

Norfolk Vanguard Offshore Wind Farm

Implications of Updated Vibration Assessment Undertaken by Hornsea Project Three at Cawston

Document Reference: ExA; ISH4; 10.D6.7
Deadline 6

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Photo: Kentish Flats Offshore Wind Farm



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1 VIBRATION ASSESSMENT – B1145 CAWSTON

1. During the Issue Specific Hearing on Environmental Matters (ISH4) on 27 March 2019, the Examining Authority (ExA) requested an update from the Applicant regarding the updated vibration assessment that Hornsea Project Three has undertaken along the B1145 through Cawston (Link 34) and any implications this has for the Applicant's submitted Traffic Cumulative Impact Assessment (Action Point 10).
2. The Applicant undertook an assessment of potential vibration impacts associated with cumulative construction traffic for Norfolk Vanguard and Hornsea Project Three along the B1145 through Cawston (Link 34) within the Cumulative Impact Assessment (CIA) submitted at Deadline 5 (ExA; ISH1; 10.D5.3). This assessment identified two shared road links with potential significant changes in relative ambient background noise as a result of cumulative (Norfolk Vanguard and Hornsea Project Three) construction road traffic emissions; Link 34 and Link 68. These two links were then taken forward for an assessment of cumulative traffic related vibration.
3. At the time of writing the CIA, vibration monitoring data had been collected by Hornsea Project Three on Link 68 but was not available for Link 34. Within the Applicant's CIA submitted at Deadline 5, vibration monitoring on Link 68 was therefore used as proxy data for Link 34. Using this data the Applicant identified no significant residual impacts associated with construction traffic related vibration along Link 34 and on this basis, no mitigation measures were deemed to be required. The Applicant committed within the CIA to review the additional vibration monitoring data from Hornsea Project Three when available, to determine whether any additional monitoring is considered necessary.
4. Vibration monitoring data has subsequently been collected by Hornsea Project Three at four properties along Link 34 and an assessment of potential vibration impacts has been submitted to the Hornsea Project Three examination. The Applicant has reviewed this data and note that the recorded existing vibration levels along Link 34 are lower than the proxy data from Link 68 used within the Applicant's Deadline 5 submission. Predicted construction traffic vibration effects are calculated based on the baseline vibration experienced from existing vehicles. The current vibration effects are a function of the existing road surface and existing traffic. The vibration effects associated with the introduction of construction vehicles can be extrapolated based on the expected sizes and speeds of those vehicles in relation to the existing vehicle types. Therefore using the higher proxy values for the existing vibration experienced represents a worst case when this is used for the calculation of potential construction traffic vibration effects.

6. The Applicant can confirm that the updated vibration monitoring data collected along Link 34 does not change the findings of the noise and vibration impact assessment submitted at Deadline 5, i.e. no significant impacts are identified and no mitigation measures are deemed to be required. Hornsea Project Three similarly concluded no significant vibration impacts associated with cumulative construction traffic using Link 34.