

**Norfolk Boreas Offshore Wind Farm**

# **Statement of Common Ground**

**Ørsted Wind Power A/S**

**(Version 2)**

Applicant: Norfolk Boreas Limited  
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*Photo: Ormonde Offshore Wind Farm*

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## Glossary of Acronyms

CIA	Cumulative Impact Assessment
CLO	Community Liaison Officer
DCO	Development Consent Order
ES	Environmental Statement
EMF	Electro-Magnetic Field
EPP	Evidence Plan Process
ETG	Expert Topic Group
HA	Highways Authority
HGV	Heavy Goods Vehicle
HDD	Horizontal Directional Drilling
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IEMA	Institute of Environmental Management and Assessment
NCC	Norfolk County Council
SoCG	Statement of Common Ground
OCoCP	Outline Code of Construction Practice
OTMP	Outline Traffic Management Plan
TMP	Traffic Management Plan
WSI	Written Scheme of Investigation

## Glossary of Terminology

the Applicant	Norfolk Boreas Limited
the Application	Norfolk Boreas DCO application
the Parties	Norfolk Boreas Limited and Ørsted Wind Power A/S
the Project	Norfolk Boreas Offshore Wind Farm
Norfolk Vanguard	Norfolk Vanguard offshore wind farm, sister project of Norfolk Boreas.

## 1 INTRODUCTION

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1. This Statement of Common Ground (SoCG) has been prepared by Norfolk Boreas Limited (hereafter the Applicant), and Ørsted Wind Power A/S (hereafter Ørsted), together ‘the parties’, as a means to set out the areas of agreement, ongoing discussions 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 Ørsted with regard to the Norfolk Boreas DCO application (hereafter ‘the Application’) as indicated in Ørsted’s Relevant Representation (RR-102) received by the Planning Inspectorate on the 30<sup>th</sup> August 2019.
3. As noted in RR-102 there is no physical overlap of the Norfolk Boreas offshore array, offshore export cable route or onshore at the grid connection points with any Ørsted project. The Norfolk Boreas proposed onshore export cable route does however cross the proposed onshore export cable route of Orsted proposed Hornsea Project Three offshore wind farm project. As there is no physical overlap of the projects offshore, this SoCG focuses on onshore interactions. However, Chapter 32 of the ES, (document reference 6.1.32 of the Application, APP-245), provides an assessment of the significance of cumulative impacts offshore.
4. Ørsted’s Relevant Representation (RR-102) raises specific points in relation to onshore interaction with Hornsea Project Three UK Ltd’s export cable corridor and the Norfolk Boreas cable corridor. Chapter 33 of the ES (document reference 6.1.33 of the Application, APP-246), provides an assessment of the significance of these impacts onshore. The agreement log (section 2) outlines the status of topic specific matters between Ørsted and the Applicant. The SoCG also provides information relating to electro-magnetic fields, design interaction, co-operation between Ørsted and the Applicant, as well as matters relating to exercise of compulsory acquisition powers.
5. 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

6. The Application is for the development of the Norfolk Boreas Offshore Wind Farm and associated infrastructure. A full description of the project can be found in Chapter 5 Project Description of the Environmental Statement (ES) (document reference 6.1.5 of the Application, APP-218).

7. The Application is seeking consent for the following two alternative development scenarios:
  - Scenario 1 – Norfolk Vanguard proceeds to construction and installs ducts and other shared enabling works for Norfolk Boreas.
  - Scenario 2 – Norfolk Vanguard does not proceed to construction and Norfolk Boreas proceeds alone. Norfolk Boreas undertakes all works required as an independent project.
8. Where a topic of agreement is specific to a scenario this is identified in the agreement log for each subject area, otherwise the agreement applies to both scenarios.

## 2 STATEMENT OF COMMON GROUND

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### 2.1 Onshore Interactions

9. Table 1 provides areas of agreement, ongoing discussion and disagreement. In order to easily identify whether a matter is “agreed”, “under discussion” or “not agreed”, a colour coding system of green, yellow and orange, respectively, is used in the “final position” column to represent the respective status of discussions.



