

CAA Consultation Assessment

Title of airspace change proposal	Norfolk Vanguard and Norfolk Boreas Windfarms
Change Sponsor	Vattenfall Wind Power Limited (NATS)
Project Reference	ACP-2018-03
SARG Lead	██████████
Case study commencement date	02 March 2021
Case study report as at	10 March 2021
<p><i>Instructions</i></p> <p>In providing a response for each question, please ensure that the 'status' column is completed using the following options:</p> <ul style="list-style-type: none"> • YES • NO • PARTIALLY • N/A <p>To aid the SARG Lead it may be useful that each question is also highlighted accordingly to illustrate what is:</p> <p>resolved YES not resolved PARTIALLY not compliant NO</p>	
<p>Executive Summary</p> <p>This regulatory assessment concerns the consultation undertaken by Vattenfall who intend to develop two offshore wind farms, 47 kilometres (km) (25.4 Nautical Miles (NM)) off the Norfolk coast. These wind farms will each contain up to 180 Wind Turbine Generators (WTGs), covering a combined area of approximately 1300 km². WTGs are known to interfere with Air Traffic Control (ATC) radars. This development has been identified as having the potential to impact the Cromer Primary Surveillance Radar (PSR). As such, a Primary Radar Mitigation Scheme (PRMS) is required to be in place prior to commencing construction of the wind farms. Previous offshore wind farm developments have explored a variety of options to mitigate the risk, with Range Azimuth Gating (RAG) (known commonly as radar blanking) implemented in previous developments, alongside a Transponder Mandatory Zone (TMZ). The PRMS which is proposed to be implemented is Cromer PSR RAG blanking of the entire area covered by the Norfolk Vanguard and Boreas developments with an associated TMZ.</p> <p>The Sponsor completed a 10 week targeted consultation aimed at aviation stakeholders, which presented Option D (simplified polygon TMZ "rubber banded" around proposed wind farm locations extended to include a 2 NM buffer) as the preferred option to provide safe and effective mitigation against the radar issues associated with the radar detection of WTGs. Option D was the only option carried forward for</p>	

consultation. The *'do nothing'* option was discounted as it would not meet planning consent conditions but was included for comparison purposes only.

A total of 13 responses were received during the consultation exercise, with 8 responses confirming their *'SUPPORT'* for the proposed airspace change (62%) and 5 have *'NO COMMENT'* (38%). No respondents categorised their level of support for the proposed change as *'AMBIVILANT'* or *'OBJECT'* and no modifications were made to the airspace design following consultation.

The fundamental principles of effective consultation are targeting the right audience, communicating in a way that suits them, and giving them the tools to make informative, valuable contributions to the proposal's development. I am satisfied that these principles have been applied by the Sponsor before, during and after the consultation. I am also satisfied that the Sponsor has conducted this consultation in accordance with the requirements of CAP 1616 and that they have demonstrated the Government's consultation principles and the Gunning Principles.

PART A – Summary of Airspace Change Process to date

A.1		
A.2	Stage 1 DEFINE Gateway	24/04/2020
A.2.1	The required documentation was presented on time and we were satisfied that the change sponsor had met the requirements of the Process up to that point. Progress to the next Step of the Process was therefore approved.	
A.3	Stage 2 DEVELP & ASSESS Gateway	28/08/2020
A.2.1	The required documentation was presented on time and we were satisfied that the change sponsor had met the requirements of the Process up to that point. Progress to the next Step of the Process was therefore approved.	
A.3	Stage 3 CONSULT Gateway	30/10/2020
A.3.2	The required documentation was presented on time and we were satisfied that the change sponsor had met the requirements of the Process up to that point. Progress to the next Step of the Process was therefore approved.	
A.4	Stage 4 UPDATE & SUBMIT	01/03/2021
A.4.1	The change sponsor formally submitted their proposal, which included all of the required documentation.	

