

Norfolk Vanguard Project EN010079 ref. 20012468
Norfolk Boreas Project EN010087 ref. 20022983

Dear Secretary of State,

I would like to take this opportunity to highlight the necessity of an independent design review of the combined Vanguard and Boreas substation projects.

It was broached by the examining authority of the Boreas application by asking the applicant and interested parties their opinion as to whether it would be prudent to include an independent design review. The applicant did not consider it necessary.

Considering the complications arising from the concerns over the cumulative effects of both projects, I feel it would provide much needed confidence in the project.

I present below references and links regarding the suggestion of an independent design review and examples of why one is needed.

The Norfolk Boreas ExA in their Fifth Round of Questions asked:

Q5.9.5.5 Breckland Council; Necton Parish Council; Holme Hale Parish Council; NSAG; the NFU and LIG; Landowners and Interested Parties with an interest in Necton.

Independent Design Review for substations.

In light of comments received at OFH2 [EV12-002] and OFH3 (Necton Session) [EV13- 011], the decision on Norfolk Vanguard, which gives greater certainty to Scenario 1, and the ExA's ongoing concern about the complexity and detail contained in post-consent approvals for R16 and R18, the resource constraints of Breckland Council and the statements in the NIC Design Principles, the ExA invited the Applicant to consider inclusion of an independent design review at an early stage in the post-consent design process for the substations area, including those for Norfolk Vanguard if appropriate. The Applicant has set out its reasons for not involving an independent design review but has committed to amending the DAS to include a design review at an early stage conducted in a local forum [REP13-018]. Do you: a) Agree that an early design review should take place? b) If so, do you consider it should be conducted in a local forum or as an independent design review – or both?

Q5.9.5.6 The Applicant; Breckland Council; Necton Parish Council; Holme Hale Parish Council; NSAG; The NFU and LIG; Landowners and Interested Parties with an interest in Necton.

Independent Design Review for substations.

The ExA is consulting on ways potentially to secure the input of an independent design review and invites without prejudice comments on inclusion of wording in the Design and Access Statement (DAS) and/ or the dDCO as follows: DAS [REP7-007, Para 67] The Applicant will engage with Breckland Council and at an early stage with an independent design review panel to review the mitigation and landscape proposals and the architecture of the convertor building of the onshore project substation, at the time when further detailed design information is available. This will be undertaken through the production of a Design Guide. AND [REP7-007, Appendix 1, first para] The Design Guide will be prepared by Norfolk Boreas Limited (the Applicant) and will combine input from specialist consultants and take on board findings as appropriate from the independent design review panel. This part of the Norfolk Boreas project will enable the team to undertake the detailed design of the onshore project substation and ensure that embedded mitigation is integral in this process. The Design Guide will be presented as an A3 document, and will combine text and figures to explain the proposals OR inclusion of additional wording at R16(3) to read: "The onshore project substation

must be constructed in accordance with the details approved by the relevant planning authority, which must also have been subject to an early independent design review.” OR Both the above.

9.6 Good design

Q5.9.6.1 Breckland Council; Necton PC

Provision for Design Review: Comment on the Applicant’s Position Statement Early Involvement of Design Review [REP13-018]. https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002383-NORB_EXQ5_FINAL.pdf pages 21, 22, 23.

Answers came back from:

Holme Hale Parish Council (HHPC)

Dear Examining Authority. I sincerely apologise for missing deadline 14 (25th August) and put forward the following responses in the hope that they might still be considered Q5.9.5.5. HHPC would like to see BOTH.. but our concerns remain that the applicant is still intending to defer until after consent is given. Q5.9.5.6 HHPC would like additional wording for ease of understanding “The Design guide should list all 9 notes of section III, Paragraph 7 (Design) of the Horlock rules and specify how each has been addressed in the design review”. This will demonstrate the established guidelines of the national Grid have been used. Q5.9.5.8 HHPC has no informed comment to make on this question Q5.16.0.1 HHPC would like to see at least a high level design review for the mitigation of the Necton substation, PRIOR to the decision by SoS of an obstructive condition that requires that design guide to be completed, reviewed and agreed with Breckland AND an independent forum, to ensure all design notes in the Horlock rules have been addressed. Best regards. https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002484-Julian%20Pearson_Redacted.pdf

Colin King.

