

**Minutes of Norfolk Boreas & Vanguard Wind Farms Assessment Meeting  
Held at CAA House, Kingsway on 4<sup>th</sup> October 2018**

<b>Present</b>	<b>Appointment</b>	<b>Representing</b>
██████████	AR <sup>1</sup> Case Officer (Chair)	CAA
██████████	AR ██████████	CAA
██████████	AR ██████████	CAA
██████████	Principal Airspace Regulator	CAA
██████████	AR	CAA
██████████	Airspace Change Specialist	NATS
██████████	Senior Consultant	Osprey

**CAA Assessment Meeting Opening Statement**

CAA noted that the Statement of Need was received in advance of the Assessment Meeting and confirmed that the documents would be published together with minutes of the meeting on the CAA website. CAA explained the purpose of the meeting and confirmed that the meeting was an Assessment Meeting and not a Gateway. The CAA reinforced that the sponsor was required to provide a broad description of their proposed approach to meeting the CAA's CAP 1616 requirements but the CAA was not deciding whether the proposed approach met the detailed requirements of the CAA's process at this stage. The purpose of the Assessment Meeting (set out in detail in CAP 1616) was broadly:

- for the Sponsor to present and discuss their Statement of Need,
- to enable the CAA to consider whether the proposal concerned falls within the scope of the formal airspace change process,
- to enable the CAA to consider the appropriate provisional Level to assign to the change proposal.

Additionally, the sponsor was required to provide information on how it intended to proceed to fulfil the requirements of the airspace change process and to provide information on timescales. Lastly, the sponsor was required to provide information on how it intended to meet the engagement requirements of the various stage of the airspace change process.

	<b>ACTION</b>
<p><b>Item 1 – Introduction</b></p> <p>Following a mandatory Health and Safety briefing the Chairman welcomed all attendees, led the introductions and then read the introductory statement above. NATS and Osprey explained their roles as representing Vattenfall Wind Power Ltd (Vattenfall).</p> <p>Vattenfall has engaged NATS Services Ltd to investigate the potential impact of the proposed wind farms on appropriate stakeholders (including NATS Enroute Ltd) and to provide advice for possible solutions and mitigations; as such NATS would lead on this project and not Osprey. The Chairman invited NATS to present some background slides in support of the Statement of Need previously submitted to the CAA on 17 August 2018.</p>	

<sup>1</sup> Airspace Regulator

<p><b>Item 2 – Statement of Need (discussion and review)</b></p> <p>A presentation was given by NATS to show the broad content of the Statement of Need and to help guide the discussion. The presentation informed the CAA about the two Vattenfall wind farm developments off of the coast of East Anglia.</p> <p>Vattenfall has conducted initial engagement with stakeholders as part of the Development Consent Order (DCO) process and has received an objection from NATS on the grounds of predicted interference of NATS radars from the Wind Turbine Generators (WTGs) and the subsequent impact on NATS ability to provide Air Traffic Services.</p> <p>The current ‘base case’ or ‘Do Nothing’ option was discussed as well as previous engagement activities and options for proposed future engagement and consultation in line with CAP1616, to explore design principle development.</p>	
<p><b>Item 3 – Issues or opportunities arising from proposed change</b></p> <p>The slide presentation outlined the current baseline with respect to air traffic operations and radar utilisation in the area of the proposed wind farms. The discussion then considered the potential aviation impacts caused by the introduction of the wind farms to aviation stakeholders and specifically to the Cromer Primary Surveillance Radar (PSR) and the requirement to mitigate impacts.</p> <p>The presentation highlighted that the introduction of the wind farms has the potential to introduce the following negative impacts:</p> <ul style="list-style-type: none"> <li>• The production of primary radar clutter leading to a potential reduction in safety when compared to today’s operation with a consequent likely reduction in the provision of ATS to mitigate this increased safety risk.</li> <li>• Potential ‘shadowing’ of radar return area.</li> <li>• Physical obstruction created by WTGs.</li> <li>• Reduced performance of Communication, Navigation and Surveillance (CNS) equipment in the vicinity.</li> </ul> <p>The CAP1616 process was considered, specifically with respect to pre-engagement already undertaken as part of the DCO process and the requirement of further engagement and formal consultation required by an Airspace Change Proposal (ACP). The CAA provided additional guidance on the distinction between engagement and consultation, particularly with respect to this stage of the process.</p> <p>Adjacent Air Navigation Service Providers (ANSPs) in the Netherlands were consulted during DCO engagement and had stated that the wind farms would have no impact. The CAA advised that a formal response would be sought during the formal consultation stage of the ACP.</p> <p>The potential impact of the proposed development upon the Ministry of Defence (MoD) was also discussed. CAA emphasised the requirement to consult with the MoD on the proposal; it was noted that if additional impacts are apparent, the solution to mitigate these may ‘piggyback’ off of any mitigation promoted by this proposal.</p>	<p><b>NATS</b></p>