PART B – Consultation Assessment		
B.1	AUDIENCE	
B.1.1	Did the consultation target the right audience?	YES
	<p>Given the Level (2B) and scope of this Airspace Change Proposal (ACP), whilst taking into consideration the stakeholders that are most likely to be affected, the Sponsor chose to undertake a targeted aviation stakeholder consultation; this approach is entirely proportionate and reasonable.</p> <p>The Sponsor provided a list of targeted stakeholders that they consulted with in their Formal ACP Submission document (Annex 15.2). All the stakeholders who were engaged with during Stages 1-2 were targeted and asked to respond to the consultation. The targeted stakeholder list included:</p> <ul style="list-style-type: none"> • NATMAC (National Air Traffic Management Advisory Committee) • Helicopter Operators (Babcock Helicopters, Bristow Helicopters, CHC Scotia, Heli Holland, NHV Helicopters, Maritime and Coastguard Agency) • Air Traffic Control (Aberdeen ATC, NATS En Route Ltd (NERL), Luchtverkeersleiding Nederland (LVNL), Maastricht Upper Area Control (UAC) • Airports (Humberside, Norwich) <p>As expected, the Sponsor did not target stakeholders whose primary interest is environmental impacts such as noise, visual intrusion, tranquillity or local air quality. However, the consultation was not exclusive to the targeted aviation stakeholders as any individual/organisation could submit a response.</p>	
B.1.2	Please provide a summary of responses below	
	<p>A total of 13 responses were received during the consultation period. Nine responses were submitted directly via the Airspace Change Portal (Citizen Space), three responses (British Gilding Association, Maritime and Coastguard Agency and NERL) were submitted via email to the consultation mailbox and one response was received from the British Microlight Aircraft Association by telephone. The email and telephone responses were manually uploaded to the Portal by the Sponsor. There were no responses from non-targeted stakeholders. Vattenfall had engaged and consulted directly with airline operators who were identified as being relevant carriers within the associated area of airspace via NATMAC; no consultation responses were received from airlines.</p>	

Of the 13 responses received, 8 responses confirm their '*SUPPORT*' for the proposed airspace change (62%) and 5 have '*NO COMMENT*' (38%). No respondents categorised their level of support for the proposed changes as '*AMBIVILANT*' or '*OBJECT*' and no modifications were made to the airspace design following consultation. This has been verified by reviewing the raw consultation responses via Citizen Space. Consultees were also invited to provide additional comments on their chosen category (*Support, No Comment, Ambivalent, Object*). The responses are summarised below:

SUPPORT

- Association of Remotely Piloted Aircraft Systems UK: Supports the TMZ because in the long term it will enhance safety in the area for both manned and unmanned aviation.
- Guild of Air Traffic Control Officers: Supports the implementation of a TMZ as described in the consultation but made no further comments.
- Norwich Airport Ltd: TMZ will have a negligible impact on Norwich Airport operations; all Norwich based North Sea Helicopters are SSR equipped and therefore will be able to comply.
- Bristow SAR: Azimuth Range Blanking, coupled with a TMZ, should mitigate the associated reduction in radar performance.
- Maritime and Coastguard Agency: Supports the Bristow SAR response but made no further comments.
- British Balloon & Airship Club: TMZ will have no impact on hot air ballooning.
- NATS - NERL: No impact on systems or procedures and therefore NERL supports the proposal.
- NATS - Aberdeen Offshore: In respect of the Anglia Radar ATC operation (which is provided by NATS Aberdeen - Offshore) they would be content with Option D, the provision of a TMZ to mitigate the blanking of Cromer PSR.

NO COMMENT

- NHV Helicopters Ltd: TMZs have little effect on commercial offshore traffic.
- Airfield Operators Group: Would be extremely surprised if the proposal will have any practical impact on GA given the location of the proposed TMZ.
- British Gliding Association: Proposed TMZ does not impact gliding operations, which do not extend that far out to sea.
- Defence Airspace & Air Traffic Management: MOD are content subject to the mitigation being approved, implemented and operational before erection of the WTGs as per the Condition of the development agreement.
- British Microlight Aircraft Association: Provided no additional comment.