Q5.9.5.5. I agree with the ExA, and also have concerns over Breckland Council's resource constraints hampering their ability to cope with the complex detail involved in post consent approvals R16 and R18. a) I agree that an early design review should take place. b) I consider the project is of such complexity and scale that findings should be sought from both a local forum, for local knowledge and an independent design review to find any technical oversights. As you are aware, I have concerns over the information provided by the applicant, on which to evaluate design requirements, therefore if an independent design review is provided with the applicant's information, this should be balanced with relevant interested parties' submissions to provide the independent design review with all the available, and most comprehensive information. Q5.9.5.6. If the inclusion of the independent design review for substations in the DAS,dDCO and at R16 (3) gives the review the most effect, then I consider it should be included in both. <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002417-DL14%20-%20Colin%20King%20-%20Deadline%20Submission.pdf>

Chris Alhusen.

5.9.5.5 & 5.9.5.6. Independent design review. No offense to the people who work at Breckland Council, but unfortunately, I have little faith in them acting in the best interests of the residents and affected parties. Whilst I am sure that they have dedicated people, this is a huge project for them to undertake. Breckland are both underfunded and understaffed, especially following the Covid 19 crisis. I would also not support this being done in a local forum as, from experience, local meetings with Vattenfall were not at all well run and have degenerated into irrelevant arguments almost immediately. I would strongly support the inclusion of an independent design review, and panel. If this were to go ahead, who would choose and appoint members of the review panel?

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002402-DL14%20-%20Chris%20Allhusen%20-%20Deadline%20Submission.pdf>

Necton Parish Council.

NECTON PARISH COUNCIL RESPONSE TO BOREAS PINS 5 th ROUND QUESTIONS Deadline: 25th August 2020 Q5.9.5.5. Independent Design Review for substations In light of comments received at OFH2 [EV12-002] and OFH3 (Necton Session) [EV13- 011], the decision on Norfolk Vanguard, which gives greater certainty to Scenario 1, and the ExA's ongoing concern about the complexity and detail contained in post-consent approvals for R16 and R18, the resource constraints of Breckland Council and the statements in the NIC Design Principles, the ExA invited the Applicant to consider inclusion of an independent design review at an early stage in the post-consent design process for the substations area, including those for Norfolk Vanguard if appropriate. The Applicant has set out its reasons for not involving an independent design review but has committed to amending the DAS to include a design review at an early stage conducted in a local forum [REP13-018]. Do you: a) Agree that an early design review should take place? b) If so, do you consider it should be conducted in a local forum or as an independent design review – or both? Necton Parish Council fully support an independent design review and would prefer it to any local forum(s) run by the applicant. We have experience of previous local forums held by the applicant. No discernible actions or changes happened as a result of local concerns raised or opinions given and therefore an independent design review would be our choice. Necton Parish Council will contribute to the best of our ability to any reviews or forums arranged by the applicant. Q5.9.5.6 Independent Design Review for substations The ExA is consulting on ways potentially to secure the input of an independent design review and invites without prejudice comments on inclusion of wording in the Design and Access Statement (DAS) and/ or the dDCO as follows: DAS [REP7-007,Para 67] The Applicant will engage with Breckland Council and at an early stage with an independent design review panel to review the mitigation and landscape proposals and the architecture of the convertor building of the onshore project substation, at the time when further detailed design information is available. This will be undertaken through the production of a Design Guide. AND [REP7-007, Appendix 1, first para]

The Design Guide will be prepared by Norfolk Boreas Limited (the Applicant) and will combine input from specialist consultants and take on board findings as appropriate from the independent design review panel. This part of the Norfolk Boreas project will enable the team to undertake the detailed design of the onshore project substation and ensure that embedded mitigation is integral in this process. The Design Guide will be presented as an A3 document, and will combine text and figures to explain the proposals OR inclusion of additional wording at R16(3) to read: "The onshore project substation must be constructed in accordance with the details approved by the relevant planning authority, which must also have been subject to an early independent design review." OR Both the above. Necton Parish Council (NPC) have been concerned throughout the examination process for both Vanguard and Boreas that the applicant has no intention of adequately mitigating the

infrastructure that is planned to be constructed at Necton. No costings have been produced for the mitigation requested by NPC, just a refusal. The phrase “... ensure that embedded mitigation is integral in this process... is something NPC have been asking for. The AND paragraphs is therefore our preference. However, NPC is still concerned that a design review will make recommendations that can be ignored by the applicant / Breckland Council. Is the ExA certain that this wording will ensure that all the independent design review recommendations will be implemented? Q5.9.5.8 Design and Access Statement and Outline Landscape and Ecological Management Strategy The Applicant will submit an updated DAS and an updated OLEMS at Deadline 14 (25 August 2020) at the same time as responses to these written questions. 1. a) You are requested to submit any comments you may have on the Applicant’s updated DAS and/ or the updated OLEMS at Deadline 15 (1 September 2020). 2. b) If you have any comments on the way the Applicant has interpreted the ExA’s questions above include these. 3. c) If you consider any wording needs changing provide suggested alternative wording. 4. d) If you think there are ongoing omissions set out what these are and how they can be remedied. Noted. Q 5.9.6.1 Provision for Design Review: Comment on the Applicant’s Position Statement Early Involvement of Design Review [REP13-018].

