

Norfolk Vanguard Offshore Wind Farm

Alternative Construction Traffic Routes at Cawston

Applicant's Comments on Deadline 6 Written Submissions: Appendix 2

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Photo: Kentish Flats Offshore Wind Farm



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1 ALTERNATIVE CONSTRUCTION TRAFFIC ROUTES - CAWSTON

1.1 Introduction

1. Cawston Parish Council has identified two possible alternative routes applicable for both Norfolk Vanguard and Hornsea Project Three to avoid traffic using the B1145 through Cawston (Link 34):
 - To use the Norfolk Vanguard onshore cable route between Cawston and the B1149 near Oulton to divert construction traffic and avoid use of the B1145 through Cawston.
 - To divert construction traffic off the B1145 and onto Heydon Road via an unclassified road to the west of Cawston

1.2 Road hierarchy

2. It is important to set out the planning processes undertaken by the Applicant that led to the selection of Link 34 (B1145) as a suitable haul route for the Norfolk Vanguard Project.
3. In the UK, a 'functional road hierarchy' was established in its current form in the 1960s to provide for the efficient movement of motor vehicles on the highway network (ref. Guidance on Road Classification and the Primary Route Network, 2012, DfT). The following four tier system is directed by the Department for Transport (DfT) for roads managed by a Local Highway Authority (LHA) :
 - **A roads** – major roads intended to provide large-scale transport links within or between areas.
 - **B roads** – roads intended to connect different areas, and to feed traffic between A roads and smaller roads on the network.
 - **Classified unnumbered** – smaller roads intended to connect together unclassified roads with A and B roads, and often linking a housing estate or a village to the rest of the network.
 - **Unclassified** – local roads intended for local traffic. The vast majority (60%) of roads in the UK fall within this category.
4. The LHA is responsible for managing all local classification decisions and an LHA is able to set their own policies if desired. The functional hierarchy informs policies relating to maintenance, spatial planning and traffic management; by definition A and B roads are subject to higher levels of service and less traffic restraints.
5. In their role as LHA for the Project, Norfolk County Council (NCC) have classified the High Street through Cawston as the B1145, a 'Main Distributor'. The Main Distributor sub-category indicates a route linking Primary Distributors (i.e. linking

significant settlements to A roads serving the County) and these are not subject to any restrictions on Heavy Goods Vehicles (HGV).

6. During the early stages of the onshore cable route option assessment, Norfolk Vanguard was cognisant of the NCC functional hierarchy and the Project was planned to maximise the use of A and B roads in order to minimise the impact on local communities. This resulted in the B1145 (Link 34) being selected as a route that was suitable to be assigned the HGV demand generated by the Project.

1.3 Proposal to divert construction traffic off the B1145 and along the Applicant's onshore cable route

7. The proposal by Cawston Parish Council identifies a portion of the Norfolk Vanguard onshore cable route between Mobilisation Area 6 (MA6) to the west of Cawston and the B1149 to the east of Cawston. Cawston Parish Council have suggested that if the Norfolk Vanguard running track along this part of the cable route was used by construction traffic (HGVs) from both Norfolk Vanguard and Hornsea Project Three that it would avoid the need for either project to use the B1145 through Cawston (Link 34) and therefore avoid the associated cumulative construction traffic impacts.
8. Link 34 is the proposed construction access route to MA6 from the B1149 to the east for Norfolk Vanguard. As part of the updated Cumulative Impact Assessment for the Project submitted at Deadline 5 (ExA; ISH1; 10.D5.3), potential traffic impacts along Link 34 have been identified should the peak construction traffic of Norfolk Vanguard (two weeks) coincide with the peak construction traffic for Hornsea Project Three.

