas.</p> <p>Cable installation works for Norfolk Vanguard and Norfolk Boreas could extend up to 4 years (2 years per project) in the worst case scenario as assessed in the Environmental Statement assuming a 2-phase cable pull programme as detailed in the Norfolk Vanguard and Norfolk Boreas Outline Programme.</p> <p>This cable pull period could be reduced if a 1-phase cable pull programme was employed for each project, reducing the total period to 2 years (1 year per project).</p> <p>It is not proposed that cables for both Norfolk Vanguard and Norfolk Boreas be installed at the same time due to the feasibility of cable supply requirements (physical quantity of cable available from suppliers within a compressed period of time) and the technical need for close alignment with offshore installation works and associated energisation. This technical need arises from the risk of cable delamination which can occur when a cable is stored at low temperatures, such as could occur if a cable was</p>	Agreed

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	<p>Vattenfall have stated in the SoCG November 2019 that cable installation could take up to 4 years being 2 years per project. This will be a very long time to have land out of agricultural production. It is further stated that this time could be reduced if a 1 phase cable pull programme was employed for each project. Then cable installation may only take 2 years which is more favourable to landowners. To reduce the impact if cable pulling does take 4 years a further explanation is requested on the areas that will need to be left open around the jointing bays that will definitely not be in agricultural production for a 4 year period. 29.11.19</p> <p>In response to Vattenfall further information is requested on how and why electric cables deteriorate in the ducting in the ground? As it is our understanding that this is the issue which may lead to cable pulling having to be carried out in stages and the joint pits opened up on numerous occasions over the 4 year period. Further it has been stated that the worst case excavated area for a joint pit will be 15mX6m X 2m. We are expecting that there will need to be a working area around this? 11.12.19</p> <p>The NFU would like a further explanation of the delamination process and why this occurs when the cables are left cold on the ground without being energised.</p> <p>We now understand from Vattenfall's last response</p>	<p>installed within the duct and not energised prior to a winter period for example. The delamination of the layers of the cable could result in failure of the cable when energised, or shortening the life of the cable which may result in repairs or replacements sections being required before the end of the project lifetime. The onshore cable cannot be energised until the entire transmission link for that circuit from National Grid substation extension, through onshore project substation, through onshore cable route, through offshore cable route and to the offshore platform is in place. The onshore cable pulling must therefore be conducted in line with these wider works to allow energisation of the transmission circuit within a timely manner. The up to 4 years (2 years for Norfolk Vanguard and 2 years for Norfolk Boreas) of onshore cable pulling activity is therefore required to align with these worst case phases of potential transmission circuit commissioning. When the cable is energised and operating, the transmission of current through the cable will result in some warming local to the cable which mitigates the delamination risks.</p> <p>The preferences of the NFU/LIG regarding minimising the number of cable pull activities is appreciated and the following wording, agreed with the NFU/LIG, has been included in the Deed of Grant to reflect this: <i>The Grantee agrees that no more than 4 Circuits for both Projects will be required and no more than 2 Circuits per Project will be required. Where 2 Circuits per Project are required the Grantee agrees to use reasonable endeavours to carry out a maximum of 1 Pull Through per Project (being a maximum of 2 Pull Throughs for both Projects) provided always that:</i></p> <ul style="list-style-type: none"> <i>(a) if 1 Circuit per Project (being a maximum of 2 Circuits for both Projects) is required then the Grantee shall be permitted to carry out a maximum of 1 Pull Through per Project (being a maximum of 2 Pull Throughs for both Projects);</i> <i>(b) if 3 Circuits for both Projects (being a maximum of 3 Circuits for both Projects) are required then the Grantee shall be permitted to carry out a maximum of 3 Pull Throughs for both Projects, and provided always that it shall be at the Grantee's absolute discretion as to the number of Circuits required per Project or Projects.</i> 	