NPC understands but does not agree with the conclusions given in REP13-018. The applicant seeks to remove qualified independent design consultants from the review. This could limit their obligation to provide adequate embedded mitigation. In addition, the applicant’s response REP13-08 immediately removes the National Grid (NG) substation from the design review. NPC believe that mitigation of the highly visible and very reflective NG infrastructure is just as important as that for the enormous substations. The applicant has already responded that the NG equipment will not be painted or changed in any way from that already present in the Dudgeon substation which can be seen for miles. NPC would like mitigation of the NG infrastructure to be included in an independent design review, the implementation of whose recommendation in their entirety form a requirement of the Design and Access Statement. Q5.16.0.1 SoS Decisions and letters regarding other NSIPs The Applicant has set out its view on the implications on the Proposed Development of the Norfolk Vanguard decision and the SoS Hornsea Three letter [REP13-025]. Points were also made at ISH5 [EV14-004]. 1. a) Provide the ExA with any views you have which do not accord with the Applicant’s opinion as set out in the above document and particularly Appendix 2, which sets out the relevance of the SoS Norfolk Vanguard decision on the Proposed Development, topic by topic. 2. b) Any other matters arising as a result of the SoS Decisions and letters regarding other NSIPs, which you wish to draw to the ExA’s attention should be set out here, stating implications and actions you would wish to see. The applicant has avoided consideration of cumulative visual impact by splitting their wind farm DCO applications into two halves, Vanguard and Boreas. The applicant’s contention was that a) insufficient information was available for the Vanguard application so cumulative visual impacts could be ignored and b) that Boreas cannot come to different conclusions than Vanguard so must pass without additional requirements for mitigation of the cumulative visual impact. This is being challenged through the Judicial Review process which is currently at an early stage. If successful, NPC would like to ensure that sufficient mitigation controls are in place for Boreas. Necton Parish Council 21 August 2020 <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002412-DL14%20-%20Necton%20PC%20-%20Response%20to%20WQ.pdf>

Necton Substation Action Group.

Q5.9.5.5 Breckland Council; Necton Parish Council; Holme Hale Parish Council; NSAG; the NFU and LIG; Landowners and Interested Parties with an interest in Necton Independent Design Review for substations In light of comments received at OFH2 [EV12-002] and OFH3 (Necton Session) [EV13-011], the decision on Norfolk Vanguard, which gives greater certainty to Scenario 1, and the ExA’s

ongoing concern about the complexity and detail contained in post-consent approvals for R16 and R18, the resource constraints of Breckland Council and the statements in the NIC Design Principles, the ExA invited the Applicant to consider inclusion of an independent design review at an early stage in the post-consent design process for the substations area, including those for Norfolk Vanguard if appropriate. The Applicant has set out its reasons for not involving an independent design review but has ExQ5 11 August 2020 Responses due by Deadline 14: Tuesday, 25 August 2020 Page 22 of 31 ExQ5 Question to: Question: committed to amending the DAS to include a design review at an early stage conducted in a local forum [REP13-018]. Do you: a) Agree that an early design review should take place? b) If so, do you consider it should be conducted in a local forum or as an independent design review – or both? a) Yes we do agree. b) Both Thank you for asking. NSAG

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002390-DL14%20-%20NSAG%20-%20Response%20to%20WQ's.pdf>

My Problem with the noise limit.

The noise limit set is 35dB5mins, 32dB15mins.

[https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001736-Applicant's%20Comments%20on%20Relevant%20Representations%20\(Versions%201%20to%203\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001736-Applicant's%20Comments%20on%20Relevant%20Representations%20(Versions%201%20to%203).pdf) page 349

The agreed average baseline noise level is

28.4dB. <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001785-Applicant's%20comments%20on%20Deadline%205%20Submissions.pdf> page 24

This baseline level was arrived at by data from only 2 of the agreed 12 long term (1 week) monitoring points, and another point for 1

day. <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001785-Applicant's%20comments%20on%20Deadline%205%20Submissions.pdf> page 23

These are the agreed 12 monitoring points:

