

Norfolk Vanguard Offshore Wind Farm

Written summary of the Applicant's oral case at Issue Specific Hearing 1

Onshore Environmental Matters

Applicant: Norfolk Vanguard Limited
Document Reference: ExA; ISH; 10.D3.1
Deadline 3

Date: February 2019
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Photo: Kentish Flats Offshore Wind Farm



Glossary

AC	Alternating Current
ADR	Air Defence Radar
DCO	Development Consent Order
DML	Deemed Marine Licence
EIA	Environmental Impact Assessment
ES	Environmental Statement
ExA	Examining Authority
HAT	Highest Astronomical Tide
HGV	Heavy Good Vehicle
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
ISH	Issue Specific Hearing
MMMP	Marine Mammal Mitigation Protocol
MMO	Marine Management Organisation
MoD	Ministry of Defence
NCC	Norfolk County Council
NFFO	National Federation of Fishermen's Organisation
NNDC	North Norfolk District Council
OCP	Onshore Connection Point
OPS	Onshore Project Substation
UXO	Unexploded Ordnance

Written Summary of Oral Submissions: Onshore Issue Specific Hearing

1. Introduction

- 1.1 Issue Specific Hearing 1 (**ISH**) on Onshore Environmental matters took place on 5 February 2019 at 10:00am at Blackfriars Hall, The Halls, St Andrew's Plain, Norwich, NR3 1AU.
- 1.2 A list of appearances on behalf of the Applicant is attached at Appendix 1.
- 1.3 The broad approach to the ISH followed the form of the agenda published by the Examining Authority (the **ExA**) on 29 January 2019 (the **Agenda**).
- 1.4 The ExA, the Applicant, and the stakeholders discussed the Agenda items in turn which broadly covered the areas outlined below.

ExA Question / Context for discussion	Applicant's Response
AGENDA ITEM 2 (Preliminary Matters)	
<p>Change Report</p> <p>The ExA queried whether The Infrastructure Planning (Compulsory Acquisition) Regulations 2010 (CA Regs) have been complied with in relation to the minor red line boundary changes in the Change Report (document reference: (Pre-ExA; Change Report; 9.3) (the Change Report).</p>	<p>The Applicant confirmed that all landowners had consented to the inclusion of additional land in the Change Report and that letters consenting to the inclusion of a provision authorising compulsory acquisition of the additional land had been submitted at Deadline 2 (Appendix to Cover Letter), with the Book of Reference (document reference 4.3) updated accordingly. The Applicant explained that it therefore considered that it was not necessary to follow the prescribed procedure in the Infrastructure Planning (Compulsory Acquisition) Regulations 2010.</p> <p>The Applicant explained that National Grid (NG) had requested a further change to Work No.11A (the overhead line modification and associated limits of deviation) which would extend the area for acquisition of permanent rights beyond the pylon and over the remainder of the affected landowner's land holding. The Applicant is engaging with NG and the affected landowner in this respect. The Applicant hopes to be in a position to confirm by Deadline 4 whether the consent of the affected landowner has been obtained in relation to this additional change and, if so, will proceed to submit a further change request accordingly.</p>
<p>Statements of Commons Ground (SoCG)</p> <p>The ExA queried why some SoCGs were signed and some left unsigned.</p>	<p>The signed SoCGs are agreed between the parties as correct at the date of submission of the SoCG (for instance, as at Deadline 1). Whilst the signed SoCGs are agreed between the parties, it should be noted that they reflect the position between the parties as at Deadline 1 and, accordingly, there are areas that are still under discussion as noted within the SoCGs.</p>

	<p>Where the SoCG is not signed it has not been possible to agree a position at Deadline 1, even on the basis that some matters remain under discussion. All SoCGs submitted by the Applicant at Deadline 1 had been issued to stakeholders for comment in advance of Deadline 1.</p> <p>The Applicant is in dialogue with all relevant parties and is working towards an updated position and submission of updated SoCGs by Deadline 4.</p>
<p>Project Presentation</p> <p>The ExA invited the Applicant to deliver a short project presentation which summarised the key elements of the project.</p>	<p>The Applicant delivered a short presentation which covered the project programme, electrical infrastructure, and changes to the Project as a result of engagement with local stakeholders and the supply chain. The project presentation was published on the Planning Inspectorate's website on 4 February 2019 and can be found at the following link: https://infrastructure.planninginspectorate.gov.uk/wpcontent/ipc/uploads/projects/EN010079/EN010079-002501-Norfolk%20Vanguard%20Project%20presentation_Feb%202019.pdf.</p> <p>The Applicant explained that the aim of the project presentation was to outline some of the key decisions that have shaped the DCO application for Norfolk Vanguard; it also highlights some important changes made to the proposals by the Applicant during the DCO process:</p> <ul style="list-style-type: none"> • Site selection for Onshore Connection Point (OCP) and Onshore Project Substation (OPS): The location of the OCP was determined jointly between Vattenfall and NG, prior to the start of the Environmental Impact Assessment (EIA) process for Norfolk Vanguard. This decision was an important factor in the site selection process for the OPS. However, the proposed OPS location was selected later, during the EIA process. • Transmission system options: The EIA process originally considered two alternative technologies for transmitting power from the offshore wind farm into the onshore transmission system. The first solution involves the use of buried cables carrying high-voltage alternating current (HVAC). This technology is widely used for offshore wind farms in the UK and elsewhere. However, because the total length of the cable route (offshore and onshore) for Norfolk Vanguard is roughly 140km, this solution would have involved the construction and operation of a cable relay station close to the landfall. The second solution also involves the use of buried cables, but in this case carrying high-voltage direct current (HVDC). HVDC technology is used for sub-sea power links, and more recently in the German offshore sector for connecting offshore wind farms to the onshore transmission grid. The HVDC option does not need a cable relay station, and requires fewer cables than HVAC. • Onshore transmission works at OCP: NG will be responsible for accommodating the electrical connection of Norfolk Vanguard to the onshore transmission system. In order to do this, NG is proposing to make changes to some of the existing infrastructure at Necton. These changes are all included in the draft DCO.

