



Norfolk Boreas/Vanguard  
Submission for Deadline 2 – Tuesday 10<sup>th</sup> December 2019

### **COVERING NOTE TO DOCUMENTS 1, 2 AND 3.**

The Norfolk Boreas Planning Inspectorate panel has stated that we should not rely on evidence/submissions made during the Norfolk Vanguard examination and to this end we are re-submitting documents, which have been updated to reflect where we are on this journey and anything we have reason to rethink since their original submission. We send them at this fairly early stage to serve as background. Three documents are attached and we summarise their aims below:

#### **Document 1: 'The role of N2RS and the importance of HVDC as a transmission system'**

N2RS (No to Relay Stations) is a local community action group formally established in April 2017. It is a single-issue group which has concerned itself primarily with trying to persuade Vattenfall to commit to an HVDC transmission system which would negate the need for cable relay stations, reduce the width of the cable corridor and reduce the construction period and therefore reduce traffic and disruption. The abovementioned document expands on the role of N2RS and the reasons behind our support for HVDC and our opposition to HVAC had it prevailed.

#### **Document 2: 'Concerns raised on the deliverability of HVDC and the applicant's response'**

Although we had had frequent reassurances about Vattenfall's commitment to HVDC, doubts were raised during the Hornsea Three examination as to the viability of HVDC. We were among a number of parties asking Vattenfall to respond to this. The above-mentioned document summarises why we were concerned, how Vattenfall responded and what we understand to be the outcome not just for Norfolk Vanguard but also for Norfolk Boreas.

#### **Document 3: 'The NSIP Process – A Herculean Task for Communities'**

This document is based on a statement read out at an Open Floor Hearing (6<sup>th</sup> February 2019) during the Norfolk Vanguard examination. We feel it is important that this panel also understands the mountains we have to climb, when encountering major NSIPs. This was mentioned by some of the speakers at the Open Floor Hearing on 13<sup>th</sup> December 2019 - and we were very aware of the weariness in the room as we start on our third NSIP examination in a year. The demands on our communities is enormous and it will only be compounded by other wind farm extensions and developments which we believe to be on the horizon.

### **THE WIDER ISSUES**

Clearly the transmission system was just one, albeit important aspect and the focus is now more on the community hotspots which will bear the brunt of the project and the wider concerns about the relentless march of offshore wind farms, the lack of a coherent strategy and the cumulative impact on our communities.

We have touched briefly on some of these issues in the past but as the group's name suggests No to Relay Stations (N2RS) was established to argue for an HVDC solution so that cable relay stations would not be needed – and this was the common ground that our 1000 or so supporters shared, regardless of any other opinions they might hold. We know that opinions are divided on how best to deal with the wider issues and we do not feel we should make any assumptions or representations on behalf of our supporters. We have also confined our opinions largely to areas where we have the local knowledge to substantiate our submissions.

However, we believe that most of our supporters would agree that Norfolk is having to accommodate too many offshore wind farms, piecemeal and with little regard for the continuing disruption they cause. It does warrant proper debate in a form that can be accessed by all affected communities and should not be confined to the interests of any one area within the county. So it is our hope that this issue be adopted by a

body which can assess and review these matters independently. Any influence the panel can bring to bear on this would be welcomed.



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### **Document 1: The role of N2RS and the importance of HVDC as a transmission system**

N2RS was formally established in April 2017 amidst concerns about the impact of major onshore infrastructure to support the Norfolk Vanguard and Norfolk Boreas offshore wind farms. Its main focus was on the choice of technology: HVAC technology would have required cable relay stations, replacing productive agricultural land and leaving a permanent industrial legacy near the coast in North-East Norfolk. Whereas HVDC technology would negate the need for cable relay stations, significantly reduce the cable width and reduce the impact for the majority of people along the cable route.

N2RS and its supporters worked tirelessly throughout the formal and informal consultations to raise awareness amongst the local community and encourage constructive engagement to ensure the project was fully debated by elected representatives, the media and other interested parties.

N2RS recognised the need for renewable energy but felt it must be achieved with due regard and respect for the environment, homes, businesses and wildlife it impacts upon. N2RS therefore called upon Vattenfall to adopt best practice at a corporate level, by committing to an HVDC transmission system – as the least environmentally damaging choice of technology for this and future UK projects. Vattenfall's unequivocal commitment to HVDC for both Norfolk Vanguard and Norfolk Boreas has therefore been warmly welcomed by N2RS. As the Planning Inspectorate scrutinises the results of Vattenfall's formal consultations, the strength of support for HVDC should become apparent and any deviation from this preferred system (pre or post consent) would undermine the planning process and would be totally unacceptable to the communities and stakeholders who supported the HVDC route.