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	<p>that there will be working areas around the joint pit and each area will be approximately 30m x 50 inclusive of the 6m x 15m excavated joint bay. As these areas are not shown on any plans it is suggested that the ALO should liaise between the landowner and the developer on where these sites will be. These working areas will actually be like a small working compound.04.03.20</p> <p>The NFU now understands that the principle limitation to multiple cable circuits in a single year is the availability of cable supply and cable jointers. 07.04.2020</p>	<p>The Applicant has made clear that it is its intention to bid for a CfD at the earliest opportunity following a successful decision to grant development consent.</p> <p>With reference to Section 5.6.2.1 of ES Chapter 5 Project Description, a joint pit will be required for each cable circuit (comprised of two cables) with a worst case excavated area of 15m x 6m x 2m. The cable pulling and jointing process would take approximately five weeks per 800m length of cable, per circuit. Any one jointing pit could be open for up to 10 weeks to allow its neighbouring jointing pit to be opened and cables pulled from one pit to the next, dependant on the level of parallel work being conducted.</p> <p>Jointing pits will not be left open throughout the up to 4 year cable pulling phase (Norfolk Vanguard and Norfolk Boreas). Each joint pit (one per circuit) will be established and reinstated within the 10 week period, per annum.</p> <p>A working area around the joint pit will be required to temporarily store the stripped topsoil, excavated subsoil and provide a turning area for cable drum, concrete (for joint pit floor), fencing and CBS deliveries. This turning area would also be used for contractor parking, storage of plant (excavator to excavate the joint pit) and cable drum siting (to pull the cable off the drum, into the joint pit and through the ducts. The temporary working area will be within the Order Limits with an area of approximately 30m (w) x 50m (l) inclusive of the 6m x 15m excavated joint bay.</p> <p>High voltage electricity cables are formed of multiple layers including the conductor, insulator, sheaths and outer coverings. In cold temperatures there is a risk that these layers could become separated from each other, called delamination. There is particular risk if any cable pulling is conducted in cold temperatures (such as over winter) as the insulation can become more brittle and the pulling tensions during installation can result in damage. Although there is a risk of delamination or any other form of degradation of a cable between it being installed and energised the</p>	

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		<p>principle limitation to multiple cable circuits for a project being installed in a single year is the availability of cable supply and cable jointers.</p> <p>We appreciate the NFU/LIG preferences to minimise the number of cable pulling phases and have already sought to minimise this through the commitment to HVDC technology (which reduced the maximum number of cable pulling phases from six to four for Norfolk Vanguard and Norfolk Boreas (i.e. up to two phases for each projects)) and wording that has been included in the Deed of Grant to use reasonable endeavours to minimise the number of cable pulling phases - within the consent envelope - across both Norfolk Vanguard and Norfolk Boreas.</p> <p>The location of the temporary works areas around the joint bays will be dictated by the location of the joint bays which will be determined during detailed design following appointment of the cable supplier. The ALO will liaise with relevant landowners affected by cable pulling and jointing works, however the location of the working areas will be principally dictated by accessibility and the length of cable deliverable on a cable drum, to be determined once the cable supplier has been appointed. 18.03.20</p>	
Cumulative Impact	<p>Confirmation is sought from Vattenfall on whether a Cumulative Impact Assessment has addressed both of their schemes, Vanguard and Boreas, along with the Orsted Scheme Hornsea 3 which are programmed to be constructed at approximately the same time. Hornsea 3 is running north to south and Vanguard and Boreas running east to west. This greatly impacts the number of landowners affected and as this takes more land out of agricultural production.</p> <p>It is paramount that the scenario which is adopted has to be the most thermally efficient and least disruptive to agricultural land during construction and after construction once all cables have been</p>	<p>ES Chapters 19 to 31 provide an assessment of relevant cumulative impacts. A summary is provided in ES Chapter 33 Onshore Cumulative Impacts (APP-246).</p> <p>The assessment methodology for the CIA considers whether impacts on a receptor may occur on a cumulative basis between Norfolk Boreas and other projects, activities and plans (either consented or forthcoming) in the onshore study area. This includes both Norfolk Boreas and Vanguard and Hornsea Project Three. The scope of the CIA (in terms of relevant issues and projects) has been agreed with relevant consultees during the pre-application process. The most thermally efficient crossing design is key to Norfolk Vanguard, Norfolk Boreas and Hornsea Project Three to ensure efficient power transmission during operation. The least disruptive construction method is also key to Norfolk Vanguard, Norfolk Boreas and</p>	Coloured item under discussion