<p><b>Item 4 – Options to exploit opportunities or address issues identified</b></p> <p>The meeting considered the need to mitigate the issues raised in Item 3 and the need to ensure that all relevant stakeholders are engaged and then consulted. The mitigations may resolve the following issues:</p> <ul style="list-style-type: none"> <li>• removal of the likely WTG induced primary radar clutter, delivering: <ul style="list-style-type: none"> <li>○ consequent safety improvement over the ‘do nothing’ option</li> <li>○ with safety remaining ‘at least as safe’ as today</li> <li>○ improvement in ATS provision which may have been degraded as a consequence of the ‘do nothing’ option</li> </ul> </li> <li>• reducing the impact of radar shadowing</li> </ul> <p>A comprehensive list of proposed stakeholders was provided in the slide pack (see Slide no.13). CAA stated that they would provide an updated National Air Traffic Management Advisory Committee (NATMAC) list to NATS and Osprey which will assist in consultation activities.</p> <p>It was suggested by CAA that engagement with the NATMAC could be limited to those members who are likely to be effected by the proposal and need not necessarily be the complete NATMAC membership. This would be for the sponsor to articulate with a suitable rationale.</p>	<b>CAA</b>
<p><b>Item 5 – Provisional indication of the scale level and process requirements</b></p> <p>The presentation by NATS, agreed by Osprey, assumed that the proposal would be considered as a Level 1 change by virtue of the fact that the change proposed would be an alteration of civil aviation traffic patterns below 7,000 feet. The potential impacts on low level flight operations as well as radar impacts warranted a wide range of stakeholders to be consulted.</p> <p>The CAA agreed that the CAP1616 ACP process is the appropriate vehicle to investigate the issues and potential mitigations raised by the introduction of the proposed wind farms with initial indications suggesting the ACP scaling is likely to be Level 1.</p>	
<p><b>Item 6 – Provisional process timescales</b></p> <p>Osprey provided an explanation of project timelines regarding consent. It was discussed that the process of implementing a wind farm is relatively long and expensive. The development process is driven in part by formal funding ‘gates’ required by the government in order to release capital and that potential obstacles to the developments’ future should be mitigated as far as possible ahead of these gates.</p> <p>CAA SARG was content that the proposal should proceed under the CAP1616 process, accepting that the time between potential approval of the proposal and implementation of any mitigation could be considerable.</p> <p>The CAA SARG advised that even though initial indications suggested that the proposed airspace change was a Level 1 the CAP1616 process was scaleable under certain conditions. Subject to the sponsor presenting satisfactory written justification the process can be scaled by shortening or removing the need to complete certain steps/stages where deemed applicable by the CAA.</p>	

Proposed Gateway Dates:			
Gateway	Gateway Assessment Date	Document Submission Deadline	
Stage 1 Define	22 <sup>nd</sup> Feb 2019	8 <sup>th</sup> Feb 2019	
Stage 2 Develop & Assess	26 <sup>th</sup> April 2019	12 <sup>th</sup> April 2019	
Stage 3 Consult	28 <sup>th</sup> June 2019	14 <sup>th</sup> June 2019	
Stage 4 Update & Submit	n/a	1 <sup>st</sup> Nov 2019	
Stage 5 Decide	24 <sup>th</sup> April 2020		
<b>Item 7 – Next steps</b>			
Development of Design Principles in accordance with CAP 1616, Step 1B.			<b>NATS</b>
<b>Item 8 – Any other business</b>			
Nil.			

**ACTIONS ARISING FROM [INSERT NAME OF CHANGE PROPOSAL] ASSESSMENT MEETING**

<b>Subject</b>	<b>Name</b>	<b>Action</b>	<b>Deadline</b>

  
ACP Sponsor