**Table 1 Statement of Common Ground – Onshore interactions**

Topic	Norfolk Boreas Limited and Ørsted Joint final position
Ground conditions and Contamination	Cumulative effects have either been scoped out, or the Cumulative Impact Assessment (CIA) has not identified any significant adverse cumulative effects.
Water Resources and Flood Risk	
Land Use and Agriculture	
Ecology	
Ornithology	
Landscape and Visual	
Noise and Vibration	
Air Quality	
Socio-economics	
Archaeology and Cultural Heritage	To manage archaeological impacts, if required where the cable corridors cross, Hornsea Project Three (UK) Limited advocates a consistent approach to targeted geophysical survey and trial trenching through a consistent approach to (Archaeological) Written Schemes of Investigation (WSI) being agreed with the relevant authorities prior to commencement of the consented works where the cables cross. The Applicant has submitted an Outline Written Scheme of Investigation (Onshore) (document reference 8.5 of the Application, APP-696) which sets out details in relation to targeted geophysical survey and trial trenching. The final Written Scheme of Investigation submitted for approval under Requirement 23 of the dDCO will be approved by the relevant planning authority in consultation with Norfolk County Council and Historic England. This will enable the relevant planning authority, and its consultees, to ensure that the approach to targeted geophysical survey and trial trenching is undertaken in a way which manages archaeological impacts from any interaction of the projects at the crossing point. The Applicant will also continue to work with Hornsea Project Three to co-operate on targeted geophysical surveys and trial trenching at the crossing point.
Public Rights of Way	To manage impacts on public rights of way, Ørsted advocates consistent approaches to the management of Reepham footpaths FP18 and FP34. The Applicant has submitted an Outline Code of Construction Practice (OCoCP) (document reference 8.01 of the Application, APP-692) which sets out details in relation to the management of footpaths. The final Code of Construction Practice submitted for approval under Requirement 20 of the dDCO will be approved by the relevant planning authority, in consultation with Norfolk County Council (amongst others). This will enable the relevant planning authority, and relevant consultees, to ensure that the approach to managing footpaths FP18 and FP34 is appropriate given the interaction of the projects at the crossing point. The Applicant will also continue to work with Hornsea Project Three to co-operate in the management of public rights of way for footpaths FP18 and FP34.

Traffic and Transport

The Applicant and Hornsea Project Three (UK) Ltd have undertaken a cumulative impact assessment and concluded that, with the design-in mitigation proposed (including those set out within the relevant traffic management plans), no significant cumulative effects relating to traffic and transport would occur.

There has been extensive consultation with Norfolk County Council (NCC) and other relevant stakeholders (including Cawston Parish Council and Oulton Parish Council) in regard to a highways mitigation scheme to address cumulative impacts along The Street, Oulton and a Highways Intervention Scheme (HIS) for the B1145, Cawston. Norfolk County Council as the highway authority had advised Hornsea Project Three that from a highways perspective, subject to receipt of a satisfactory Road Safety Audit (RSA) the mitigation measures identified for Cawston are technically workable and would be acceptable to NCC as local highway authority. The RSA was issued to NCC on the 29<sup>th</sup> March 2019.

Following NCC's review of the Cawston HIS RSA, a number of concerns were raised which required further amendments before NCC could agree to the scheme. It was agreed with Norfolk Vanguard and Hornsea Project Three (UK) that the Applicant would take forward the scheme design to address the concerns raised in the RSA and by NCC.

A revised Cawston HIS was submitted at Deadline 4 of the Norfolk Boreas DCO Examination addressing the concerns raised by the RSA and NCC, and the HIS was subject to another RSA, undertaken on 16<sup>th</sup> February 2020. The resultant RSA report, RSA Decision Log response and updated HIS Plans were submitted at Deadline 5 of the Norfolk Boreas DCO Examination for further review by the relevant stakeholders.