B.2	APPROACH	
B.2.1	Did the change sponsor consult stakeholders in a suitable way?	YES
	<p>The Sponsor utilised the Airspace Change Portal (Citizen Space) functionality to consult with stakeholders and consequently their approach was aligned with the requirements of CAP 1616.</p> <p>Whilst the stakeholders identified by Vattenfall are considered to be technically minded and the language used in the consultation materials is clearly suited towards an aviation audience, the content is easy to follow and would be understood by non-technical individuals.</p> <p>In the consultation strategy, Vattenfall acknowledged that due to the COVID-19 pandemic, any engagement work would be done remotely via telephone/video conferencing and/or email, as opposed to any face-to-face meetings. Due to the difficult challenges facing the Sponsor and their stakeholders in these unprecedented times, this consultation exercise could only be held online. Given the target audience, the scope of the proposal and the responses received, it is reasonable to conclude that hosting the consultation solely online did not in any way undermine or affect the validity of the consultation exercise.</p>	
B.2.2	What steps did the change sponsor take to encourage stakeholders to engage in the consultation?	
	<p>The engagement activities conducted by the Sponsor during the 'DEFINE' and 'DEVELOP & ASSESS' stages of the airspace change process helped to ensure that the targeted set of stakeholders, who would be affected by this change, were both prepared and informed.</p> <p>The Airspace Change Portal (Citizen Space) acted as the primary public source where stakeholders were able to view and download the consultation document, along with supporting consultation materials and respond online.</p> <p>All targeted stakeholders were sent a notification email on 23 November 2020 informing them of the consultation launch. The email included a brief description of the proposal, the consultation start/end date and a link to the Airspace Change Portal (Citizen Space). Reminder emails were sent to all targeted stakeholders midway through the consultation (4 January 2021) and at the start of the final week (25 January 2021) to prompt stakeholders for a response and to achieve maximum stakeholder participation. This has been verified as the Sponsor has provided the raw email correspondence (outgoing/incoming) as part of their Formal ACP Submission.</p> <p>A link to the Airspace Change Portal (Citizen Space) was shared on the Norfolk Boreas/Vanguard and www.nats.aero websites. This has been verified through evidence supplied by the Sponsor.</p> <p>Postal requests for printed copies of the consultation document were to be accommodated providing that the request was</p>	

	received no later than fourteen days before the consultation closed. Due to the ongoing COVID-19 pandemic and in line with government guidance, staff are currently working from home and there is disruption to company mail deliveries. Stakeholders were therefore strongly encouraged to respond via the Airspace Change Portal (Citizen Space). Although there no were responses received by post, the Sponsor was right to offer this as it conforms to best practice consultation principles. Given the target audience involved, it is reasonable to suggest that these stakeholders have internet access and could respond via the Airspace Change Portal (Citizen Space).
B.2.3	Was the change sponsor required to respond to any unexpected events and/or challenges?
	NO
	The Sponsor's consultation strategy explained how they would respond to unexpected events and challenges, including escalation and extension plans. There is no evidence to suggest that Vattenfall had to take any actions/measures during the consultation period as a result of unexpected events and/or challenges. Vattenfall were mindful of the ongoing COVID-19 situation and would potentially extend the consultation deadline if necessary but this was not required. It would be fair to say that the consultation exercise went smoothly and as anticipated.
B.3	MATERIALS
B.3.1	What materials were used by the change sponsor during the consultation?
	<p>As documented above, the Sponsor utilised the Airspace Change Portal (Citizen Space) to create a related consultation site. The site included a narrative which provided an overview of the main aim/purpose of the consultation and clearly articulated the scope of it. A chart depicting the proposed wind farm developments with the associated TMZ was also included. The consultation document itself was embedded on the site and also available for download. Additionally, the Sponsor provided some useful related weblinks which included:</p> <ul style="list-style-type: none"> • Norfolk Boreas & Norfolk Vanguard website • CAA Policy and Guidelines on Wind Turbines • CAA Policy for Radio Mandatory Zones and Transponder Mandatory Zones • CAP1616 <p>The 17-page consultation document included the following sections:</p> <p>Overview: Scope and Purpose of this Consultation</p> <p>The Sponsor explained their intention to develop two offshore wind farms off the Norfolk coast and described how this development has been identified as having the potential to impact the Cromer PSR. As such, a PRMS is required to be in place prior to commencing construction of the wind farms. Stakeholders were informed how previous offshore wind farm</p>

developments have explored a variety of options to mitigate the risk, with RAG implemented in developments, alongside a TMZ. Stakeholders were invited to give their feedback on the Sponsor's proposal to establish a TMZ within Class G airspace.

Stakeholder Engagement

Signposted stakeholders to the Airspace Change Portal (Citizen Space) where they could download previous engagement material at Stages 1-2.

Justification and Objectives

According to the Sponsor, *"The objectives of this ACP are to ensure aviation safety, with no increased risk to an ATCOs ability to detect aircraft conflicts and to meet the planning consent condition for these wind farms development to enable their construction and realise significant environmental benefits by the generation of renewable energy"*.

Current Airspace – The “do nothing” Option

Presented a chart illustrating the current airspace within the North Sea (UK AIP ENR 6.25) and the proposed Norfolk Vanguard and Boreas developments. The 'do nothing' option does not meet the planning consent condition or the Design Principles thus the wind farm developments could not be constructed. It is included for comparison purposes only.

