

**From:** [Hoque, Shamsul](#)  
**To:** [Norfolk Vanguard](#)  
**Subject:** Response to the Norfolk Vanguard ExA's Written Question Deadline 1  
**Date:** 16 January 2019 17:48:27  
**Attachments:** [Highways England Norfolk Vanguard Windfarm Written Statement 2019 Jan 16.pdf](#)

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16 January 2019

Dear Ms Ridge  
Lead Member of the Examining Authority  
Norfolk Vanguard Off-Shore Wind Farm

Please find the attached Highways England's response for this Norfolk Vanguard Off-Shore Wind Farm in relation to the Examining Authority's (ExA) Written Questions dated 19 December 2018.

Thank you.

Yours Sincerely

**Shamsul Hoque, PhD**

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Our ref: NORV- EN010079-01/19  
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16 January 2019

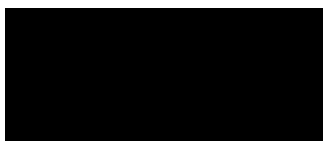
Dear Ms Ridge

**Norfolk Vanguard Offshore Wind Farm (EN010079): Written Statement**

I refer to your letter of 19 December 2018 regarding the above proposal and your invitation to submit written representations to the Examining Authority's (ExA) Written Questions as set out in Annex A by Deadline 1 (16 January 2019)

Highways England's responses are set out below and should be read in conjunction with the Statement of Common Ground between Highways England and Norfolk Vanguard which has been submitted to you by the applicant.

Yours sincerely,



Eric Cooper  
Operations (East) Spatial Planning Team Leader  
Email: eric.cooper@highwaysengland.co.uk

## **Norfolk Vanguard Off-Shore Wind Farm (EN010079)**

### **Written Statement by Highways England**

**16 January 2019**

#### **1.0 Introduction**

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Highways England (HE) have been invited (dated 19 December 2018) to provide written representations to the ExA's Written Questions for this project. The relevant questions to Highways England and our responses are set out below.

#### **Q 1. General**

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**WQ 1.2 – Please provide comments on any relevant information contained in the Change Report [AS-009] and Errata document [AS-010], and whether you agree with the conclusions reached by the Applicant. In the event that the amendments are accepted please indicate any consequential amendments which you require to the DCO.**

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The above changes relate to the Chapter 28 Onshore Archaeology and Cultural Heritage. Highways England does not have any comments in respect to these amendments.

#### **Q 11. Traffic, Transport and Highways Safety**

##### **General methodological questions**

**WQ 11.1 – (i) Do you agree with the methodology, baseline data, assumptions and predicted traffic movements used to assess traffic and transport impacts in Chapter 24 of the ES [APP-348]?**

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Baseline, Assumptions, Assessment Methodology and Forecasting

Highways England is content with the general methodology used to inform the traffic and transport impacts of the proposals on the Strategic Road Network (SRN). There are no specific points to raise which would affect the outcomes of the assessment or its associated mitigation.

**WQ 11.1 – (ii) Are you content with all mitigation and management measures set out in the Outline Traffic Management Plan [APP-032], the Outline Access Management Plan [APP-034], the Outline Travel Plan [APP-033] and the Outline Code of Construction Practice [APP-025]?**

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Highways England is not yet content with all the measures set out in the documentation and have raised a number of concerns relating to the layout and management of the access arrangements proposed:

- (1) on the A47 at Necton to gain access to the Necton National Grid Substation, the proposed Onshore Project Substation and the National Grid Overhead Line Modification works; and
- (2) on the A47 at Scarning to gain access to the work sites for the A47 cable crossing

These concerns are set out in AECOM Briefing Notes 1, 2 and 3 and in the email sent to the Applicant by AECOM dated 24 August 2018.

These concerns have been addressed in part by the Applicant through the submission of the A47 Substation Access Technical Note (SATN) and the A47 Substation Access Briefing Note (SABN). However, a number of issues remain and we understand that these are to be addressed during the first quarter of 2019 by the Applicant through the submission of two further documents: the A47 Substation Access Clarification Technical Note (SACTN) and the A47 Cable Crossing Access Technical Note (CCATN). Subject to the timely provision of this additional material, we anticipate being able to provide a positive response to the SACTN and the CCATN and, consequently, a definitive answer to this Written Question in advance of Deadline 4 on 13 March 2019.

**WQ 11.1 - (iii) Please identify any outstanding issues.**

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These are still a number of items yet to be resolved between Highways England and the Applicant. These matters largely relate to:

- The agreement of acceptable access arrangements for the works associated with the sub-station at Necton;
- The agreement of acceptable access arrangements for the A47 cable crossing at Scarning;
- The impact on the A47 junctions at Swaffham and Dereham of traffic displaced from these locations, should it be necessary to restrict any of the site accesses to left-in, left-out movements only.