The Applicant and Hornsea Project Three (UK) Ltd have committed to the implementation of the outline scheme at The Street, Oulton, and the B1145, Cawston which would be sufficient to mitigate impacts for either the Applicant alone, Hornsea Project Three (UK) Ltd alone, or for these projects together. All of the identified measures to mitigate cumulative construction traffic impacts on shared road links will be captured in each Projects' Outline (Construction) Traffic Management Plans (OTMPs) (see document reference 8.8 of the Application, APP-699 for the Norfolk Boreas project). The details and development of the schemes are ongoing, but the scheme in principle is agreed.

In addition to the outline mitigation schemes and Cawston HIS noted above, it has been agreed that for five specific links, the cumulative traffic effects from the Applicant and Hornsea Project Three (UK) Ltd should be monitored to ensure certain levels of construction traffic are not exceeded in the event of the projects running simultaneously. The links and maximum cumulative traffic levels not to be exceeded without a full Institute of Environmental Management and Assessment (IEMA) Transport Environmental Link Assessment and agreement with the Highways Authorities (HAs) and incorporated into the detailed OTMPs are defined below (HP3 link notation in Italics);

- Link ID 13b (34): A148 from B1354 junction to Letheringsett - 729 two way movements per day, of which up to 535 (379 Norfolk Boreas & 156 Hornsea Project Three) can be HGVs;
- Link ID 34 (89): B1145 through Cawston - 646 two way movements per day, of which up to 239 (112 Norfolk Boreas & 127 Hornsea Project Three) can be HGVs;
- Link ID 32 (59): B1149 Edgefield to Heydon - 478 two-way total movements per day, of which up to 289 (136 Norfolk Boreas & 153 Hornsea Project Three) can be HGVs;
- Link ID 41 (190,191): B1436 between A148 and A140 - 825 two way movements per day, of which up to 436 (287 Norfolk Boreas & 149 Hornsea Project Three) can be HGVs;
- Link ID 68 (208): The Street, Oulton 408 two way movements per day, of which up to 198 (80 Norfolk Boreas & 118 Hornsea Project Three) can be HGVs.

The Applicant and Hornsea Project Three continue to work together to seek to further refine cumulative traffic profiles, timescales and numbers prior to the close of examination.

The relevant management plan for each project (e.g. Outline Code of Construction Practice (CoCP), Annex A: Framework Communication Plan, and Outline CTMP for Hornsea Project Three (UK) Ltd and OCoCP (document reference 8.01 of the Application, APP-692 and OTMP (document reference 8.8 of the Application, APP-699) for the Applicant) will set out the process of continued engagement between both parties and the Local Highway Authority. This will ensure that as construction programmes are refined post-consent, this information is regularly shared between parties, particularly traffic demand on shared road links. This will ensure that commitments to manage cumulative construction traffic demand are fully delivered; for example, on a given road the projects may have to commit to programme works to ensure each scheme's peak traffic does not overlap. Regularly programme sharing of information will ensure that the final approved (C)TMPs for the projects accurately reflect the expected construction traffic demand (both volume and typical flows) of both projects, and provide certainty to the Local Highway Authority that commitments remain feasible and deliverable. The OTMP for the project is secured under Requirement 21 of the DCO, and the final Traffic Management Plan must be submitted to the relevant planning authority and approved in consultation with the highway authority.

#### B1149 Open Cut Trench

The Applicant has produced an updated traffic management design which has been developed to address the safety concerns raised by NCC. The drawings (which include Swept Path Analysis), demonstrate traffic management detail fully compliant with Chapter 8 of the Traffic Designs Manual, which can also accommodate Hornsea Project Three cumulative traffic (including Abnormal Loads) and is entirely within the current Norfolk Boreas DCO Order limits. The updated design has been included in the updated OTMP at Deadline 5.