- **Selection of HVDC transmission option:** In early 2018, Vattenfall made a decision to rule out the HVAC transmission option and commit to the use of HVDC technology for the Project. This decision was made as a result of stakeholder consultation and following an extensive review of the HVDC supply chain capability and technology readiness.
- **Site for onshore project substation:** the final siting decision for the onshore project substation was also made during EIA process. The decision process is fully described in Chapter 4 Site Selection and Assessment of Alternatives of the ES.
- **Changes made post-submission:** A number of relatively minor changes have also been made by the Applicant post-submission. Minor onshore cable route changes have been made in order to accommodate landowner preferences and there has been an increase to the areas within which the NG towers will be located as requested by NG. The amendment to the number of piles for the offshore electrical platforms and the removal of floating turbines from the design envelope have been driven by engineering requirements.
- **Norfolk Boreas:** Vattenfall Wind Power Ltd (the parent company of Norfolk Vanguard Limited), through one of its subsidiaries, is also developing Norfolk Boreas, a 'sister project' to Norfolk Vanguard. In order to minimise local impacts overall, as desired by stakeholders, a strategic decision was made at the start of project development to co-locate, or 'share' as much of the infrastructure as possible between the two projects. This would allow Norfolk Vanguard to undertake some work, which would be common to both projects, thereby reducing environmental impacts. Therefore, Norfolk Vanguard and Norfolk Boreas have the following shared infrastructure:
 - Shared onshore connection point
 - Shared onshore and offshore cable routes including landfall location
 - Co-location of onshore project substations.

To maximise some of the benefits of the shared infrastructure, Norfolk Vanguard has included within its DCO application, some enabling works which will benefit Norfolk Boreas. This includes:

- Pre-construction works throughout the onshore cable route will be sufficient for Norfolk Vanguard and Norfolk Boreas duct installation
- Norfolk Vanguard will install ducts for both Norfolk Vanguard and Norfolk Boreas throughout the length of the onshore cable route, in a single construction campaign
- Norfolk Vanguard will create a permanent access, including any modifications to the A47 junction for safe access, to the co-located onshore project substations
- National Grid overhead line modifications conducted for the connection of Norfolk Vanguard at the grid connection point will be sufficient to accommodate Norfolk Boreas.

	<p>Where applicable, the Norfolk Vanguard design envelope considers these enabling works for Norfolk Boreas within the Norfolk Vanguard base assessments. All other works associated with Norfolk Boreas are considered fully within the Norfolk Vanguard cumulative assessments.</p> <ul style="list-style-type: none"> • Programme for onshore works: The indicative onshore construction envelope of six years (as per table 5.36 of ES Chapter 5 Project Description) is reduced as far as practicable through a number of commitments including: <ul style="list-style-type: none"> ○ The commitment to use HVDC technology, which has reduced the onshore construction programme for Norfolk Vanguard by one year compared to a HVAC technology solution. ○ The ability to install Norfolk Boreas ducts at the same time as Norfolk Vanguard ducts, and in a sectionalised manner, which maximises the efficiency of the onshore cable route installation for Norfolk Vanguard and Norfolk Boreas. • Onshore duct installation: the onshore cable duct installation strategy is proposed to be conducted in a sectionalised approach in order to minimise impacts. Construction teams would work on a short length (approximately 150m sections) and once the cable ducts have been installed, the section would be back filled before moving onto the next 150m length. This would minimise the amount of land being worked on at any one time and would also minimise the duration of works on any given section of the route. Further details on the proposed construction methods with respect to duct installation for both Norfolk Vanguard and Norfolk Boreas and subsequent cable pulling for Norfolk Vanguard are provided in Section 5.5.2.3 of ES Chapter 5 Project Description. • Onshore cable pulling and offshore works: The onshore electrical works, comprising of cable pulling through pre-installed ducts, and all offshore works, may be completed in up to two separate phases. This is to allow flexibility in the supply chain considering, at 1,800MW, Norfolk Vanguard is larger in export capacity than any offshore wind farm built to date and may therefore be constructed in up to two 900 MW units. <p>Onshore, cable pulling does not require the trenches to be reopened, with the cables pulled through the pre-installed ducts from jointing pits located at approximately 800m – 1000m intervals. Access to joint pits may require up to 12km (20%) of the running track to be retained or reinstated following duct installation.</p>
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AGENDA ITEM 3 (Project Design & Alternatives)

<p>Securing the standards to cover issues and concerns on Major Accidents & Disasters.</p>	<p>The Applicant's response to Written Representations (in response to Patricia Lockwood's Written Representation in particular) (document reference: ExA; WRR; 10.D2.2) covers this issue.</p> <p>The Applicant considers that the risk of a terrorist attack on the onshore project substation is not reasonably foreseeable. No attack in respect of a substation has ever been planned or executed on UK soil. In addition, the</p>
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	nature of the design of the onshore project substation is to the highest health and safety standards and there are stringent regulatory processes which govern these elements, including the requirement for operators to develop emergency response plans and crisis management procedures.
Site selection and the Horlock Rules	The Applicant referred to previous submissions on this topic, in particular the detail regarding the choice of the onshore connection point which the Applicant dealt with at Deadline 1 in response to the ExA's question 2.1 (document reference: ExA; WQ;10.D1.3). Chapter 4 Site Selection and Assessment of Alternatives of the Environmental Statement (ES) (document reference: 6.1.04) also covers the process of site selection including the alternatives for the siting of the onshore project substation. The onshore connection process is also outlined in the document titled ' <i>A strategic approach to selecting a grid connection point for Norfolk Vanguard and Norfolk Boreas</i> ' (document reference: Pre-Exa; OCP Report; 9.2).
Use of technology – can the Applicant respond on the feasibility of High Voltage Direct Current (HVDC), and should HVDC be secured in the DCO.	<p>The Applicant referred to its response to question 1.5 of the ExA's written questions at Deadline 1 (document reference ExA; WQ;10.D1.3). Furthermore, the Applicant explained that Vattenfall has been engaging with suppliers who are capable of manufacturing and supplying HVDC cables; as a result, Vattenfall has concluded that there is no reason why the Project would not be fully deliverable as an HVDC project. The Applicant is in the early stages of engaging HVDC suppliers for the design and procurement process.</p> <p>The Applicant noted that it could not simply be a case of switching back to HVAC technology. In accordance with the Planning Inspectorate's guidance¹, if the Applicant needed to utilise HVAC technology, rather than HVDC, then a material change to the Development Consent Order (DCO) would be required. Additionally, 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 Interested Parties in this respect. In summary, the Applicant's position maintains that because the draft DCO does not consent the additional infrastructure required for HVAC it is not necessary to stipulate HVDC through a Requirement or further secure the use of a HVDC system within the works description.</p> <p>The Applicant also noted that this topic would be covered further in ISH 3 into the draft Development Consent Order, and would refer the ExA to the Applicant's written summary of oral submissions for ISH3 (ExA; ISH; 10.D3.3).</p>
AGENDA ITEM 4 (Transport & Highways)	
<p>A47 and access arrangements to the onshore project substation</p> <p>The ExA requested an update on the relevant substation access documentation together with the</p>	Following submission of the DCO application in June 2018, the Applicant has been liaising with Highways England to continue discussions regarding appropriate access arrangements for the onshore project substation access works from the A47. The latest position on these discussions has been captured through the SoCG with Highways England as submitted at Deadline 1 (Rep1 - SOCG - 7.1). In order to address outstanding concerns of

¹ Planning Act 2008: Guidance on Changes to Development Consent Orders; December 2015 (Department for Communities and Local Government)

ongoing discussions between the Applicant and Highways England.