The advantages of an HVDC are reiterated below

- No cable relay stations will be required in unspoilt countryside near the coast
- The cable corridor width will be reduced from 100 m to 45 m
- The local landscape and countryside, which is key to the area's character and its popularity with tourists, will be protected from permanent industrialisation.
- Local wildlife (which includes many protected species) will no longer be threatened by loss of habitat due to cable relay stations.
- Construction traffic, which would have impacted on nearby quiet lanes posing a real threat to tourism and to the quality of life of locals, will be reduced from eight years to two.
- High-grade farmland will no longer be lost to cable relay station sites and disruption to farm operations will be reduced.
- Ancient bridleways such as Munn's Loke – the home of diverse wildlife and a much-valued local amenity – will not be lost or compromised.
- The risk to tourism businesses – holiday cottages, seaside parks, cafes, shops and restaurants – will be considerably reduced, but not eliminated.

### **Additional points**

Although welcoming the HVDC decision and acknowledging the significant extent to which it reduces impact, the project will still affect some individuals and communities, especially at landfall, where the cable corridor runs close to homes and businesses, where traffic is disruptive and where it connects to the Grid. N2RS submits that:

- a) Due regard should be given to homes and businesses which are still directly affected by the

wider plans - and loss in property value and quality of life should be taken into account. It should not fall upon individuals to bear the brunt of schemes like this and those affected must be properly compensated. This would include owners of holiday businesses who will lose trade during construction and possibly suffer longer-term loss of reputation.

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- b) The intrusion into the countryside should be kept to an absolute minimum and the developers should continue to liaise with local people to utilise their knowledge and experience so that homes, the quality of life of individuals, businesses and wildlife do not suffer unnecessarily.
- c) Vattenfall should continue to communicate with those who have expressed an interest in this project directly to inform them of major milestones and any aspect that will affect nearby communities – such as road closures and improvements.
- d) Once construction starts, local people should have an effective means of contacting the developer or project team especially in emergencies where for example there is evidence of harm to wildlife, flooding or other unexpected events.
- e) Vattenfall's project team should recognise the importance of tourism and ensure wherever possible that works will not impact on the area during peak tourism periods. The impact on tourism businesses during construction and loss of reputation should be compensated. Finally, the rights of local people to enjoy their surroundings out of peak hours should also be respected.

N2RS.org.uk

Submitted by:  
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## **Document 2: Concerns raised on the deliverability of HVDC and the Applicant's response**

Vattenfall's decision to commit to an HVDC transmission system was warmly welcomed and hugely significant. It removed a great deal of opposition at a stroke and made the project much more acceptable for many people. Around 1000 people signed up to the N2RS campaign – 'no to relay stations – yes to DC' and of course many other people and organisations also shared our goal.

This commitment to HVDC shaped public and stakeholder responses to the previous Norfolk Vanguard examination and it continues to shape responses to the current Norfolk Boreas examination. Had HVAC still been on the table, these examinations would have looked and sounded very different. There would be many more people sending in representations and attending hearings voicing their concerns about cable relay stations and the width of the cable corridor.

Whilst we do not have any reason to doubt the applicant's intentions with regard to this choice of transmission, comparisons had inevitably been made between Norfolk Vanguard/Boreas and Hornsea Three – and comments made by Orsted at the Hornsea Three Issue Specific Hearing on 4<sup>th</sup> December 2018 initially led to some uncertainty. We feel it is worth revisiting claims made by Orsted and reassurances that were subsequently given by Vattenfall.

These concerns were shared by a number of parties including the NNDC, the CPRE and our then MP Norman Lamb – all who have made their own submissions.

### **Orsted's position**

At the above mentioned Orsted hearing (4<sup>th</sup> December 2018) and after a lengthy discussion about the deliverability of HVDC, Gareth Phillips (representing Orsted) concluded that "In due course having gone down the route of committing to DC - which may be perceived to make their (Vattenfall's) consent process at this stage, simpler, easier and less controversial - they may then have to turn back to make an amendment just like East Anglia One did in the past."