## 2.2 Construction Management and Community Liaison

10. Both parties have both committed to community liaison through the construction phase.
11. The Applicant has submitted an OCoCP (document reference 8.01 of the Application, APP-692). Section 2.4 of the Applicant's OCoCP notes that the Applicant will ensure effective and open communication with local residents and businesses that may be affected by noise or other amenity aspects caused by the construction works. A designated local community liaison officer (CLO) will respond to any public concerns, queries or complaints in a professional and diligent manner as set out by a project community and public relations procedure which will be submitted for comment to the Local Authorities. Parish Councils in the relevant area will be contacted (in writing) in advance of the proposed works and ahead of key milestones, with these measures being captured in a communications plan as part of the final CoCP.
12. Similarly, Hornsea Project Three (UK) Ltd has produced an OCoCP<sup>1</sup>. Appendix A (Communication Plan Framework) of the OCoCP notes that a Communication Plan will be developed, managed and implemented by the Stakeholder Manager for Hornsea Project Three (UK) Ltd. During the construction phase, a CLO will be appointed prior to the commencement of onshore works. The CLO will attend public meetings including liaison with community groups and will manage all contacts with local resident groups, schools, emergency services and local businesses with regard to general construction works issues in accordance with the parameters established in the Communications Plan.
13. The respective OCoCPs as produced for both the Applicant and Hornsea Project Three (UK) Ltd include commitments to developing project specific Communication Plans post-consent, and include a framework to set out the key points of how communications will be delivered. The Communication Plans will ensure effective and open communication with local residents and businesses that may be affected by the construction works. In order to ensure communication between the respective parties, it is proposed that the Communication Plans will also set out the process of continued engagement between the Applicant, Hornsea Project Three (UK) Ltd and the Local Highway Authority. This will ensure that as construction programmes are refined post-consent that this information is regularly shared between parties, particularly traffic demand on shared road links and that commitments to manage cumulative construction traffic demand are fully

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<sup>1</sup> Document reference REP9-063 of the Hornsea Project Three Examination, available here: [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-002003-%C3%98rsted%20Hornsea%20Project%20Three%20\(UK\)%20Ltd%20-Appendix%2036%20-%20Outline%20Code%20of%20Construction%20Practice%20-%20Clean.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-002003-%C3%98rsted%20Hornsea%20Project%20Three%20(UK)%20Ltd%20-Appendix%2036%20-%20Outline%20Code%20of%20Construction%20Practice%20-%20Clean.pdf)

delivered; for example on a given road the projects may have committed to programme works that ensure each scheme's peak traffic does not overlap.

14. Furthermore, the final Traffic Management Plans (TMP) for each project will confirm cumulative traffic impacts and set out the measures to ensure that the cumulative environmental impacts are managed to levels such that they are acceptable by Norfolk County Council as the local highway authority. Regularly programmed sharing of information will ensure that the final approved TMPs accurately reflect the expected construction traffic demand of both projects, and provide certainty to the Local Highway Authority that commitments remain feasible and deliverable.
15. Outline mitigation schemes for each project alone and projects cumulatively have been agreed in principle with Norfolk County Council. These outline schemes will be included within updated versions of the outline (C)TMPs for each project.
16. All parties have committed to a process of continued engagement between them and the Local Highway Authority. This will ensure that as construction programmes are refined post-consent, this information is regularly shared between parties, particularly traffic demand on shared road links. This will ensure that commitments to manage cumulative construction traffic demand are fully delivered.

## 2.3 Cumulative Electro-Magnetic Fields (EMFs) at the crossing point of Hornsea Project Three (UK) Ltd and the Applicant

17. When considered cumulatively, as magnetic field strength decreases rapidly with distance from the source, combined with the vector nature of electric and magnetic fields, the cumulative field strength from multiple sources would not typically be as great as the scalar sum of their maximum strength. In practice, this means that magnetic field strength at a given location tends to be dominated by one source (the largest and/or nearest) where several sources in the area are present.
18. As such, and considering the large margin of compliance with the public exposure guidelines, no significant cumulative impacts from other existing or proposed sources are anticipated.
19. In response to local concerns, Ørsted and Vattenfall jointly commissioned an independent study and resulting report which explores the 'worst case' EMFs which may result where it is proposed the power cables from offshore wind farm projects will cross. The Vattenfall and Ørsted Circuit Crossings- EMF Information Sheet was submitted as Appendix 1 (AS-024) to the Applicant's Comments on Relevant Representations (AS-025) and is also available for download from both Ørsted and Vattenfall corporate websites<sup>2</sup>.
20. These assessments represent the worst-case scenario for two crossing points, one where both transmission systems use High Voltage Alternating Current (HVAC) technology and the other where both use High Voltage Direct Current (HVDC) technology. It should be noted that this worst case scenario was correct at the time the study was commissioned, however the Applicant and Norfolk Vanguard Ltd have subsequently made the commitment to deploy HVDC technology. The parameters modelled are included in the tables below and are conservative as maximum rating, minimum burial depth and most acute crossing angle (45°) were taken and the most highly loaded circuits were located on top which produced the highest magnetic fields.
21. A summary of the cumulative impact of the parties projects is:
  - The study found that the maximum calculated HVAC magnetic fields were 50.7  $\mu\text{T}$ , which is 14% of the UK exposure limit values; the maximum calculated HVDC magnetic fields were 60.8  $\mu\text{T}$  which is less than 1% of the UK exposure limit.
  - All of the cable crossing scenarios irrespective of whether HVDC or HVAC cable connections are used will be compliant with the UK exposure limits set to protect the health of members of the public against EMF exposure.