Highways England, the Applicant has produced the following clarification notes which have been issued to Highways England for comment:

- A47 Substation Access Technical Note (**SATN**);
- A47 Substation Access Briefing Note (**SABN**).

A number of issues remain outstanding and the Applicant is progressing work to address these and will provide Highways England with a further document: A47 Substation Access Clarification Technical Note (**SACTN**).

The following issues will be addressed in the SATCN:

- Confirmation of full compliance with relevant Design Manual for Roads and Bridges (DMRB) design standards for the layouts proposed at access option locations A, B and D1. A figure will be submitted to the examination at Deadline 4 clearly setting out the locations of these accesses;
- Confirmation that the swept paths of heavy goods vehicles (HGVs) can be accommodated without over running of kerb or centre lines;
- The impact on the A47 junctions at Swaffham and Dereham of traffic displaced from access points A and D1. Accesses would be restricted to left-in, left-out movements only.

The Applicant hopes to submit this information at Deadline 4.

Any required traffic management or restrictions agreed with Highways England within the SACTN would be delivered through the final Traffic Management Plan (**TMP**) secured through Requirement 21 of the draft DCO.

Highways England anticipate that their outstanding issues will be addressed with the provision of the SACTN, as indicated by Highways England's response to Q11.1 submitted at Deadline 1.

In relation to the A47 access point at Scarning, the Applicant is progressing work to address the outstanding matters with Highways England and will provide Highways England with a further document: A47 Cable Crossing Access Technical Note (**CCATN**). The following points will be addressed in the CCATN:

- The provision of detailed junction layout plans;
- Confirmation of compliance with relevant DMRB design standards;
- Confirmation that the swept paths of HGVs can be accommodated without over running of kerb or centre lines;
- Details of any modifications required to the current layouts of these junctions to achieve such an outcome;
- Analysis of the collision data for the relevant junctions;

	<ul style="list-style-type: none"> • The extent of the existing levels of use of the junctions and the relative impact of traffic generated by the construction of Norfolk Vanguard; • Details of any traffic management arrangements to prevent conflicts occurring between vehicles entering and leaving simultaneously, to minimise the risk of a vehicle having to wait within the carriageway of the A47 to enter either of the side roads; and • The impact on the A47 junctions at Swaffham and Dereham of traffic displaced from this location, should these accesses be restricted to left-in, left-out movements only. <p>The Applicant hopes to submit this information at Deadline 5.</p> <p>Any required traffic management or restrictions agreed with Highways England within the CCATN would be delivered through the final TMP secured through Requirement 21 of the draft DCO. Highways England anticipate that their outstanding issues in this respect will be addressed with the provision of the CCATN - as indicated by Highways England's response to Q11.1 submitted at Deadline 1.</p> <p>The Applicant also noted that traffic demand related to the proposed onshore substation accesses has been assessed in ES Chapter 24 Traffic and Transport, however this information is repeated within the SACTN and CCATN for clarity. The worst case assessed in all instances is based on the realistic worst case traffic demand at each traffic link.</p>
<p>Necton junction</p> <p>Local stakeholders raised concerns regarding the traffic flow around Necton and the junction leading to Necton village, in particular given the recent development of a petrol station at the junction</p>	<p>The Applicant has assessed all the road links that are required for access to support the onshore construction works for the Project. The sensitivity of all the required road links was agreed with Norfolk County Council (NCC) and Highways England as part of the original assessment. Sensitive links were taken forward within the ES for further detailed assessment, as presented within Chapter 24 (document reference: 6.1.24). No impacts on the junction capacity at Necton were identified.</p> <p>The Outline TMP (document reference: 8.8) sets out enforcement procedures to ensure that construction related HGV deliveries associated with the Project adhere to the prescribed routes; this includes unique identification display for each HGV to identify Norfolk Vanguard deliveries. This will prevent drivers entering Necton or using the junction as a roundabout to undertake U-turns.</p> <p>The Applicant also noted that new developments along the A47, such as petrol stations and coffee shops, would intercept traffic already present along the A47, and that the developments themselves would not generate increased traffic numbers along the A47.</p> <p>The Applicant explained that it has committed to a communications plan and a local liaison officer for any local residents who wish to raise concerns in relation to traffic and construction management. This is set out at Section 2.4 of the Outline Code Of Construction Practice (CoCP) (document reference 8.1), which states:</p> <p><i>“Communications will be co-ordinated on site by a designated member of the construction management team. A proactive public relations campaign will be maintained, keeping local residents informed of the type and timing of</i></p>

	<p><i>works involved, paying particular attention to potential evening and night time works and activities which may occur in close proximity to receptors.</i></p> <p><i>A designated Norfolk Vanguard Limited local community liaison officer 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.</i></p> <p><i>Parish Councils in the relevant area will be contacted (in writing) in advance of the proposed works and ahead of key milestones. This information will include indicative details for timetable of works, a schedule of working hours, the extent of the works, and a contact name, address and telephone number in case of complaint or query. Enquiries will be dealt with in an expedient and courteous manner. Any complaints will be logged, investigated and, where appropriate, rectifying action will be taken.”</i></p> <p>The exact detail of the complaints procedure will be agreed with the relevant planning authority when producing the final CoCP. This will include the role of the relevant planning authority in this process. The final CoCP is secured through Requirement 20 of the draft DCO.</p>
<p>Construction impacts and cumulative impacts</p> <p>The ExA asked questions on the construction traffic process as well as for clarification on the number of compounds proposed at Oulton, near to the Hornsea Project Three (HP3) crossing point, together with how the interaction with HP3 would work in relation to construction traffic and its related impacts, especially in view of the appeal decision for the biomass power plant.</p>	<p>An outline TMP has been submitted as part of the Norfolk Vanguard application (document reference 8.8) which captures the traffic related mitigation principles identified for the construction phase of the onshore elements of the Project. The final TMP will be developed post-consent and will accord with the outline TMP. This is secured through DCO Requirement 21.</p> <p>The final preferred access choices would be determined in the discharge of Requirements 21 and 22 of the DCO in consultation with NCC and Highways England. Requirement 22 requires that “details of the siting, design, layout and any access management measures for any new, permanent or temporary means of access to a highway to be used by vehicular traffic, or any alteration to an existing means of access to a highway used by vehicular traffic” are provided as part of the Traffic Management Plan (TMP) submitted under Requirement 21. The TMP would be approved by the relevant planning authority in consultation with the Highways Authority.</p> <p>The design process will be supported by a Stage 1 Road Safety Audit of each location.</p> <p>In relation to the interaction with HP3, the Applicant has identified a number of links where traffic management measures will be required, including along The Street as detailed in the Outline TMP. This indicates that pilot vehicles and the addition of localised road widening, i.e. temporary passing places may be required. The Applicant is currently reviewing Orsted’s proposals for HP3 in relation to passing places along The Street and the Applicant will engage with NCC to discuss this further.</p> <p>The Applicant is also currently reviewing Orsted’s updated traffic numbers for HP3 (provided to the Applicant on 15th January 2019 and submitted by the Applicant to the Norfolk Vanguard examination at Deadline 3 (ExA; ISH; 10.D3.1C)) and will engage with NCC to discuss the outputs of the cumulative traffic impact assessment. The Applicant hopes to submit this information at Deadline 5. This will include consideration of different scenarios in the sequencing of the HP3 and Norfolk Vanguard and how required mitigation measures under those different scenarios are secured. This will also include consideration of the accident data presented by Orsted for HP3.</p>