In respect of the proposed substation access, the material submitted with the A47 Substation Access Briefing Note on 10 December 2018, did not provide sufficient confidence that the operation of the site access junctions proposed would be acceptable in terms of its impact on the safe and free flow of traffic using the A47. AECOM are in the process of providing advice to Highways England on this point, which we will share with the Applicant as soon as it is finalised.

In respect of the substation access, the following issues still need to be resolved:

- Confirmation of full compliance with relevant DMRB design standards for the layouts proposed at access option locations A, B and D1;
- Confirmation that the swept paths of heavy goods vehicles 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, which we understand are intended to be restricted to left-in, left-out movements only.

Highways England anticipate that these issues will be addressed in the forthcoming A47 Substation Access Clarification Technical Note (SACTN).

In respect of the A47 junctions at Scarning, which will be used by vehicles accessing the A47 cable crossing work sites via access points AC160 and AC161:

- The provision of detailed junction layout plans;
- Confirmation of compliance with relevant DMRB design standards;
- Confirmation that the swept paths of heavy goods vehicles 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 junctions in question;
- The extent of the existing levels of use of the junctions in question and the relative impact of traffic generated by the wind farm construction;
- Details of any traffic management arrangements to prevent conflicts occurring between vehicles entering and leaving simultaneously, so as to minimise the risk of a vehicle having to wait within the carriageway of the A47 to enter either of the side roads;
- The impact on the A47 junctions at Swaffham and Dereham of traffic displaced from this location, should it be necessary to restrict traffic using these accesses to left-in, left-out movements only.

Highways England anticipate that these issues will be addressed in the forthcoming A47 Cable Crossing Access Technical Note (CCATN).

**WQ 11.1 - (iv) Please indicate where a single HGV movement is defined or provide a definition of a single HGV movement.**

Highways England understand the phrase ‘single HGV movement’ to mean a one-way trip by an individual Heavy Goods Vehicle (HGV). The definition of a HGV is set out in the Department of Transport document ‘A simplified Guide to Lorry Types and Weights’ dated October 2003.

([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/211948/simplified-guide-to-lorry-types-and-weights.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/211948/simplified-guide-to-lorry-types-and-weights.pdf))

## **WQ 11.2 –**

### **(i) Are the existing traffic flows in ES chapter 24 table 24.8 agreed?**

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Highways England have no issues to raise with the traffic flows relating to the SRN links shown in Table 24.8.

There are a number of additional traffic surveys being undertaken by the Applicant's consultant in response to issues raised by Highways England. However, these relate to specific links and junctions affected by the substation and cable crossing access proposals and not to any of the links listed in ES Table 24.8

### **(ii) Are the link-based sensitivity receptors in table 24.9 agreed?**

Highways England have no issues to raise with the link sensitivity categories relating to the SRN links shown in Table 24.9.

## **Other Projects**

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### **WQ 11.6 – ES 24.7.7.3.3**

**(i) What is the current position (and likely timescale) of the A47 corridor improvement works? It is noted that it was anticipated that a DCO application would be submitted in summer 2018 (ES24.8.1.3, paragraph 388).**

The following four Road Investment Strategy projects along the A47 are currently under development.

#### **A47/ A11 Thickthorn Junction**

This scheme currently has a proposed construction start in March 2021, with a construction period of 20 months and is expected to open for traffic by November 2022.

#### **A47 North Tuddenham to Easton**

This scheme currently has a proposed construction start in 2021/22, with a construction period of 24 months, and opening to traffic by 2023/24.

#### **Blofield to North Burlingham A47 corridor improvement**

The scheme is at preferred route announcement stage and has a proposed construction start in spring 2020, with a delivery period of 28 months and open to traffic by 2022.

#### **A47 Great Yarmouth Junction Improvement**

The proposals are currently under review to take account of any impact arising from the proposed Great Yarmouth Third River Crossing, a scheme which links the enterprise zone and port area of the town with the A47 at Harfreys Roundabout. This scheme, promoted by Norfolk County Council, is currently subject to a Development

Consent Order application. Consequently, start of works and completion is currently subject to review.

**(ii) The A47 improvement works are outside the Applicant's control. If they do not take place, or are significantly delayed beyond the construction period for this project, what do you consider the impacts would be on the various receptors?**

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In the absence of the A47 Blofield to North Burlingham RIS scheme, there is a high risk of a minor adverse road safety impact at Cluster Site 12 (link 5) from the forecast increase in the flow of traffic (and, particularly heavy goods vehicles) along link 5.