1.3.1 Norfolk Vanguard Construction Methodology and Embedded Mitigation

9. Norfolk Vanguard is planning to install below-ground cable ducts along the length of the onshore cable route to facilitate the installation of export cables for both Norfolk Vanguard and Norfolk Boreas. This duct installation process involves the movement of materials (e.g. roadstone, sand and subsoil) to and from the proposed cable route. It is this duct installation stage of the construction process that involves the greatest number of HGV movements on the public road network for the Norfolk Vanguard project.
10. For the purpose of the duct installation process across the 60km onshore cable route, the onshore cable route has been divided up into twenty sections (see Figure 24.07 of Chapter 24 Traffic and Transport of the Environmental Statement) to maximise the ability for multiple work fronts to work concurrently and minimising the overall construction programme. Mobilisation areas provide the access points to the associated section of the onshore cable route from the public highway and are the base from which all works take place along a section of the route. All

materials, including roadstone for the construction of the running track, will be delivered via the mobilisation area. In most locations, including at MA6, the mobilisation area supports two work fronts, one installing ducts to the east (MA6-E) and one installing ducts to the west (MA6-W).

11. Duct installation will progress outwards from the mobilisation area, including associated running track establishment, at a typical interval of 150m per week.

1.3.2 Review based on Norfolk Vanguard proposed construction methodology

12. The Applicant has reviewed the proposal submitted by Cawston Parish Council in respect of the Applicant's proposed construction method and identified that it does not represent an appropriate alternative to the assessed route (Link 34).
13. The running track construction will progress outwards from MA6. The majority (~75%) of HGV deliveries along Link 34 to MA6 are associated with the construction of the running track (delivery of roadstone). These deliveries will have to take place before the section of the running track between the B1149 and the B1145 (the proposed alternative HGV route) can be completed. Therefore, the alternative route proposal would not be available to use as an alternative construction route during the period of peak construction traffic.
14. Furthermore, it is the Applicant's intention to remove sections of the running track as soon as possible upon completion of the duct installation works and assessments have been progressed on this basis. Therefore, the alternative route proposal would be removed once duct installation to the B1149 has been completed, resulting in the running track along the alternative route proposal being available for up to two weeks within the construction programme only.

1.3.3 Further Considerations of the use of the cable route to divert construction vehicles

15. The Applicant has further considered how the construction methodology in this location could be amended to facilitate the construction of the running track from the B1149 to MA6, prior to duct installation works, to implement the alternative route proposal.
16. The alternative route would require 2.8km length of the running track to be pre-constructed prior to MA6 and duct installation works and retained in place for 3-4 years if also used for Hornsea Project Three to mitigate cumulative impacts. The impacts and other considerations of this have not been assessed but would include:
 - Additional land outside the Order Limits would be required at the B1149 to accommodate a small mobilisation area to facilitate the construction of the running track from this location, rather than in a sectionalised manner from MA6. This

additional land would allow safe delivery and storage of materials and machinery to construct the running track and any junction works at the B1149. Any additional land and the impacts on that land have not been identified, assessed or negotiated with respective landowners.

- NCC has indicated that they would not accept any proposal to introduce a new access onto the B1149.
- The impacts to this cable route section would begin earlier in the construction programme and extend throughout the duct installation and potentially for up to 3-4 years if utilised by Hornsea Project Three to mitigate cumulative impacts. This is compared to the sectionalised approach which would require the running track to be constructed as works progressed out from MA6 and be removed approximately 24 weeks after works started for Norfolk Vanguard alone.
- This increased timescale for retaining the running track for 3-4 years would affect commitments for temporary crossings of sensitive watercourses (including blackwater drain), minimising sediment input within the River Wensum Special Area of Conservation catchment, flood risk (land drainage), hedgerow reinstatement, topsoil storage and land use restrictions.
- There are properties within 20m of the Order limits along this cable route section. Disturbance effects from the currently proposed construction method can be mitigated due to the short period that construction works would take place adjacent to each property (1-2 weeks). However, if the running track were retained for 3-4 years this would represent a significant change to the potential disturbance effect.
- The materials required to construct the running track in advance of duct installation would need to be delivered over a condensed period (compared to at a rate of 150m/week over 20-24 weeks in line with duct installation).
- The running track has been designed to accommodate the necessary construction vehicles serving each workfront (a specification of up to 300mm aggregate up to 6m width, reduced to 3m width at watercourse crossings, has been assessed). In order for the running track to support the required quantity of HGV movements for both Hornsea Project Three and Norfolk Vanguard on a daily basis, the running track would need to have a more robust specification to ensure longevity (for example it may need to be a different depth or material). This would require a greater volume of materials to be delivered and in turn an increase in the number of HGV movements for the purpose of running track construction, with resulting impacts on the local and wider road network. These impacts have not been assessed as part of the application.
- The construction approaches of both Norfolk Vanguard and Hornsea Project Three differ and would not support the use of a shared access. It is the Applicant's intention to remove sections of the running track as soon as possible upon