	<p>The assessment of cumulative impacts along The Street will be based on the realistic worst-case traffic demand for HP3 and Norfolk Vanguard.</p> <p>The cumulative traffic impact assessment will also consider air quality and noise and vibration impacts on the previously agreed receptors along those shared routes. The Applicant will also review the package of works proposed by Orsted for HP3, including their proposal for smoothing the road surface along The Street in the location of the old level crossing.</p> <p>With regards to the planning appeal decision for a biomass plant that would have required use of The Street, the Applicant has set out its position within the SoCG with NCC submitted at Deadline 1 (Rep1 -SOCG -15.1). In summary, the biomass plant was refused planning permission based on the capacity of The Street for its operational traffic. The proposed operational traffic for that development was 112 daily HGV movements (based on a 14-hour working day) and would have occurred throughout the operational life of that development (assumed to be approximately 25+ years). In comparison, Norfolk Vanguard's proposed construction traffic along The Street would be during the construction phase only; that is 96 daily HGV movements (during a 16 week period in 2022), a further 6 weeks of 88 daily HGV movements (also in 2022), and 64 daily HGV movements for approximately 20 weeks (during 2024).</p>
<p>Trenchless Crossing(s)</p> <p>The ExA asked the Applicant to comment in relation to trenchless crossings and, in particular, NCC's request for trenchless crossing at the B1149.</p>	<p>The Applicant has considered the use and viability of trenchless crossings throughout the entire onshore cable route. It should be noted that trenchless crossings (for instance Horizontal Directional Drilling (HDD)) do result in other impacts including noise and environmental issues, as well as impact to the construction programme. The Applicant has explained this further in Appendix 11.1 to its submissions at Deadline 1 (document reference: ExA;WQApp11.1;10.D1.3).</p> <p>The Applicant has proposed a range of measures to minimise traffic impacts associated with open cut trenching. These include introducing a single lane closure to carry out road works without significant delay, taking into account the appropriate timing of any traffic management such as seasonal traffic increases, and therefore a trenchless crossing of the B1149 is not considered necessary. In addition, a trenchless crossing at this location could not be facilitated within the existing Order limits.</p>
<p>AGENDA ITEM 5 (Noise and Construction Impacts)</p>	
<p>Construction Hours</p> <p>The ExA questioned the approach to defining construction hours (as 7am-7pm Monday-Friday and 7am-1pm on Saturday) and how this interrelates with HGVs coming and leave the construction sites.</p>	<p>Traffic impacts, including traffic related noise, are based on the construction working hours set out in DCO Requirement 26, i.e. 07.00 to 19.00 on weekdays and 07.00 to 13.00 on Saturdays. An assessment of construction noise impacts has been undertaken on this basis.</p> <p>In a small number of locations the predicted construction noise would exceed the agreed daytime threshold. In these locations the Applicant has proposed mitigation measures to reduce construction noise down to non-significant levels, details of which are captured in the outline CoCP (document reference 8.1). A construction noise management plan will form part of the final CoCP to be produced for each stage of the works post-consent.</p>

	<p>This will include site specific detail on the delivery of these measures in each location. The final CoCP will require approval from the relevant planning authority prior to construction commencing.</p> <p>All traffic movements are assumed to occur between 07.00 to 19.00. The worst case traffic demand assessed assumes that the shift pattern would be 10 hours and so the assessment compresses 12 hours of traffic into 10 hours to give a worst case value, however it is assumed that this worst case traffic demand could occur anywhere in the 12 hour shift.</p> <p>Control of HGV deliveries is set out at Section 1.6.3 of the outline TMP (document reference 8.8), which will prevent HGVs arriving at a locked compound outside of the consented hours and hence idling. Control measures include:</p> <ul style="list-style-type: none"> • HGV booking system - the booking system will enable a daily profile of deliveries to be maintained and allow the contractor to ensure that the required deliveries are regularly forecast and planned. • HGVs will be refused access and turned away if they arrive outside of their allocated time slot; a small number of daily slots will be reserved to accommodate any unplanned deliveries. • The contractor will be required to keep an up to date record of deliveries and exports from the project, this will take the form of delivery receipts. This information will be retained to be provided to the relevant local authority, NCC and Highways England upon request. • Supply chain vehicles will display a unique identifier in the cab of the vehicle. <p>Extended working hours are required for some specific activities listed in DCO Requirement 26. The purpose of the extended hours is to allow continuous activities (such as drilling) which would not be safe or technically feasible to cease part way through. In these instances it would be the activity itself, i.e. drilling, that would continue beyond the consented working hours (in agreement with the relevant planning authority), rather than a continuation of HGV deliveries etc. The Applicant will produce a clarification note outlining the expected traffic movements (HGV and personnel), arisings, shift patterns and the basis for assessment related to potential 24 hour working at the landfall. This will be submitted to the examination by 4pm on 19 February.</p>
<p>Lighting</p> <p>Some local stakeholders raised concerns in relation to lighting from construction and operation, and specifically at the onshore project substation</p>	<p>In relation to the construction phase of the Project, the lighting requirements are different depending on the area or structure in question, for example:</p> <ul style="list-style-type: none"> • Mobilisation areas: As the Applicant details in paragraph 370 of ES Chapter 5 Project Description (document reference 6.1.05), <i>'Site lighting and secure fencing around the perimeter of the mobilisation area would be utilised for safety and security purposes'</i>. • Onshore Project Substation: As the Applicant details in paragraph 398 of ES Chapter 5 Project Description, <i>'Construction activities would normally be conducted during working hours of 7am - 7pm. Evening or weekend working could be required to maintain programme progress and for specific time critical activities such as transformer oil filling and processing; however, these would be kept to a minimum. Perimeter and site lighting would be required during working hours in the winter months and a</i>

lower level of lighting would remain overnight for security purposes.’ Construction working hours are secured within Requirement 26 of the draft DCO.

