

From: [Louise Staples](#)
To: [Hornsea Project Three](#)
Cc: [Jane Kenny](#)
Subject: NFU and LIG submissions to the hearings from 3rd to 7th December 2018
Date: 14 December 2018 20:11:48
Attachments: [Orsted Open Floor hearing Monday 3rd December NFU LIG Final 14.12. 2018.pdf](#)
[Orsted specific hearing Friday 7th December NFU LIG final 14.12. 2018.pdf](#)
[Orsted specific hearing DCO Thursday 6 December NFU LIG 13.12. 2018 final.pdf](#)
[Orsted specific hearing Tuesday 4 December NFU LIG Final 12.12. 2018.pdf](#)

Dear Kay

Please find attached the written submissions on behalf of the NFU and LIG in regard to the following hearings:

Open floor hearing – Monday 3rd December 2018

Issue Specific Hearing – Alternatives and design flexibility – Tuesday 4th December 2018

Issue Specific Hearing – Draft Development Consent Order – Thursday 6th December 2018

Issue Specific Hearing – Other Onshore Matters – Friday 7th December 2018

Further two documents have been attached which go with the submission in regard to the hearing on Thursday 6th December 2018. The links to these documents have also been inserted in the submissions.

If you do need anything else please do contact me.

Kind regards

Louise

Louise Staples MRICS, FAAV

Rural Surveyor

NFU

Agriculture House

Stoneleigh Park

Stoneleigh

Warwickshire

CV8 2TZ

Direct line: 02476 858558

Fax: 02476 858559

Mobile: 07799384359

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**WRITTEN SUBMISSIONS OF NFU AND LIG REGARDING THE HORNSEA PROJECT THREE
OFFSHORE WIND FARM DEVELOPMENT CONSENT ORDER 201 [...]**

PLANNING INSPECTORATE REFERENCE NO EN010080

**SUBMISSIONS OF NATIONAL FARMERS UNION AND THE LAND INTEREST GROUP ON THE
ISSUE SPECIFIC HEARING – ALTERNATIVES/DESIGN FLEXIBILITY ISSUES ON 4th DECEMBER
2018**

DATE 14TH DECEMBER 2018

1. Introduction

- 1.1 Submissions on behalf of the National Farmers Union (“NFU”) and the Land Interest Group (LIG) in respect of the application for a Development Consent Order (DCO) by Orsted Hornsea Project three (UK) Limited for the Hornsea project Three Offshore Wind Farm. The NFU is making a case on behalf of its members and LIG its clients, who are affected by the DCO.
- 1.2 The NFU represents 47,000 farm businesses in England and Wales, and additionally has 40,000 countryside members with an interest in the farming and the country.

2. Alternatives and Design Flexibility

- 2.1 The NFU and LIG understands from the questions raised by Mr David Prentice the lead planning officer for the DCO examination to Orsted in regard to HVAC and HVDC that design flexibility is an issue. Orsted have highlighted that they need the application to go forward for both HVAC and HVDC cables. The reasons given by Mr Gareth Parker were as follows that DC is still a maturing technology, it is developing but not fast enough for them to be able to commit at this time for this project. Orsted would not want to put a date on when they thought it would be possible to make a decision on whether they could go HVDC. They believe there is still insufficient information in the market place and they raised an issue over suppliers stating that there are only two major suppliers for DC cables and so cost and timings is an issue. At the present time there is not enough competition and that HVDC has very high fixed costs. They stated that systems are well understood for HVAC over long distances, as for this project and that Orsted is very experienced. The lead in time for HVAC cables is likely to be 3 years where as the lead in time for HVDC will be longer as depends on suppliers.
- 2.2 NFU and LIG were pleased that the Examining Authority at the hearing made it clear that Orsted are applying for Compulsory Acquisition rights for two phases and therefore must be certain that Phase 2 will happen.
- 2.3 NFU and LIG understands that Orsted, in regards to funding, explained that under the Contracts for Difference it was not certain the required level of funding could be secured at the same time for both phases due to capping. The capping provisions are not clear. A range of bids will be put forward for different designs and that the bids can reflect a different scale of project. It was confirmed that no bids can be put forward until the project has secured consent for the DCO. Therefore Orsted stated that the first opportunity to put in a bid would be May 2021.
- 2.4 Orsted raised the issue that some projects like the East Anglia One had applied for their DCO to cover HVDC cables and have since had to go back requesting a non-material change to the DCO to be able to take forward HVAC cables. Orsted believe that this created a time delay and they do not want to be in this position. They have stated that it is essential for the DCO to go ahead for both HVAC and HVDC cables.
- 2.5 It was highlighted that Vattenfall have made a commercial decision to take the Norfolk Vanguard and Boreas projects forward applying for HVDC cables and LIG very much believes that these projects are a very strong comparable. NFU and LIG are still unclear why Vattenfall is able to make this commercial decision but Orsted are not. LIG is also aware that National Grid have applied for planning to approve HVDC cables on the Viking Link Project in Lincolnshire a 1.4GW electricity link between Great Britain and Denmark. It is scheduled to be commissioned in 2023.
- 2.6 It was stated that a converter station will be needed no matter what size the cables for HVDC and Orsted highlighted that it would be possible to use HVAC cables on the first phase and then HVDC cables on the second phase. NFU and LIG do have concerns with this and raised issues over the amount of structures that would need to be built with HVAC and HVDC which include both a converter station and a substation, a booster station, along with multiples of link boxes and potentially a greater number of joint bays. The impact on land could be greater than first considered with the additional infrastructure.
- 2.7 NFU and LIG stated that there preference is for the DCO to be approved for HVDC cables onshore as this will mean that Orsted will take a narrower corridor through agricultural land for the laying of the cables as