18. Onshore project substation measurement locations are detailed within Table 2.13 and are shown on Figure 25.1.1b and 25.1.1c. Table 2.13 Baseline noise monitoring locations – onshore project substation Receptor identifier Parish/ location X Y Nearest postcode SSR1* Necton 588486 309896 PE37 8HY SSR2* Necton 589787 309564 PE37 8JB SSR3* Bradenham 592046 310041 NR19 2JY SSR3 ALT** Bradenham 592331 310051 IP25 7RQ SSR4* Little Fransham 590955 311011 PE37 8JB SSR5 Little Fransham 588826 311107 PE37 8DL SSR6 Little Fransham 591717 311554 NR19 2JY SSR7 Little Fransham 589770 311296 NR19 2RQ SSR8 Little Fransham 589914 311696 NR19 2JW SSR9 Little Fransham 591060 311805 NR19 2JU SSR10 Bradenham 590741 309382 IP25 7QZ SSR11 Necton 588478 310811 PE37 8DL *Amended since methodology agreed due to access rights. **Additional measurement position added as it was more representative of the identified receptor location within the previously agreed methodology. 19. At SSR1, long term noise monitoring was conducted over a period of 24 hours (23/05/17 to 24/05/17) consisting of one-minute samples in order to gain a better spread of data throughout the period as a one week profile of 5 minute samples wasn't possible due to land access issues. <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000830->

[6.3.25.1%20Environmental%20Statement%20Appendix%2025.1%20Baseline%20Noise%20Survey.pdf](#)

page9

page 10, 11 shows the results gained from just 2 sites + 1 site for a day.

The applicant and Breckland Council considers this adequate as this is the same noise limit as set for the Dudgeon substation, and that has worked

successfully.<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001785-Applicant's%20comments%20on%20Deadline%205%20Submissions.pdf>

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The problem is, the nearest sensitive receptor to Dudgeon is a house only 20m from the very busy A47 main road, causing its baseline noise level to be far higher than the 28.4dB of the closest sensitive receptor positioned in tranquil quiet Ivy Todd, 1.5km from the A47.

Data should have been gathered from the other 10 monitoring points, as it is very likely West End Bradenham would have been quieter than Ivy Todd.

I would like to refer to the Daedalus project Audible Noise Assessment document,

[REDACTED] where I notice they have used earth bunding, and take the absorption properties into account conservatively before vegetation and soft landscaping establishes. This was thought necessary for a HVDC converter substation of 1000MW, where at Necton the combined scenario 1 capacity would be 3600MW.

The baseline background noise limit is a very important element, with regard to the impact on residents around the substation. This I feel has been set too lenient at 32dB at 750m from the substation. The Dudgeon's limit is 32dB at 450m, Orsted's Hornsea 3 Annex 8.4, fig 1.2 shows 32dB at 300m, and the Daedalu's limit is 30dB at 245m for comparison. A diagram in the Daedalus Audible Noise Assessment shows 27.5 dB at the first property (245m). These comparable figures, and the shortfall in the background noise monitoring results leads me to question whether this figure was derived with the due care, and the realised importance required.

Planning Noise Advice Document Sussex 2.2 Guidelines And Criteria 2.2.1. BS41442:2014. Page 11. states the noise limit should be set at the background noise level, or up to 10 dB below for specific sites, where a rating level below background is deemed appropriate, or noise creep could be a problem. I consider the quiet and tranquil nature of Ivy Todd and West End Bradenham demands a noise limit under the background level, not over, when compared to more normal urban or industrial areas for this type of development, even without the possible noise creep situation.

[REDACTED]

In Chapter 25 Noise and Vibration of the Environmental Statement, it states, National Planning Policy Framework, 2019

22. b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason;

<https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000411-6.1.25%20Environmental%20Statement%20Chapter%2025%20Noise%20and%20Vibration.pdf>

page 6

Breckland's Statement of Common Ground signs off all noise and vibration considerations as agreed. [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002043-Norfolk%20Boreas%20Statement%20of%20Common%20Ground%20with%20Breckland%20Council%20\(Versions%202\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002043-Norfolk%20Boreas%20Statement%20of%20Common%20Ground%20with%20Breckland%20Council%20(Versions%202).pdf)
pages 12, 13, 14 .

The applicant seems of opinion that they are positioning this project in an already industrial area because of the A47 trunk road.