- **National Grid Substation Extension:** As the Applicant details in paragraph 425 of ES Chapter 5 Project Description, *‘Construction activities would normally be conducted during working hours of 7am to 7pm. Evening or weekend working may be required to maintain programme progress. Perimeter and site lighting would be required during working hours and a lower level of lighting would remain overnight for security purposes.’*

The lighting requirements are secured through DCO Requirement 20(2)(c) which requires the preparation and approval of an Artificial Light Emissions Management Plan (**ALEMP**). As the Applicant details in the Outline CoCP (document reference 8.1):

"The ALEMP will detail the mitigation measures to be taken to manage emissions from artificial light in accordance with good practice, such as the use of directional beams, non-reflective surfaces and barriers and screens, to avoid light nuisance whilst maintaining safety and security obligations.

Details of the location, height, design and luminance of all floodlighting to be used during the construction of the project, together with measures to limit obtrusive glare to nearby residential properties, will be set out in the Artificial Light Emissions Management Plan which will be submitted to the local authorities for approval prior to construction commencing. The approved scheme will be maintained throughout the construction of the relevant works.

Site lighting will be positioned and directed to minimise nuisance to footpath users, residents, to minimise distractions to passing drivers on adjoining public highways and to minimise skyglow, so far as reasonably practicable. Lighting spillage will also avoid or minimise impacts on ecological resources, including nocturnal species."

In relation to operational lighting:

- **Onshore Project Substation:** As the Applicant explains in the ES Chapter 5 Project Description and Chapter 29 Landscape and Visual Impact Assessment, the onshore project substation has been designed so that it does not require permanent lighting and would not be manned, however temporary lighting may be required during maintenance activities.
- **National Grid Substation Extension:** As the Applicant details in paragraph 427 of ES Chapter 5 Project Description, the National Grid substation extension would be unmanned except for maintenance activities and would not usually be illuminated. Lighting would be used when conducting maintenance activities (during working hours only).

Plane crash

The ExA asked the Environment Agency (EA) to explain their current understanding of the plane crash near to the onshore project substation, and also asked the Applicant to elaborate on their understanding of the background and the mitigation that would be utilised.

The Applicant has received documentation from George Freeman MP in December 2018, following a Freedom of Information request to the Ministry of Defence made by a member of the public. This documentation includes reporting produced by the Royal Air Force (RAF) following the crash site recovery and clean up exercise.

The reporting produced by the RAF following the crash site recovery and clean up exercise does not identify radioactive material as a potential contaminant present on site. A copy of the RAF recovery report is included as Appendix 12.2 to the Applicant’s Deadline 1 submission (document reference ExA; WQApp12.2; 10.D1.3).

As set out within section 6 of the outline CoCP (document reference 8.1), the Applicant has committed to producing a Contaminated Land and Groundwater Plan for dealing with contamination post-consent. The plan will follow the Model Procedures for the Management of Land Contamination (CLR11) (Environment Agency, 2004) for evaluating the risk of contamination.

Any potential risk of radioactive material would also require the written scheme to take into account procedures set out in CLR13 and CLR14 – The Radioactively Contaminated Land Exposure Methodology (Defra, 2011).

The written scheme for dealing with contamination will follow CLR11 and where relevant CLR13 and CLR14. It will set out the approach for all known sites of potential contamination and will include:

- A preliminary risk assessment based on a conceptual model and identification of further investigation, where required, e.g. site investigation;
- A generic or detailed quantitative risk assessment informed by intrusive site investigations;
- Extent, scale and nature of any contamination;
- An assessment of the potential risks to human health based on the proposed construction activities and future use of the site, i.e. potential effects on crops, livestock, groundwater, surface water, etc.; and
- Appraisal of remediation options, where required.

Any site investigations would be designed to take into account the information identified within the preliminary risk assessment and would be undertaken by appropriately qualified specialists.

The written scheme for the management of contamination of any land and groundwater will be submitted and approved by the local authority in consultation with the Environment Agency. This is secured through Requirement 20 of the draft DCO, which requires a Code of Construction Practice (based on the OCoCP) to be approved by the local planning authority, in consultation with the Environment Agency, ahead of each phase of the onshore construction works. This has also been captured within the SoCG between the Applicant and the Environment Agency submitted at Deadline 1 (Rep1 - SOCG - 6.1).

Coastal Erosion

The ExA asked North Norfolk District Council (NNDC) and the Applicant to

The Applicant has provided a full response to this issue at Deadline 1 through the response to the ExA's question 16.27 and 16.28 (document reference ExA; WQ; 10.D1.3). The Applicant also agreed to provide an explanation of how the key elements of coastal erosion and climate change, as set out in the National Policy Statement (NPS_

<p>comment on the concerns over coastal erosion at Happisburgh South (the landfall)</p>	<p>for Energy (EN-1), are satisfied as part of the design and management for the Project. This has been submitted at Deadline 3 (document reference: ExA; ISH; 10.D3.1D). A SoCG is being progressed between the Applicant and NNDC on various topics including coastal erosion (document reference: Rep1 – SOCG – 17.1). An updated SoCG will be issued at Deadline 4.</p>
<p>Flood risk and drainage</p> <p>The ExA questioned whether any progress been made in relation to flood risk and would the Applicant like to provide any further response to the representations made regarding flooding near the onshore project substation.</p>	<p>The Applicant referred back to its responses to the ExA's question 16.17 (document reference ExA; WQ; 10.D1.3), in which the Applicant provided a response on NCC's comments on the surface water drainage strategy. In summary: infiltration testing and drainage design will be undertaken when the project progresses to detailed design post-consent. The Applicant has committed to produce a Surface Water Drainage Plan (SWDP), which will be designed to meet the requirements of the National Planning Policy Framework (NPPF) and NPS EN-1. The drainage strategy will be developed according to the principles of the Sustainable Drainage Systems (SuDS) discharge hierarchy. The appropriate greenfield runoff rate will be agreed through consultation with the Lead Local Flood Authority and the Environment Agency during the detailed design stage.</p> <p>The Applicant has committed to the process outlined above to develop the SWDP, which will form part of the final CoCP and is secured through Requirement 20 of the DCO. No stage of the onshore transmission works may commence until for that stage a CoCP has been submitted to and approved by the relevant local planning authority, in consultation with the EA.</p> <p>In relation to flooding near the onshore project substation, the Applicant notes that the surface water runoff from the areas affected by the proposed development will be collected within the site drainage network and discharged in accordance with the requirements of the NPPF and NPS EN-1. Accordingly, there will be no net change in surface water flood risk as a result of the proposed development. The Applicant notes the concern of local residents in relation to current water run-off but the Applicant is limited to mitigating the impacts of the development proposed, rather than improving the existing situation. Any potential benefits in this regard would be a matter to be considered outside of the DCO application.</p>
<p>AGENDA ITEM 6 (Landscape and visual impacts)</p>	
<p>Preliminary matters</p> <p>The ExA sought clarity on where correction to Figures 29.11a and 29.11b (plans depicted in planting removals) will be captured</p>	<p>Figures 29.11a and 29.11b submitted as part of the ES within the DCO Application in June 2018 incorrectly depicted the planting near to the A47 associated with Dudgeon Offshore Wind Farm. Revised figures (29.11a, Revision 7 and 29.11b, Revision 9) were submitted at Deadline 1 (document reference: ExA; WQApp14.1; 10.D1.3) and are captured within the Guide to the Application (document reference 1.4).</p>
<p>Siting</p> <p>Local stakeholders raised issues with the siting of the onshore project substation from a landscape and</p>	<p>Site selection is presented in ES Chapter 4 Site Selection and Assessment of Alternatives (document reference: 6.1.04). Landscape and visual amenity was a key consideration throughout the site selection process. The Applicant noted that one of the first key decisions embedded into the project design was to install underground cables as an alternative to overhead lines along the 60km onshore cable route from landfall to the onshore connection point. The selection of HVDC technology was also driven strongly by landscape and visual amenity,</p>