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	<p>installed and are up and running. We would also like an explanation as to what are Shared Access Areas? 11.12.19</p> <p>The NFU would like to see that Norfolk Vanguard is stated in the second sentence of the paragraph which starts The assessment methodology This has been shown in orange.</p> <p>It has been stated that the most thermally efficient crossing design and the least disruptive construction method is key to Norfolk Boreas, Vanguard and Orsted, Hornsea 3. But we do not actually have this statement confirmed by Orsted.</p> <p>Further, at the meeting with Vattenfall on 20.02.20, it was discussed that the scheme with the lesser width should install their cables at the deepest depth to minimise the impact and this would be Vattenfall. Please can this be confirmed in the SoCG. 04.03.20</p> <p>NFU still has no confirmation from Orsted that the crossing point of cables will be carried out to achieve the most thermally efficient and least disruptive construction to landowners. 07.04.2020</p>	<p>Hornsea Project Three to maximise the efficiency of the construction works. The parties are in advanced stages of entering into a co-operation agreement which is a commercially confidential document but matters pertinent to construction management and implementation are included in the Orsted Hornsea Three SoCG [REP2-056] and specifically include that ‘All parties will design the cable installation works so as to ensure that the other parties can still install their cables – for example, if the first project installs the cables by way of open cut trench, that section of trenching will include enhanced thermal conductivity backfill to reduce any potential future thermal interactions with the second project.’ Furthermore, both Hornsea Project Three and Norfolk Boreas and Vanguard have included land to accommodate a trenchless crossing at the crossing point to allow one of the projects to utilise this method and minimise construction impacts.</p> <p>Shared access areas are accesses which overlap both the Hornsea Project Three and Norfolk Vanguard/Boreas Order Limits. Access AC105 (west of the potential cable crossing) represents the only private shared access. For Norfolk Vanguard/Boreas, this access is for operation only (not for duct installation or cable pulling) therefore the likelihood of any shared access requirement is negligible and the co-operation agreement principle that ‘each party will grant the other parties rights of access in an emergency’ will apply, as outlined in [REP2-056]. Other shared access areas relate to public highway links which are required by all projects under consideration and traffic management measures will be employed in line with the OTMP.</p> <p>Norfolk Boreas do not consider the final statement made by the NFU to be factually correct and wish to clarify the position as follows: The general principle will be that the project with the least number of cables will carry out the installation method by trenchless crossing and be below the other</p>	

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		<p>project. Therefore, the project with the most cables will use an open cut trench method and be located above the other project. However, if there is a good technical reason, such as beneficial for overall thermal efficiency, it may be that the project with the least cables would be more appropriately located above the other project. In the case where only one project goes ahead, the project to be constructed, will be installed using open cut methods within the subsurface.</p> <p>Agreed. These additions were included in the Deadline 5 version of the SoCG [REP6-032].</p> <p>This was not an accurate reflection of what the Applicant said at the meeting. The Applicant discussed that the general principle will be that the project with the least number of cables/circuits (rather than the lesser width) will carry out the installation method by trenchless crossing and be below the other project. Therefore, the project with the most cables/circuits will use an open cut trench method and be located above the other project.</p> <p>However, if there is a good technical reason, such as being beneficial for overall thermal efficiency, it may be that the project with the least cables/circuits would be more appropriately located above the other project. In the case where only one project goes ahead (i.e. being Hornsea Project Three or Norfolk Vanguard and/or Norfolk Boreas, the project to be constructed, will be installed using open cut methods within the subsurface.</p> <p>This wording was included in the Deadline 5 SoCG [REP6-032] to clarify the discussion. 18.03.20</p>	