157. The onshore project substation is located near Necton to the west of the town of Dereham. The A47 is a heavily trafficked major trunk road through Norfolk (see Chapter 24 Traffic and Transport for more details) and therefore contributes substantially to existing background noise levels in the area, particularly at the properties closest to it. The area is generally rural in nature with Necton containing the largest concentration of residential properties. Smaller villages and individual residential properties are also located within the study area. Identified NSRs are detailed in Table 25.26. <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000411-6.1.25%20Environmental%20Statement%20Chapter%2025%20Noise%20and%20Vibration.pdf> page 46

In fact to the south of the construction the nearest hamlets of Ivy Todd and West End Bradenham are very quiet and tranquil, a feature valued by residents and visitors using one of the camp sites, holiday lets or B&Bs. In fact they are putting a totally industrial construction with just the buildings equalling 8 Angels of the North, in a totally green and rural area, potentially changing the character of the area, and they gloss over this to minimise the mitigation needed.

My Problem with the visualisations

I am sure the visualisations of viewpoints 3 and 7 are not representative. Virtually all my submissions through the Boreas examination show the inaccuracy. The applicant maintains they have been prepared to a known industry standard.

The only representations of the substations are these photo montage visualisations.

The applicant explains pages 349 350 Comments on Relevant Representations :

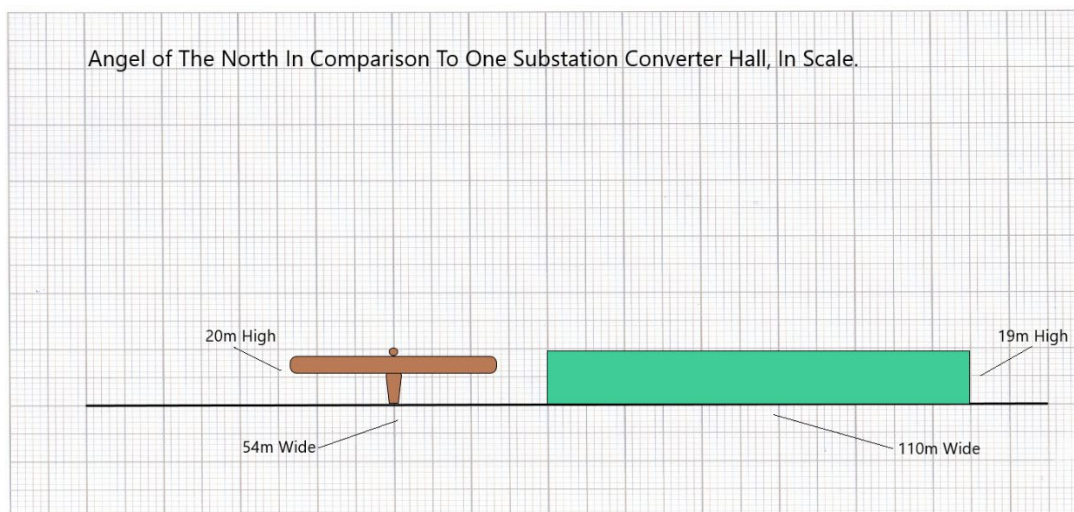
A 3D model of the onshore substation has been used to give an indication of what the substation will look like and a blue dotted box represents the Rochdale envelope, within which the substation elements can move. By showing the blue Rochdale envelope alone, we may overestimate the extents to which the development could be visible. By showing just the substation model alone, we may underestimate visibility. Hence, the use of both techniques in the visualisations. [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001736-Applcants%20Comments%20on%20Relevant%20Representations%20\(Versions%202\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001736-Applcants%20Comments%20on%20Relevant%20Representations%20(Versions%202).pdf)

This admits the visualisations are a representation of a probable underestimation of the scale of the converter buildings and a blue dotted box represents how large they could possibly be. This is not clearly explained, and is therefore very misleading.

As an example [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000684-](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000684-6.2.29.25%20Environmental%20Statement%20Figure%2029.25%20Scenario%201%20-%20Viewpoint%203%20Lodge%20Lane%20north.pdf)

[6.2.29.25%20Environmental%20Statement%20Figure%2029.25%20Scenario%201%20-%20Viewpoint%203%20Lodge%20Lane%20north.pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-000684-6.2.29.25%20Environmental%20Statement%20Figure%2029.25%20Scenario%201%20-%20Viewpoint%203%20Lodge%20Lane%20north.pdf) Demonstrates there is no explanation of the blue dotted box on the visualisation and no way of knowing that the buildings could be that big, It also shows by representing the buildings as an underestimation, but they could be as big as the blue dotted box, that this massive variance makes the visualisations pretty useless.

This scale diagram shows the 4 converter halls alone of Boreas/Vanguard would be equivalent to 8 Angels of The North.



Drainage from the substation site.

The design of the water attenuation system needs reviewing. Dudgeon substation already drains its runoff into the little stream that runs through Ivy Todd which historically floods so it is imperative that they get the design correct in the first instant.

Thank you for your attention,

Yours sincerely Colin king.