visual point of view. Specific concerns centred on claims that the onshore project substation will be sited on the top of a hill.

as it removed the requirement for a cable relay station. The onshore project substation site offers a relatively level plateau amidst an undulating landscape, making it suitable to accommodate the temporary and permanent footprints required for the Project without extensive earthwork operations. The site also benefits from existing woodland and mature hedgerows that will act as natural screening.

The Horlock Rules (National Grid's Guidelines on Substation Siting and Design) were considered as part of the site selection exercise (refer to Table 4.3 of ES Chapter 4 Site Selection and Alternatives), and for LVIA specifically through avoiding proximity to any landscape designations, taking advantage of screening by land form and existing vegetation, and the use of site layout and levels to reduce impacts on surrounding areas. Although the area defined by the A47 to the north, Necton to the west, Ivy Todd Road to the south and Great Wood to the east is not extensive, there is sufficient space in terms of landscape capacity to accommodate the onshore project substation and National Grid substation extension. This is partly due to the extent of existing and establishing enclosure along the A47 and Ivy Todd Road and the lower elevation of Necton. These factors reduce the extent to which the onshore project substation and National Grid substation extension would be visible and therefore also their influence on surrounding visual receptors.

In terms of concerns regarding the elevation of the site, the following points must be considered. The National Character Area in which the onshore project substation and National Grid substation extension are located is Mid Norfolk. This landscape is characterised by its 'broadly flat, rural landscape'. The landform is gently undulating with only subtle variations in elevation. The onshore project substation is located on a plateau at an elevation of approximately 70m. The landform falls away into a steep sided valley to the west, taking the elevation down to a low of 55m. To the south the landform falls away more gradually towards the River Wissey. The landform to the north rises to 80m around Wood Farm before falling away further north. To the east the landform rises gradually to the high point of Bradenham Hill (95m AOD). The site is therefore contained by rising landform to the north and east and moving the onshore project substation in either of these directions would increase its elevation. To move the onshore project substation south would reduce its elevation but bring it closer to visual receptors associated with Ivy Todd and Ivy Todd Road. To move the onshore project substation to the west would reduce the elevation but would also give rise to the complication of constructing a level footprint in a steep valley landform and would involve a major operation of cut and fill earthworks. This would notably alter the landform of the local landscape and could potentially require engineered solutions such as retaining walls. In contrast, the plateau, where the onshore project substation site is currently located, offers a naturally level area and although earthworks would still be required to accommodate the footprint, these would be markedly less than if the site were moved into the valley. Topographical survey data for the area surrounding the onshore project substation was submitted into the examination by the Applicant in response to the first written questions at Deadline 1 – Appendix 20.2 in response to Q20.25 (ExA;WQApp20.2;10.D1.3).

The onshore project substation benefits from relatively substantial existing hedgerows and woodland blocks within the local area (Great Wood, Necton Wood), which provide a level of mitigation of landscape and visual effects from the outset and will be strengthened with planting proposals during construction to ensure robust screening. Consideration was also given to locating the onshore project substation away from settlements, roads and paths.

	<p>Norfolk Vanguard has also committed to incorporate effective, appropriate and suitable screening and planting to reduce landscape and visual impacts as well as any indirect impacts on the setting of heritage assets (see OLEMS document reference 8.7).</p> <p>The field surveys conducted by the Applicant during the pre-application process assisted the iterative site selection process by highlighting actual visibility and prominence of the sites and the sensitivity of surrounding receptors. This is detailed in ES Chapter 4 (document reference 6.1.4).</p>
<p>Onshore Project Substation</p> <p>The ExA asked questions regarding mitigation measures and planting at the onshore project substation, and how the existing ground levels are determined.</p>	<p>Extensive landscape planting will be implemented on the sites of the onshore project substation and the National Grid substation extension, and around the new A47 junction at Spicers Corner, to mitigate localised effects. Planting would comprise mostly woodland planting that would grow to screen or partially screen this infrastructure. Effects on road users would be mitigated within the first 10 years of operation, and effects on walkers on Lodge Lane and local landscape character within 20 years. The effects on road users on Ivy Todd Road would be mitigated within 25 years, however the limited extent to which this view is experienced by road users moderates this effect.</p> <p>Mitigation planting associated with Dudgeon Offshore Wind Farm (Dudgeon) substation has already been implemented around the existing National Grid substation, as well as in an extended area along the A47. While small areas of Dudgeon's mitigation planting would need to be removed in order to implement the new A47 access and the National Grid substation extension for Norfolk Vanguard, overall a net gain in the quantity of mitigation planting will be achieved. The presence of the Dudgeon planting and the advanced stage it will be at by the time the National Grid substation extension for Norfolk Vanguard is constructed would be a notable advantage in the mitigation of landscape and visual effects. There are however opportunities to extend and enhance the existing planting provision. Mitigation measures for the National Grid substation extension have looked to integrate with the existing provision whilst working to reduce visibility from visual receptors which previously had been less notably affected.</p> <p>The mitigation planting for Norfolk Vanguard will be designed to comprise a mix of faster growing 'nurse' species and slower growing 'core' species. The core species would comprise a mix of preferred native, canopy species that would outlive the nurse species and characterise the woodland structure over the longer term. It is anticipated that the growth rate of these species would be on average 250mm per annum. The nurse species would be faster growing and shorter-lived, providing shelter to bring on the canopy species. The mix would contain nurse species such as alder, birch, and pine, with average growth rates of 350mm per annum and core species such as oak, beech and horse chestnut, with average growth rates of 250mm per annum. It is anticipated that 5m to 7m growth would take 20 years and the nurse species would have reached approximately 7.25m to 9.75m (assuming planting height of 1m) after 25 years. The nurse species would be sufficiently fast growing to provide substantial screening of the onshore project substation after 20 years. The extent to which this planting would screen the onshore project substation and National Grid substation extension over time would vary depending on the location of the viewer, with viewers at lower elevations typically having their views screened at an earlier date to those at higher elevations, for example Lodge Lane compared to the Top Farm access on the A47.</p>