Highways England are content that this risk should be addressed through the provision of additional 'queueing ahead' signage. Details of the signage can be agreed post-consent.

In the absence of the A47 Great Yarmouth Junction Improvement scheme or the Third River Crossing, there is a high risk of a minor adverse impact on congestion from the forecast increase in the flow of traffic (and, particularly heavy goods vehicles) along links 6, 9 and 10.

Highways England recommend that this should be addressed through the Traffic Management Plan, with the objective of minimising the flow of additional traffic through these junctions during peak periods

#### **WQ 11.7**

**(i) With regard to the road improvement scheme involving dualling of the A47 south of Lingwood Lane junction and the construction of a new junction at the B1140 what are the implications of the increased construction traffic on link 5?**

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In the absence of the RIS scheme, there is a high risk of a minor adverse impact on driver delay and road safety due to the predicted increase in flow of 1.6% in total traffic and of 28.1% in the flow of heavy goods vehicles on a link which will already be over its design capacity.

Once the RIS scheme is in place, the A47 dual carriageway link and the junction provided with the B1140 should have sufficient capacity to accommodate the predicted level of flow during construction of the wind farm.

**(ii) Would the provision of a 'Queueing Ahead' sign be sufficient mitigation in relation to the potential for construction traffic to escalate the identified pattern of rear end shunts at the A47/B1140 junction?**

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The impact of wind farm construction traffic is to increase the flow along the A47 at this point by 1.6% (total traffic) and 28.1% (heavy goods vehicles). No wind farm traffic is predicted to turn on or off the A47 to access the B1140 at this junction.

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There will therefore be no increase in the number of vehicles making the right turns which form the queues of traffic that relate to the collision cluster. There is a risk that the increase in flow along the A47 will make it marginally more difficult for right turning vehicles to complete their turn, however, given the scale of the increase predicted, Highways England are content that the provision of additional signage to alert approaching drivers to the risk of queueing traffic ahead is a proportionate response to the impact predicted.

**WQ 11.9**

**ES 24.7.7.3.7**

**Does the recently completed North Norfolk Distributor Road alleviate traffic congestion and problems at the A140/B1149 roundabout junction to the extent that a 147.5% increase in HGV traffic along links 36, 38 and 39 would not have a material effect upon highway safety and/or congestion?**

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This question is not related to Highways England's Strategic Road Network. We do not have any comment on this and suggest it be addressed to Norfolk County Council as Local Highway Authority.

**Impacts**

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**WQ 11.14**

**ES 24.7.7.3.8**

**Would the mitigation measures proposed by way of enhanced Traffic Management Plan measures to increase driver awareness be sufficient to mitigate the impact of development traffic in the form of a projected HGV increase of up to 50% along link 64?**

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The Link 64 is related to part of the A12 road, which is not part of the SRN. Highways England have no comment on this and suggest it be addressed to Suffolk County Council as Local Highway Authority..

**WQ 11.19**

**ES 24.7.7.3.9 and A47 Access Technical Note**

**(i) What are the implications of leaving confirmation of the onshore project substation access to post-consent consultations on the Outline AMP?**

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This is a matter under discussion.

Requirement for an Access Management Plan (AMP) and Traffic Management Plan (TMP) was identified.

An outline AMP (OAMP) (document reference 8.10) and outline TMP (OTMP) (document reference 8.8) have been provided as part of the DCO application.



The applicant has now provided indicative proposals in terms of the junction layouts proposed at site access options A, B and D1. These were received on 19 December 2018. Highways England are in the process of finalising our response to these, which will be issued to the applicant as soon as it is ready, with a view to having agreed a mutually acceptable access strategy in advance of Deadline 4 on 13 March 2019.

**(ii) Do you have a preference for option A, A1 or B in highway terms and if so, why?**

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Highways England have no particular preference for access options A, A1 or B on the basis of the information we have received to date. Access B appears the most likely to achieve a full compliance with relevant DMRB design standards for the provision of a central 'ghost-island' lane for vehicles turning right into the site access. Option A would have to be limited to use for left-in, left-out movements only.

Highways England's current understanding (based on information provided by word of mouth during a meeting held on 17 December 2018) is that the applicant's intention is to use both access point A (to gain access to the Necton National Grid substation) and access point B (to access the proposed onshore project substation).

In principle, this should be satisfactory, provided both access layouts meet relevant DMRB design standards, provide in full for the swept paths of heavy goods vehicles and that the use of access point A is restricted to left-in, left-out movements.

Highways England hope to reach a positive view on a specific access proposal in advance of Deadline 4 on 13 March 2019.