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<p>Jointing bays and Link Boxes</p>	<p>It is understood that some link boxes will be needed with the cables being HVDC cables and further clarification is sought on how many there are likely to be and the location of the link boxes. Link boxes do stand proud above ground level and so greatly interfere with agricultural operations and are a hazard to farm machinery. It is extremely important to have further design information on link boxes and the siting of them. The preference is that all link boxes are located within field boundaries.</p> <p>The NFU with LIG would like to request that the location of the jointing bays which will dictate the location of the link boxes need to be part of the early design consideration so that as many link boxes as possible can be located in or within the 2m range of field boundaries. 29.11.19</p> <p>Further to the meeting/conf call on 4th December 2019 we would like the statement above from Vattenfall highlighted in yellow to be included in the outline Code of Construction so that it is binding under the DCO. 11.12.19</p> <p>The NFU would like the wording highlighted in orange to be re worded so that there is an obligation on the developer to go to the landowner to discuss and consult on the location and level of said link boxes. This could be carried out by the ALO.</p> <p>The NFU is in agreement to the wording being included in the Design and Access statement rather than the OCoCP. 04.03.20</p>	<p>The location and format of the Link Boxes has been discussed at length with the LIG and the NFU. Wording has been agreed in the final form of the Deed of Easement that:</p> <p><i>'Prior to the installation of any Link Box, the Grantee shall consult with the Grantor (and if reasonably requested by the Grantor, any relevant Occupier) as to the location and level of said Link Box and where reasonably practicable (and subject to reasonable engineering requirements or construction requirements) the Grantee shall implement the Grantor's requirements as to location and level of the Link Box.'</i></p> <p><i>Unless there are reasonable engineering requirements construction requirements or specific requirements by the Grantor the Link Box shall be located in or within 2 metres from a field boundary, hedge (measured from the centre of the hedge nearest to the Link Box) or other boundary structure and shall be laid level with or below the surface of the Easement Strip.'</i></p> <p>This wording will be included in the next version of the Design and Access Statement (DAS) to be submitted at deadline 5. The DAS is a certified plan of the DCO under Article 37 (as is the OCoCP), however as the wording regarding link boxes is in relation to design rather than construction, it is more appropriately placed in the DAS than the OCoCP.</p> <p>The Applicant considers that the existing wording in the deed of grant provides a sufficient level of consultation required in this matter. The wording states that the Grantee <i>shall</i> consult with the Grantor and further consultation with the Occupier will be conducted if reasonably requested by the Grantor.</p> <p>The following wording has been included in the Deadline 5 version of the DAS [REP5-012] submitted to the examination. <i>'Prior to the installation of any link box, (if reasonably requested by the landowner, or relevant tenant) the Applicant shall consult with the landowner/tenant as to the location and level of any relevant link box. Where reasonably practicable (and subject to reasonable engineering requirements or construction</i></p>	<p>Agreed</p>

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		<p><i>requirements) the Applicant shall comply with the landowner/tenant's requests as to location and level of the relevant link box. Unless there are reasonable engineering requirements, construction requirements or specific requirements by the landowner/tenant the link box shall be located in or within 2 metres from a field boundary hedge (measured from the centre of the hedge nearest to the link box) or other boundary structure and shall be laid level with or below the surface of the Easement Strip.'</i></p> <p>The first sentence of this wording is to be updated in the next iteration of the DAS to more accurately reflect the wording in the deed of grant to the following: <i>'Prior to the installation of any link box, the Applicant shall consult with the landowner (and if reasonably requested by the landowner, the relevant tenant) as to the location and level of any relevant link box. 18.03.20</i></p>	
Field Drainage	<p>Land drainage is one of the main issues which landowners and occupiers are concerned about on this scheme and some detail has been agreed in the heads of terms and we have not yet seen the wording that we would like included in the OCoCP for Boreas.</p> <p>Wording has now been included in the OCoCP which is agreed and it has been confirmed by Vattenfall that this document will be an Appendix to the voluntary Deed of Easement. 29.11.19.</p>	<p>The Applicant has agreed with the NFU and LIG that the OCoCP will be included as an Appendix to the voluntary Deed of Easement documentation.</p>	Agreed
Soils	<p>As above the treatment and reinstatement of soil during and after construction is one of the main issues of concern. Limited detail has been provided to landowners and occupiers. Again LIG and NFU would like certain wording to be agreed and highlighted in an outline soil management plan as part of the CoCP. It is important that soil reinstatement and aftercare is specified. Further</p>	<p>The Applicant has agreed with the NFU and LIG that the OCoCP will be included as an Appendix to the voluntary Deed of Easement documentation.</p> <p>The Applicant has reviewed the additional wording proposed by the NFU regarding soil aftercare and is broadly in agreement, with the suggested clarification of the aftercare period.</p>	Agreed