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<sup>2</sup> <https://corporate.vattenfall.co.uk/contentassets/bf0e5e31bbab467eaf02040c7b17513a/vattenfall-orsted-emf-information-sheet.pdf>

- As the magnetic field is mainly dependant on cable rating, burial depth and phase separation, all cable crossings with similar or less onerous design parameters will also be compliant.

22. The study advises that if both cable routes that cross use the same power transmission technology, i.e. HVAC and HVAC or HVDC and HVDC, the fields can combine to add or subtract from one another. However, if different technologies are used, i.e. HVAC and HVDC, the magnetic fields do not interact with one another. In that scenario, the installations of the HVAC and HVDC cables can be considered separately.

## 2.4 Design Interaction and Co-Operation Agreement

23. The parties are in advanced stages of entering into a Co-operation Agreement. Whilst the terms of that agreement are confidential – those matters pertinent to construction management and implementation extend to:-

- The parties agree that there should be no detrimental impact for either party to execute their statutory consents.
- The parties agree to consult one another and keep each other reasonably apprised of key decisions and changes to programme, milestones and upcoming communication with any relevant regulatory body. Further, the parties shall provide a rolling stakeholder engagement plan to ensure that each party is aware of ongoing engagement with the wider community. This will help ensure that all parties are aware of works ongoing in the area so as to assist with each project's own community liaison initiatives.
- The parties will share all survey works at the point of crossing and/or shared access areas – this will help reduce the number of surveys undertaken and ensure consistency in base survey data utilised by all parties.
- 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.
- Parties will share design specifications when known to help facilitate the design of the other party's cables at the point of crossing.
- The Parties will work together to share information and agree mitigation, such as traffic management measures and plans, with the collective aim of minimising the cumulative environmental impact of construction on the local road network, noise management and management of neighbouring Public Rights of Way.
- Each Party will grant the other Parties rights of access in an emergency.



## 2.5 Compulsory Acquisition Powers

24. It is agreed that all parties will seek to enter into either a tri-partite Option Agreement or a direct voluntary agreement with the relevant landowner to acquire the rights necessary to construct, use and maintain assets for the parties at the cable crossing point. The terms of the Option Agreement will provide for, amongst other items, crop loss and severance compensation where the accumulative impact of projects in construction at the same time have increased impact to the landowner when compared to separate construction periods.
25. In the event that a voluntary agreement cannot be entered into with the relevant landowner, it is agreed that the compulsory acquisition of new rights and imposition of restrictive covenants can co-exist for the parties. The Co-operation Agreement will regulate the exercise of compulsory acquisition and temporary use powers.
26. Reciprocal protective provisions have also been included in the dDCOs for the projects which govern the interaction of the projects and rights in relation to the areas in which the cables cross. In the dDCO for the Norfolk Boreas project, protective provisions are included for the undertaker with the benefit of the Hornsea Project Three DCO at Part 8 of Schedule 17.

**The undersigned agree to the provisions within this SoCG**

Printed name	
Position	
On behalf of	
Date	

Printed name	Jake Laws
Position	Norfolk Boreas Consents Manager
On behalf of	Norfolk Boreas Limited (the Applicant)
Date	05/03/2020