completion of the duct installation works, and to return the land to agricultural use. Assessments and land agreements have been progressed on this basis. Hornsea Project Three would require access between the B1145 and the B1149 for the duration of their onshore works which would extend the period post-construction of Norfolk Vanguard duct installation in which the running track is in place considerably. These extended timescale impacts have not been assessed as part of the application.

1.4 Divert construction traffic off the B1145 and on to Heydon Road

17. Heydon Road has been proposed by the Parish Council as an alternate route to potentially divert HGV traffic away from Link 34 via a lightly trafficked lane which links Heydon Road to the B1145 in Cawston. Both routes are unclassified.
18. The lane connecting the B1145 to Heydon Road is a single 2.5m wide carriageway stretching for approximately 2.5 km with no passing facilities. To facilitate HGV traffic the route would require significant improvements to the carriageway to accommodate the additional loading as well as frequent passing bays to ensure the construction vehicles and background traffic can pass.
19. The use of Heydon Road and the unclassified lane for HGV traffic would be counter to the planning principles established by NCC's functional hierarchy and it is considered the engineering works required on the lane connecting to Heydon Road to accommodate Norfolk Vanguard's traffic demand (and subsequent reinstatement) would be disproportional, recognising the B1145 as a viable route. It is reasoned that mitigation measures are better concentrated on Link 34 which will continue to function as a Main Distributor and that designs seek to explore legacy benefits to support the continuing functionality of the route. The Applicant also acknowledges NCC's concerns raised at Issue Specific Hearing 6 regarding the use of the lane between the B1145 and Heydon Road.

1.5 Conclusion

20. The Applicant has considered Cawston Parish Council's alternative route proposals in the context of suitability to the Applicant's proposed construction method. The Applicant concluded that the proposal does not align with the duct installation construction method proposed along the cable route, including the establishment of the running track in 150m sections as the duct installation progresses from MA6 in parallel workfronts to the east and west. The Applicant's construction method is identified as embedded mitigation throughout the onshore chapters of the ES to minimise a range of impacts, particularly minimising the amount of land being worked on at any one time and also the duration of works on any given section of the route.

21. The Applicant further considered other approaches to implementing the alternative route proposal, outwith the Applicant's proposed construction method, which would require the running track to be pre-constructed from the B1149 to MA6, prior to construction of MA6 and duct installation along this cable section. The Applicant concluded that pre-construction of this running track from the B1149 to MA6 would result in impacts throughout the cable section for a prolonged period. This is against the principle of the Applicant's embedded mitigation to minimise the amount of land worked on and duration of works on any given section of the route and further included the requirement for additional land not within the Order Limits. These impacts have not been assessed as part of the application.
22. In conclusion, as there is a viable route along the B1145, which is designated by Norfolk County Council as a Main Distributor Road, and the environmental impacts of the use of the B1145 have been assessed and suitable mitigation proposed. There is not considered to be a compelling case to progress the proposed alternative.
23. The Applicant does acknowledge the constraints through Cawston along Link 34 and the potential amenity impacts. The Applicant has identified a range of traffic management measures that are required to manage potential cumulative impacts along Link 34, including enhanced pedestrian facilities, managed parking and road safety measures, avoiding term time school drop off and pick up times, as well as managing cumulative peak HGV flows. A scheme of highway mitigation that would deliver the required measures has been proposed by Hornsea Project Three. Norfolk Vanguard is continuing to engage with Norfolk County Council and Cawston Parish Council to further understand whether further refinement to this scheme is required.