Given how detrimental an HVAC project would be and how vastly different it would look from the Norfolk Vanguard project and the Boreas proposal which was before the Planning Inspectorate at the time, we asked for reassurances that if and when consent is given, it does not allow for any turning back to HVAC. If that were to happen it would make a mockery of the process we have been participating in.

### **Vattenfall's Response**

As a result of these concerns Vattenfall gave assurances that HVDC was the only transmission system possible under the Norfolk Vanguard DCO and it is our understanding and expectation that this will also apply to Norfolk Boreas.

Some of these assurances can be viewed in the Applicant's Response to the Examining Authority's Further Written Questions. Document Reference: EcA;FurtherWQ; 10.D4.6 Deadline 4 - on pages 13 & 14 Section 2.7. An extract showing the relevant sections is attached and the full document is available at:

<https://infrastructure.planninginspectorate.gov.uk/wpcontent/ipc/uploads/projects/EN010079/EN010079-002679-ExA;%20FurtherWQ;%2010.D4.6%20Applicant's%20response%20to%20Further%20Written%20Questions.pdf>



**Norfolk Vanguard Offshore Wind Farm**

# **Applicant's Responses to the Examining Authority's Further Written Questions**

**Applicant: Norfolk Vanguard Limited**

**Document Reference: ExA; FurtherWQ; 10.D4.6**

**Deadline 4**

**Date: March 2019**

**Author: Royal HaskoningDHV**

*Photo: Kentish Flats Offshore Wind Farm*



PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
			<p>The concept of sustainability and sustainable energy production is the driving principle underpinning the Project; Norfolk Vanguard would be one of the largest offshore wind projects in the world and would make a large contribution to the achievement of national and global renewable energy targets. Norfolk Vanguard has the potential, at today's level of UK carbon emissions from the power sector, to prevent more than 2,000,000 tonnes of CO2 from entering the atmosphere. Norfolk Vanguard therefore represents a significant beneficial impact in terms of the UK's contribution to global efforts to reduce the effects of climate change.</p> <p>Adaptability relates to the siting of the offshore and onshore infrastructure, and choice of materials, taking into account natural processes such as coastal erosion, flooding and storm surges. These are all directly linked to climate change and a full response is provided on this at Q2.4. The key areas where adaptability to climate change has influenced the design (as described in more detail in the Applicant's response to Q2.4) include:</p> <ul style="list-style-type: none"> <li>• The design of the landfall infrastructure and construction methods allowing for coastal erosion projections;</li> <li>• Allowing sufficient room within the design at the onshore project substation for surface water attenuation taking into account climate change plus an allowance of 20%; and</li> <li>• Accounting for sea level rise in the turbine and offshore platform foundation design.</li> </ul>
2.7	Applicant	At ISH1 [EV-006 and EV-007] the Examining Authority (ExA) asked about the contention of some interested parties that the deliverability of HVDC technology was questioned by the promoters of the Hornsea Three Project. Please comment upon these representations and explain any differences in approach between the Norfolk Vanguard project and the Hornsea Three Project. Please explain the	<p>Since many local residents and stakeholders regard the use of HVDC technology as being more suitable for the Project, and with fewer impacts than the use of a High Voltage Alternating Current (HVAC) solution, it is understandable for these Interested Parties (IPs) to seek assurances that the HVDC solution is deliverable, both technically and commercially. The fact that Hornsea Three (H3) is taking a different approach on the HVAC/HVDC question is clearly contributing to the need for further assurances on these points.</p> <p>At project scoping and Preliminary Environmental Information Report (PEIR), the Applicant described both HVAC and HVDC transmission solutions. During</p>