Proposed Airspace – TMZ Option D

Provided stakeholders with technical and operational information with a chart illustrating the proposed Vattenfall TMZ and the Norfolk Vanguard and Boreas Developments. The proposed wind farms are located within UK and Dutch airspace in the North Sea and at their closest the wind farms will be 47 km from the Norfolk coastline. Some UK Air Traffic Service (ATS) routes transit the windfarms location but will not be affected by this change as the vertical extent of the TMZ will reach FL100. The rationale for Option D TMZ being the preferred option is that the simplified TMZ boundary shape is advantageous from a Human Factors perspective which has been found to be effective in previous wind farm developments.

Predicted Scale of Impacts and Benefits of TMZ Option D

The Sponsor presented a summary of impacts and benefits of TMZ Option D and signposted stakeholders to the Final Options Appraisal.

Consultation Participation/Timeframe

Signposted stakeholders to the Airspace Change Portal (Citizen Space) with clear instructions on how to respond. A postal address was provided if stakeholders required a paper copy of the consultation document or if they wished to submit their response via post.

	<p>Reversion Statement Should the proposal be approved and implemented, it would not be possible to revert to the pre-implementation state without affecting NATS ATC operations. The proposed changes would be considered permanent unless a cost-effective alternative mitigation scheme is developed and proposed. In the unlikely event that there are unexpected issues caused by this proposal, then short notice changes could be made via NOTAM. For a permanent reversion, the changes would have to be reversed by incorporating this into an appropriate future AIRAC date to align with NATS' engineering updates; of which there are only four a year.</p> <p>Compliance with the Airspace Change Process Stakeholders could contact the CAA if they had any questions or comments regarding the Sponsor's conduct of the airspace change process.</p> <p>What Happens Next? Stakeholder were asked to give their feedback via the Airspace Change Portal (Citizen Space). Once the consultation is concluded, all feedback will be collated, analysed and the proposal will be updated accordingly before the Formal ACP is submitted to the CAA.</p> <p>Annex A: Glossary Annex B: List of stakeholders Annex C: Coordinates of Proposed Option D (preferred) Outer Boundary Annex D: Feedback Form for Postal Responses</p>	
B.3.2	Did the materials provide stakeholders with enough information to ensure that they understood the issue(s) and potential impact(s) on them?	YES
	The Sponsor clearly set out their rationale for pursuing an ACP in their consultation document. Vattenfall provided sufficient information to help stakeholders understand the current situation and determine what the likely impact of the proposal would be on them if it was approved and implemented.	
B.4	LENGTH	
B.4.1	Please confirm the start/end dates and the duration of the consultation below	
	Start date: Monday 23 November 2020 End date: Sunday 31 January 2021 Duration: 10 weeks	

B.4.2	If duration was less than 12 weeks, what was the justification?	YES
	Vattenfall produced a rationale in their consultation strategy for a reduced 10-week consultation as they considered this to be entirely proportionate for this ACP. This was due to the targeted stakeholders, the limited number of aviation stakeholders affected by the proposed change, the geographical location of the proposed wind farms and TMZ, as well as the lack of potential impact on non-aviation stakeholders. This was further justified by the pre-consultation engagement activities Vattenfall undertook with their stakeholders and the relative simplicity of the ACP itself. Vattenfall were confident that stakeholders were already in a well-informed position to respond to the consultation as they have had the opportunity to influence the designs in advance of the consultation. Mindful of the impacts caused by COVID-19 to the aviation industry, Vattenfall provided assurances that they would be flexible as the situation dictates and extend the consultation deadline if necessary.	
B.4.3	Was the period of consultation proportionate?	YES
	The CAA considered at the Stage 3 'CONSULT' Gateway that a 10-week consultation was entirely appropriate and proportionate for the level and impact of the change. The CAA was prepared to exercise some flexibility and in this instance were content to accept the rationale provided by Vattenfall. There is no evidence to suggest that a stakeholder expressed their concerns to either the Sponsor, or directly to the CAA, on the reduced consultation period or through a perceived lack of opportunity to respond. Stakeholders were responding from an informed position based on engagement undertaken at Stage 1-2 of CAP 1616.	
B.5	GENERAL	
B.5.1	Was the conduct of the consultation aligned with the consultation strategy?	YES
	The consultation was aligned with the consultation strategy that was approved at the Stage 3 'CONSULT' Gateway.	
B.5.2	Has the change sponsor categorised the responses in accordance with CAP 1616?	YES
	Within the Step 3D 'Collate and Review Responses' document, the Sponsor has categorised the responses in accordance with CAP 1616 (see Appendix C, Table C2). The CAA has reviewed the consultation responses and accepts that Vattenfall has completed a fair, transparent and comprehensive review and categorisation of consultation responses; this exercise was completed on 22 February 2021.	
B.5.3	Has the change sponsor correctly identified all of the issues raised during the consultation and accurately captured them in the consultation response document?	YES