	<p>The EIA has been based on a worst case scenario including the assumption that advanced planting ahead of onshore construction would not take place. This is because the detailed operations of constructing the site are currently unknown. As per the Applicant's response to Written Representations (ExA; WRR; 10.D2.2), the Applicant notes the advantages of implementing advanced planting; where advanced planting can be achieved (in areas not affected by the construction works), this would commence in 2020 (based on the indicative programme outlined in ES Chapter 5 Project Description (DCO document 6.1.5)) which will provide a minimum 3 years of growth prior to commencement of operation which equates to approximately 1.2m of additional growth. Once detailed plans for the construction process emerge, those areas that are safe to be planted without future disturbance will be identified and planting implemented.</p> <p>The potential for a small earthworks bund, up to a maximum height of 2m, has been included along the western edge of the onshore project substation in order to give the mitigation planting a higher base level and help reduce the required time to mitigate the potential effects. Bunding is not an intrinsic feature of the local landscape character and would appear out of character if used extensively around the site. For this reason it has been included along the western edge of the onshore project substation only. The assessment undertaken is not reliant on the inclusion of the earth bund, but it would help to give an incremental increase to the overall height of screening along this sensitive boundary.</p> <p>With these measures in place potential impacts to landscape and visual amenity will be appropriately minimised.</p>
<p>Hedgerow removal and replacement planting</p> <p>NNDC raised concerns about hedgerow removal and the (5 year) timeframe for replacement planting</p>	<p>A suite of mitigation measures for landscape and visual impacts is presented within the OLEMS (document reference 8.7) as secured through DCO Requirement 24. This includes commitment to minimising hedgerow and tree removal where possible; using predominantly native and indigenous species for replanting; reinstating all hedgerows affected where possible; and ensuring that mitigation planting is designed to screen the project from the most sensitive receptors. Finalisation of the detailed location for the onshore cable route would look to minimise hedgerow and tree losses wherever practically possible. The OLEMS highlights plans to implement a five year replacement plan to ensure failed plant stock is replaced within the first five years post-planting. This time period for replacement planting reflects the industry standard and covers the critical initial period during which the majority of plant failures would occur. In relation to NNDC's specific local authority area, the Applicant noted that replacement planting in this area would be limited to hedgerows only. On this basis, 5 years of post-planting monitoring is considered to be appropriate across the entire route and, in particular, for planting within NNDC's boundary.</p> <p>Indicative mitigation planting and removals are shown in ES Chapter 29 Figures 29.9 – 29.12 and will be secured through DCO Requirement 18 (Provision of landscaping) and Requirement 19 (Implementation and maintenance of landscaping). The final Landscape Management Scheme will be consulted on and agreed with the relevant planning authority and Natural England. This will include more detailed planting plans designed in response to local variations in conditions across the site, for example soil type and quality, slope and aspect, hydrology (for example potential for water-logging), micro-climate (for example frost pockets and wind tunnels), and existing ecology, especially utilising species that thrive in this local area.</p>

AGENDA ITEM 7 (Historic Environment)	
<p>Engagement with Historic England</p> <p>The ExA asked Historic England to confirm whether they accept the conclusions in the Errata (document reference: Pre-ExA; Errata; 9.4) and also asked the Applicant for an update on discussions regarding the submission of the written scheme of investigation and the timeframes for approval (in view of Historic England's Written Representation).</p>	<p>The Applicant welcomes Historic England's agreement on the approach to the impact on the Church of St Andrew and the Applicant agrees that no further mitigation is needed given the distance of the church from the onshore project substation.</p> <p>In relation to the wording of the Written Scheme of Investigation at Requirement 23 and Condition 15(2) of the Generation Deemed Marine Licence (DML) (Schedule 9-10) and Condition 10(2) of the Transmission DMLs (Schedules 11-12), the Applicant is open to discuss matters further with Historic England.</p>
AGENDA ITEM 8 (Land use and recreation)	
<p>General update</p> <p>The ExA requested an update on discussions between the Applicant and those with farming interests.</p>	<p>The Applicant has been engaging with affected land interests since late in 2016. Negotiations were initially concerned with survey access over a wider onshore cable corridor as shown in the PEIR, and engagement continued into 2017 when a more refined corridor was defined.</p> <p>Land referencing forms were issued to all known land interests in March 2017 and were followed by multiple rounds of correspondence inviting landowners to meetings to discuss the proposals. Land referencing forms were accompanied by the first version of The Land Pack; a Landowner Information Pack developed and provided to landowners in June 2017 and uploaded to the 'Landowner' Section of the project website as a publicly available document at the point of issue. The Landowner Information Pack (Version 1) can be seen in Appendix 13.19 to the Consultation Report (document reference 5.01). This document was updated and reissued to landowners in March 2018 to contain some further common concerns raised through landowner meetings. This document contained 34 FAQs, along with various photographs and diagrams to assist with the clarity of the answers.</p> <p>By the end of 2017, Vattenfall's land agents had met with approximately 90% of affected interests and their representatives. In early 2018, Vattenfall's Land Manager commenced discussions with the lead representative of the LIG over the draft Heads of Terms (HoTs). In the preparation of the template HoTs, over 40 rounds of communication, including meetings, phone calls and emails were conducted between the Applicant's Land manager and the LIG group led by Jane Kenny of Savills to reach agreed HoTs. The HoTs were in an agreed format by May 2018 and issued to the majority of landowners affected by the Order limits. At the point of DCO submission in June 2018 approximately 40% of the HoTs had been signed. At the current time (February 2019) just over 70% of landowners have now signed HoTs.</p> <p>Throughout the informal consultation process key local members of the National Farmers' Union (NFU), Country Land and Business Association Limited (CLA) and two local groups of the Central Association of Agricultural</p>