PINS Question Number	Question is addressed to:	Question:	Applicant's Response:
		<p>reasons behind the Applicant's confidence that HVDC can be delivered for this project.</p>	<p>pre-statutory consultation, strong feedback was received favouring the HVDC solution from a range of stakeholders. Although as noted in response to q20.121, it is the physical structures (e.g. cable relay station and increased number of cables requiring an increased land take), as opposed to the nature of the Alternating Current (AC), that is the principal issue for IPs in this respect. Vattenfall undertook a technology assessment exercise in late 2017 to establish whether there was a real benefit to the Project in retaining the HVAC option and on the commercial and technical viability of the HVDC solution. Following this assessment, a decision was made to rule out the HVAC option. The Applicant announced this decision in early 2018, and the HVAC solution was not included in the ES and dDCO at submission (June 2018).</p> <p>As a result of ongoing collaboration with the HVDC supply chain, the Applicant has a high degree of confidence in the ability to procure a cost-effective HVDC transmission solution in the timescales required for the Project. This confidence is supported by the fact that there are already a number of offshore HVDC 'hubs' in the German sector of the North Sea, through which multiple OWFs export power into the onshore transmission system of that country. Secondly, the supply chain for offshore HVDC solutions is becoming more mature – there are now three suppliers of HVDC converter technology who have experience of designing and delivering offshore HVDC converter platforms, and several cable suppliers who can manufacture and install suitable HVDC cables.</p> <p>The approach being taken by the H3 project is somewhat different to Norfolk Vanguard; H3 have opted to retain both HVAC and HVDC transmission solutions within the envelope of their DCO consent and they contend that this is necessary in order to maximise the range of supply chain options and secure the most cost-effective transmission solution for their project (in order to minimise cost to consumers). This position is set out in section 5 of the H3 document "Appendix 22 to Deadline 1 submission – Transmission System (HVAC/HVDC) Briefing Note" available at:</p> <p><a href="https://infrastructure.planninginspectorate.gov.uk/wpcontent/ipc/uploads/projects/EN010080/EN010080-001131DI_HOW03_Appendix%2022.pdf">https://infrastructure.planninginspectorate.gov.uk/wpcontent/ipc/uploads/projects/EN010080/EN010080-001131DI_HOW03_Appendix%2022.pdf</a></p>





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### **Document 3: The NSIP Process – A Herculean Task for Communities**

We would like to make some general observations about the toll NSIPs take on communities and how ill equipped many of us feel in taking on multi-billion-pound energy companies. We feel we are ideally placed to make these comments having participated actively in the Norfolk Vanguard and Norfolk Boreas projects from the outset and having had a lesser but nevertheless considerable involvement in the Hornsea Three process.

This is not to say that the applicants have not followed due process nor that the Planning Inspectorate panels we have encountered have not done their best to be fair and inclusive, but rather that the government guidelines, which presumably inform this process, are flawed and do not truly appreciate the herculean task NSIPs present for communities.

Those who are most affected - and who will have to live through the disruption during construction and the lasting legacy of permanent infrastructure - are local people who have no rights to professional or financial support. Although landowners are able to instruct land consultants at the expense of the applicants, local people have limited means to navigate these complex proposals and their efforts are entirely self-funded.

Few have the time to properly read and digest the multitudinous pages of detail, in order that they can put forward a compelling case of their own. Unlike many of the parties involved, this is not our 'day job'. We still have businesses to run, jobs to go to, homes to manage and children and elderly relatives to care for. Our group alone has clocked up thousands of man-hours and considerable expense.

And for those facing the worst of the impact, there is the additional stress created by uncertainty about the future, their quality of life and the worry that their homes and businesses could be devalued.

Although impressed by the knowledge and commitment of many people we have encountered, it should not be assumed that communities can always summon up the skills, expertise and resources needed to fully articulate their concerns nor that they are always going to be comfortable speaking at hearings.

Contrast this to the teams fielded by the various developers. We are no match for the fully funded lawyers, engineers, environmental consultants and communications experts who do this for a living, and it is no wonder that ordinary people feel disenfranchised, disheartened and unable to compete and in the end campaign fatigue tends to set in.

It is telling that when N2RS approached two planning consultants in 2017 for professional advice, we were advised not to waste our money as the chances of influencing an NSIP were negligible.

Rural Norfolk also faces additional challenges in that many villages are geographically scattered often consisting of clusters of houses and small hamlets. This contributes to the charm and character of the area – but it makes mobilisation of communities much harder to achieve.

Fortunately for N2RS, the North Norfolk District Council, The Norfolk County Council and the CPRE and many landowners were among those to share our aims and they vigorously endorsed the need for HVDC - but these organisations are dealing with a number of major offshore wind farm applications, running side by side, and they too are stretched. Some parish councils have been actively engaged but others have struggled, and we have sensed that some are overwhelmed by projects of this magnitude.

Thankfully our group's particular goal in respect of Norfolk Vanguard and Norfolk Boreas appears to have been reached but with some communities feeling their current issues are unresolved and with more offshore wind farms planned for the county we can see no end to this constant struggle and we are left with a sinking

feeling that the cards will always be stacked against communities until those inequalities are addressed and other solutions are found.