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	<p>information will be needed to show 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 or soil management plan.</p> <p>The NFU confirms that wording has been included in the OCoCP to cover soils at Appendix A. The NFU would still like to see further wording on how soil aftercare will take place. This wording to be agreed with Vattenfall. 29.11.19</p> <p>The NFU is in agreement to the wording that is shown to cover soil aftercare. 4.3.2020.</p>	<p>Soil aftercare – cultivations. The restoration of soils will be assessed against the baseline schedule of soil condition taken during preconstruction. This will include soil testing and a schedule of aftercare maintenance, appropriate to the target specification should be drawn up for a period of up to five years following completion of the relevant construction work. The aftercare period shall be a flexible minimum of one year and a maximum of five years with the aftercare deemed complete when the reinstatement standard has been achieved within that period.</p> <p>During the aftercare period, there will be annual monitoring of physical soil characteristics and soil nutrient levels to set aftercare management requirements for the following year. The land will be handed back to the owner at the earliest opportunity once the restored land is in a suitable condition to be returned to its former use. A final report will be drafted to determine the final handover condition of the agricultural soil.</p> <p>The reinstated soils will be cultivated to enable the initial aftercare crop to be established. The cultivations required will vary according to soil type, site and weather conditions at the time but could include the use of plough, power harrow and roll. In addition, stone picking may also be required where excessive stone volumes have become incorporated in reinstated topsoil areas.</p> <p>The specified cultivations will be subject to discussion with the landowner prior to implementation.</p> <p>The reasonable cost of meeting the aftercare by the relevant landowner shall be borne by Norfolk Boreas save where such cost has been compensated under the compensation code.</p> <p>Agreed. This wording will be included in the next version of the OCoCP to be submitted to the examination. 18.03.20</p>	

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Flood Issues	<p>No details have been provided to landowners and occupiers on how any increase in surface run off of water from the haul road or the construction compounds will be dealt with during construction. Therefore there is concern that retained land may flood during the construction works.</p> <p>The NFU believes that it is particularly important that no surface water or discharge of water from the working area either runs on to adjacent land or is discharged on to adjoining land. Further if water is then discharged in to local ditches or drains then these outlets must be capable of taking the extra water.</p> <p>29.11.19</p> <p>The NFU confirms that the wording requested to go in under the ALO role has been included and is agreed. 4.3.2020.</p>	<p>The CoCP will be included as an Appendix to the voluntary Deed of Easement documentation.</p> <p>The OCoCP (APP-692) provides details of the principles of construction drainage, with an acknowledgement that a detailed Surface Water and Drainage Plan (Requirement 20 (2)(i)) of the DCO will be developed post-consent and agreed with the relevant regulators. The Construction Surface Water and Drainage Plan (DCO Requirement 20 (2)(i)) will be developed, agreed with the relevant regulators and implemented to minimise surface water run-off into working areas and ensure ongoing drainage of surrounding land. This typically includes interceptor drainage ditches being temporarily installed parallel to excavations (e.g. trenches under Scenario 2) and soil storage areas to provide interception of surface water runoff and the use of pumps to remove water from excavations. Depending upon the precise location, water from the channels will be infiltrated or discharged into the surface drainage network at a managed rate so as to not overcome the surface drainage network. Furthermore, the sectionalised duct installation method (excavate, lay and reinstate approximately 150m/week) is designed to minimise water ingress to the trenches, the area of land stripped of topsoil and the area of land subject to temporary construction drainage.</p> <p>The Applicant has included the following wording within the OCoCP, at the request of the NFU/LIG as outlined in their Deadline 3 submission, in relation to discharge to existing drains: <i>‘Liaise with affected landowners prior to any discharge to existing drains if any such discharge is proposed’.</i></p> <p>The Applicant has conducted a full cable route engineering visual inspection (where access allowed – approximately 85% of cable route length) to gather information of existing above ground drainage arrangements and details of existing drainage arrangements (particularly subsurface) have been requested from landowners. This information will be used to develop the Surface Water and Drainage Plan in due course, in</p>	Agreed