	After reviewing the raw consultation responses (downloaded from Citizen Space), the CAA is satisfied that the Sponsor has accurately identified and transposed the key themes and issues raised by consultees in the Step 3D 'Collate and Review Responses' document (see Table 1 and Table 2).	
B.5.4	Does the consultation response document detail the change sponsor's response to the identified issues?	YES
	The Sponsor considered that none of the responses (see B.1.2) require any amendment to the final proposed design as they did not contain any new information or suggestions.	
B.5.5	Is the change sponsor's response to the issues raised appropriate/adequate?	YES
	The Sponsor's response in determining that none of the consultation responses require any amendment to the final proposed design is both fair and justified. There was also no requirement for the Sponsor to produce a set of 'Frequently Asked Questions' in response to consultee feedback.	
B.5.6	Is the formal airspace change proposal aligned with the conclusions of the consultation response document?	YES
	Yes	
B.6	RECOMMENDATIONS/CONDITIONS/PIR DATA REQUIREMENTS	
B.6.1	Are there any Recommendations which the change sponsor <u>should try</u> to address either before or after implementation (if approved)? If yes, please list them below.	n/a
	Not applicable in this instance.	
B.6.2	Are there any Condition(s) which the change sponsor <u>must fulfil</u> either before or after implementation (if approved)? If yes, please list them below.	n/a
	Not applicable in this instance.	

B.6.3	Are there any specific requirements in terms of the data to be collected by the change sponsor for the Post Implementation Review (if approved)? If yes, please list them below.	YES
	<p><u>STAKEHOLDER OBSERVATIONS</u></p> <p>The change sponsor is required to collate related stakeholder observations (enquiry/complaint data) and present it to the CAA.</p>	
PART C – Consultation Assessment Conclusion(s)		
C.1	Does the consultation meet the CAA’s regulatory requirements, the Government’s guidance principles for consultation and the Secretary of State’s Air Navigation Guidance?	YES
	<p>The fundamental principles of effective consultation are targeting the right audience, communicating in a way that suits them, and giving them the tools to make informative, valuable contributions to the proposal’s development. I am satisfied that these principles have been applied by the Sponsor before, during and after the consultation. I am also satisfied that the Sponsor has conducted this consultation in accordance with the requirements of CAP 1616 and that they have demonstrated the Government’s consultation principles and that the consultation has:</p> <ul style="list-style-type: none"> • Taken place when the proposal was at a formative stage – Whilst the scope of this consultation was limited to a single option (TMZ Option D), the Sponsor encouraged stakeholders to provide relevant and timely feedback on the impact this proposal might have on their operations, and any mitigations they might suggest, supported by evidence where possible. The removal of other options (in this case the ‘do nothing’ option) did not remove the scope for formative feedback. • Presented the consultation material clearly and outlined the potential impacts that needed to be considered – Evidenced by the Airspace Change Portal (Citizen Space) consultation webpage which provided an overview of the proposal and clearly articulated the scope of the consultation. Also evidenced by the 17-page consultation document which set out the purpose/scope of the consultation, provided details on the current and proposed airspace operations and included the predicted impacts/benefits of TMZ Option D. This has allowed consultees to make informed decisions and give meaningful responses based on the material that they were presented with. • Provided a sufficient timeframe to allow considered responses – Evidenced by a 10 week consultation which was entirely appropriate and proportionate for the scale and impact of the proposal. The engagement activities conducted by the Sponsor during the ‘DEFINE’ and ‘DEVELOP & ASSESS’ stages of the Airspace Change Process helped to 	

ensure that stakeholders were both prepared and informed. The CAA accepted Vattenfall's rationale due to the limited number of aviation stakeholders affected by the proposed change, the geographical location of the proposed wind farms and TMZ, as well as the negligible impact on non-aviation stakeholders.

- **Taken into account the product of the consultation** – The Sponsor's response in determining why none of the consultation responses require any amendment to the final proposed design is both fair and justified. The output of the consultation has not witnessed any unexpected issues/concerns being raised by consultees, which is perhaps unsurprising given the proposal's offshore location and the anticipated minimal impact to stakeholders.

PART D – Consultation Assessment Approval

	Name	Signature	Date
Consultation assessment completed by (Airspace Regulator – Engagement and Consultation)	██████████	██████████	10/03/2021
Consultation assessment approved by (Manager Airspace Regulation)	██████████	██████████	21/06/2021