the working width required is less. Further the final lease width is less at 40m. This reduces the impact on the farm businesses in the future as the restrictive covenants in place will be over a reduced area. We would like clarification as to why 40m is needed when the Norfolk Vanguard and Boreas projects for 3.6GW scheme requires a 20m easement. Also the need for link boxes for HVDC cables is far less with only 52 required instead of 440 with HVAC cables. Link boxes greatly interfere with agricultural operations on a day to day basis. They have to be sited within 10m of a joint box at the end of every cable run which will be approximately 800m long.

- 2.8 Norfolk County Council did state that their preference is for the DCO to go forward for HVDC cables as the cable width is reduced with less link boxes and so is less disruptive to land. Further if there is no need for a booster station then this would reduce traffic impacts.
- 2.9 North Norfolk District Council stated that their preference is that the DCO should be approved for one type of cable and not both HVAC and HVDC. They believe that HVAC cables will have a greater impact in the area due to the wider corridor required for the cables which will lead to a bigger impact on landowners and agricultural production. Further stated that a booster station is not required with HVDC cables.
- 2.10 NNDC also raised a policy issue in regard to EN3 at para 6.2.42 which allows for design flexibility where there is an unknown. They believe that Orsted do know about HVDC cables and that EN3 should not be used because something is more commercially favourable one way or the other. They believe that under EN3 elements have to genuinely be unknown and that this is not the case in regard to Orsted's understanding on HVDC cables. They believe this element needs to be addressed. They also clearly believe that of all the other projects highlighted by Orsted in Appendix 22: Table 2 on page 15 that actually Vanguard is the main comparison and should be considered.
- 2.11 South Norfolk District Council stated that they would prefer to see HVAC cables and it is the NFU and LIGs view that this is due to the impact that a converter station would have sited next Keswick Hall if the project goes ahead with HVDC cables
- 2.12 CPRE for Norfolk also stated that they favour the use of HVDC cables due to land take being 50% less than HVAC. They also mentioned the Rochdale Envelope and the flexibility that is available for DCO projects but that this is for unlikely and unforeseen events. They believe that with Orsted events are known.
- 2.13 The NFU and LIG is concerned that Orsted at the hearing were only prepared to state that they do have the ability to duct the cables which would remove the direct lay option. They also have not made a commitment to ducting. The NFU and LIG stated very clearly that they need Orsted to make a commitment to pre-duct. Further it was also stated by Orsted that even if they ducted the first phase that they may not be able to lay ducts for the second phase as the specification may change for the ducting due to different cable lengths and design.
- 2.14 In regard to Phasing of the projects Orsted made it clear that they do need a 3 year gap between both phases. The NFU and LIG are very concerned about this as Orsted have also made it clear that it will take at least 2 years to complete the each phase. This means that to complete both Phases Orsted will impact and disrupt the agricultural land for a minimum of 7 years. This length of time for land and agricultural businesses to be disrupted is far too long. This emphasises the importance that ducts must be laid not only for phase 1 but for phase 2 at the same time.
- 2.15 Orsted tried to state that compensation will be paid to landowners and that this will compensate for the disruption over the length of time the land is taken for. This is not the case, compensation in money terms will not be able to compensate for the disruption caused to top soil not being reinstated and a haul road left down for 7 years. This will cause severance within each field the route goes through and impact on the overall running of the business.