	<p>Valuers (CAAV) were provided with regular updates regarding the project (this correspondence was through Consents Solutions on behalf of the Applicant). Please refer to table 13.10 in the Consultation Report.</p> <p>Discussions are currently ongoing with the NFU with regards to their Relevant Representation and a Statement of Common Ground (SoCG) has been prepared between the Applicant and the NFU (Rep1 - SOCG - 5.1). A meeting was held on 24 January 2019 between the Applicant, NFU and the LIG representative, Jane Kenny, to discuss the SOCG and to continue to seek resolutions to the outstanding concerns. Discussions are on-going and an updated SoCG will be provided at Deadline 4.</p> <p>The Applicant continues to liaise with those landowners for which signed HoTs are outstanding and the Applicant's land agents remain willing to meet with any further affected land interest who has questions or concerns regarding the project.</p>
<p>Phasing</p> <p>The ExA requested an explanation of construction phasing and timeframes</p>	<p>In response to questions from the NFU, the Applicant explained the approach to the planned phasing of the Project. The Applicant has provided a Gantt chart of the construction programme at Deadline 1 (document reference: ExA; WQApp20.1;10.D1.3). In summary and as outlined in section 5.5.8 of Chapter 5 of the Environmental Statement (document reference 6.1.05), the main construction activities and sequence associated with installation of the onshore infrastructure are as follows :</p> <ul style="list-style-type: none"> • Pre-construction works (2020 – 2021): would be conducted to maximise the efficiency of the main construction works and mitigate potential programme delays. The works would consider the requirements of Norfolk Boreas (the Applicant's sister project) in order to minimise future disruption and would therefore cover an onshore cable route width of up to 45m. The main pre-construction activities include road modifications, hedge and tree netting/removal, ecological preparations, archaeological preparations, and pre-construction drainage. • Main duct installation works (2022 – 2023): trenched installation is estimated to progress at a rate of approximately 150m per week, operating out of 11 identified mobilisation areas with multiple work-fronts operating from each mobilisation area. This method allows for parallel working in order to achieve the 2 year programme across the cable route length. The sectionalised 150m advancements of each work-front aims to restrict impacts to a very local area for a short period of time (150m per week) compared to long lengths of trench being excavated and held open at any one time. During this period, the ducts for both Norfolk Vanguard and Norfolk Boreas are proposed to be installed to minimise overall impacts; this includes at onshore trenchless crossings which are estimated to be 8 weeks per crossing. During the 2022 to 2023 period, the landfall ducts for Norfolk Vanguard will also be installed. For a 1000m length, this is estimated to be 20 weeks in the worst case, although this could be shortened to 14 weeks if 24 hour working is employed. • Norfolk Vanguard Cable Installation (2024 – 2025): cables will be installed into the onshore ducts in up to 2 separate phases, namely 2024 and 2025. Where applicable, EIA assessments have also considered as a worst case the potential for both circuits to be completed in a single year, 2024.

	<ul style="list-style-type: none"> • Norfolk Vanguard OPS and National Grid Substation Extension (2022 – 2025): The main works for the OPS and associated National Grid substation extension, such as drainage, foundations and buildings, would be constructed within a 24 to 30 month period, in parallel with the duct installation programme (2022 – 2023). Onshore project substation plant (such as transformers and switchgear) would subsequently be supplied and installed in up to two phases during 2024 and 2025 in parallel with the Norfolk Vanguard Cable Installation. <p>The dates and periods noted are subject to change dependant on assumed consent granted for the project by the end of 2019 and for Norfolk Boreas by the end of 2020. The beginning of construction will be dictated by the award of a Contract for Difference (CfD) and subsequent Final Investment Decision made by Vattenfall for either or both projects.</p>
<p>Contract for Difference (CfD) and funding</p> <p>As a result of dialogue with the NFU, the ExA questioned the funding mechanism for the project and whether there was a reliance on CfD.</p>	<p>The Applicant acknowledges the ExA's observation that this matter will be considered as part of the Compulsory Acquisition hearing (on 29 March 2019). However, in the meantime, the Applicant can confirm that:</p> <ul style="list-style-type: none"> • In July 2018, the UK Government announced that the next CfD allocation round for less established technologies such as offshore wind will open in 2019 with 2 subsequent rounds in 2021 and 2023; • Subject to a successful DCO decision for Norfolk Vanguard (expected on or before 10 December 2019), the Applicant intends to bid into the earliest CfD allocation round, which is currently assumed to be 2021.
<p>AGENDA ITEM 9 (Socio-Economic)</p>	
<p>The ExA did not have any questions in this respect. NCC welcomed the notion of a community benefit fund and the possibility of an employment and skills plan.</p>	<p>The Applicant is committed to open engagement and liaison with NCC in relation to wider benefits related to the construction and operation of the Norfolk Vanguard project. However, the Applicant notes that consideration of any such benefits should fall outside of the DCO process itself.</p>

APPENDIX 1: THE APPLICANT'S LIST OF APPEARANCES

1. **John Houghton**, Senior Counsel, **Womble Bond Dickinson**; and **Victoria Redman**, Partner, **Womble Bond Dickinson**

Speaking on behalf of Norfolk Vanguard Limited:

- In response to the Examining Authority's questions and for general advocacy.

2. **Andrew Hardcastle** Senior Power Engineering Consultant, **GHD**; and **Rob Driver**, Grid Manager, **Vattenfall**.

Speaking on behalf of Norfolk Vanguard Limited on:

- The Norfolk Vanguard Project Presentation – Electrical systems and grid, key project decisions / changes, project programming and phasing
- Project design and alternatives
- Construction (where relevant)
- Public rights of way (where relevant).

3. **Andy Ross**, Technical Director Transport Planning, Royal HaskoningDHV (**RHDHV**)

Speaking on behalf of Norfolk Vanguard Limited on:

- Transport and highway safety
- Access arrangements to the onshore substation
- A47 crossing arrangements and sensitive junctions
- Cumulative impacts.

4. **Jon Allen**, Principal Environmental Consultant, **RHDHV**

Speaking on behalf of Norfolk Vanguard Limited on:

- Noise and other impacts during construction
- Cumulative impacts (where relevant)
- Code of Construction Practice
- Air quality, contamination, light pollution
- Public rights of way (where relevant).

5. **Dean Curtis**, Senior Acoustic Consultant, **RHDHV**; and **Alasdair Baxter**, Principal Acoustic Consultant, **RHDHV**

Speaking on behalf of Norfolk Vanguard Limited on:

- Noise and other impacts during construction.

6. **Jo Phillips**, Associate Landscape Architect, **Optimised Environments**

Speaking on behalf of Norfolk Vanguard Limited on:

- Landscape and Visual.

7. **Freddie Scadgell**, Principal Heritage Consultant, **RHDHV**

Speaking on behalf of Norfolk Vanguard Limited on:

- Historic Environment

8. **Peter Gibbard**, Director & Land Manager Consultant, **Ardent**; and **Pete Gettinby**, Land Manager, **Vattenfall**

Speaking on behalf of Norfolk Vanguard Limited on:

- Land use
- Update on discussion between Applicant and those with farming interests

9. **Rebecca Sherwood**, Consents Manager, **Vattenfall**; and **Ruari Lean**, Senior Development Manager, **Vattenfall**

Speaking on behalf of Norfolk Vanguard Limited on:

- Any other matters.