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		<p>fulfilment of DCO requirement 20 (2)(i).</p> <p>Agreed. This wording has been included in the Deadline 5 version of the OCoCP [REP5-010] submitted to the examination. 18.03.20</p>	
Dust/Irrigation	<p>Clarification is needed on how practical issues like dust will be controlled during construction and how can the effect on irrigation be minimised? Further if any private water supply is affected a temporary and permanent supply will be needed.</p> <p>It is agreed that this has been covered in sufficient detail in the outline CoCP and that this will be an annex to the voluntary agreement. 29.11.19</p>	<p>The Applicant has agreed with the NFU and LIG that the Outline CoCP will be included as an Appendix to the voluntary Deed of Easement documentation.</p> <p>The Outline CoCP (APP-692) gives details on air quality management control measures to be implemented which includes dust management. This document informs the final CoCP to be agreed with the relevant planning authority through Requirement 20 of the DCO.</p>	Agreed
Private Water	<p>The NFU believes that wording is still be included in the draft outline CoCP to cover how interference to a water supply will be dealt with. 29.11.19</p> <p>The NFU will not accept the wording that has been put forward by Vattenfall legal team. The words reasonable and reasonable endeavours are not accepted as this means that the developer /contractor could get out of providing a supply of water. This wording has already been agreed in many other OCoCPs. 4.3.2020.</p> <p>The NFU does not like the wording ‘reasonable endeavours’ as it is not a strong enough commitment given the importance of a provision of a water supply. If the water supply is adversely and directly affected by the construction works, then it is right that the developer should either find an alternative supply or pay for the cost of an alternative.</p>	<p>The Applicant has received draft wording from the NFU. The Applicant is broadly in agreement but proposes some minor wording amendments to provide further clarity and flexibility on how an adverse impact to the water supply could be addressed. The wording proposed is:</p> <p><i>Where an existing private water supply to an agricultural holding is adversely and directly, affected by the construction of the Proposed Works, if reasonably requested by the landowner/agricultural tenant, the Developer will use reasonable endeavours to provide or procure or meet the reasonable cost of the provision of an alternative.</i></p> <p><i>Where the supply is so affected temporarily by the construction of the Proposed Works, then the alternative need only be provided for the period during which it is affected.</i></p> <p><i>Where a request is made by the agricultural tenant or landowner for a permanent supply due to permanent severance of the existing supply caused by the construction of the Proposed Works then, if the landowner/agricultural tenant can demonstrate that an alternative means of supply is reasonably required for its agricultural operation, the Developer</i></p>	Under discussion

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	<p>Within the wording submitted we have provided some protection to the developer as it says 'reasonable costs of the provision of an alternative'. Therefore the developer is not exposed to an unreasonable ask from a landowner/occupier. The wording further says that the landowner/occupier has to demonstrate that the alternative means of supply is 'reasonably required'.</p> <p>The following wording has been agreed in regard to water supplies for the A303 Stonehenge application for a DCO by Highways England. This is the latest scheme where NFU have been involved.</p> <p><i>Private water supplies:</i></p> <p><i>Where an existing private water supply to a farm is adversely and directly affected by the construction of the Scheme, the main works contractor shall, if requested by the farmer or landowner to do so, provide or procure or meet the reasonable cost of the provision of an alternative supply of water (the form and type of which shall be at the contractor's option). Where the supply is affected temporarily by the construction of the Scheme, then the alternative supply need only be supplied for the period during which it is affected.</i></p> <p><i>Where a request is made by the farmer or landowner for a permanent supply due to permanent severance of the existing supply caused by the construction of</i></p>	<p><i>will use reasonable endeavours to provide or procure or meet the reasonable cost of an alternative.</i></p>	

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	<p><i>the Scheme, the main works contractor shall, where provision of an alternative means of supply can be demonstrated by the land owner/farmer to be reasonably required for his business, provide or procure or meet the reasonable cost of a permanent means of alternative supply of water (the form and type (either borehole or mains supply) shall be at the contractor's option). 07.04.2020</i></p>		
<p>Access Routes to the Order Limits</p>	<p>At the present time Vattenfall has provided details of access routes it would like to use to gain access to the working strip. Issues have been raised by some of the agents that some of the access routes are not actually physically possible on the ground due to differing ground levels. In some instances there are better access routes available to reach the working strip but Vattenfall as yet has not engaged in agreeing viable access routes. It is the understanding of the NFU and LIG that there are still access routes to be agreed with landowners that are needed on a temporary and permanent basis. 29.11.19</p>	<p>The Applicant is engaged in on-going discussions with a small number of parties with regards to preferred alternative access routes as put forward by the landowner and their representative. The majority of access routes have been agreed with landowners through the signed HoTs.</p> <p>Accesses required for construction have been assessed individually to provide access to complete the construction works and these are secured within the Order Limits submitted as part of the application of the projects and therefore are not able to be changed.</p> <p>Where construction accesses are planned to also be used as O&M accesses and there are better alternatives, these will be considered on a case-by-case basis.</p>	<p>Under discussion</p>

The undersigned agree to the provisions within this SOCG

Printed Name	
Position	
On behalf of	National Farmers Union
Date	

Printed Name	Jake Laws
Position	Norfolk Boreas Consents Manager
On behalf of	Norfolk Boreas Limited (the Applicant)
Date	8 th April 2020