

Focus Group 1 - Minutes

Project Title	Clash Gour Airspace Change Proposal
Client	Force9
Purpose of Meeting	Design Principles Focus Group
Date of Meeting	30 th November 2021
Held at	Elgin Town Hall
Present	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
Osprey Reference	71609 012
Issue	Issue 1

[REDACTED]
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Glossary

Acronym	Meaning
ACP	Airspace Change Proposal
AMS	Airspace Modernisation Strategy
ANSP	Air Navigation Service Provider
ATC	Air Traffic Control
BGA	British Gliding Association
CAA	Civil Aviation Authority
CAP	Civil Aviation Publication
CAS	Controlled Airspace
GA	General Aviation
GAA	General Aviation Alliance
LOS	Line of Sight
PSR	Primary Surveillance Radar
RAF	Royal Air Force
RMZ	Radio Mandatory Zone
TMZ	Transponder Mandatory Zone

Meeting Summary

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<p>Opening introductions</p> <p>██████████ welcomed everyone and thanked them for their attendance. Following introductions from those present, he then provided an introduction which described the purpose of the Focus Group and outlined the Clash Gour project. ██████████ then described the reasons why an airspace change is needed before ██████████ provided further information on the Civil Aviation Publication (CAP) 1616 process and the requirement for Design Principles (DPs).</p>
<p>Appropriateness of Level</p> <p>██████████ described the requirement to scale the process by assigning a level to the Airspace Change Proposal (ACP). He stated that the Civil Aviation Authority (CAA) provisionally considered that this ACP would be a Level 1 ACP. The category would be confirmed at the end of Step 2B at the Develop and Assess Gateway. ██████████ gave the attendees the chance to express their opinion on the appropriateness of the level chosen.</p> <p>There were limited comments regarding the level of the ACP.</p>
<p>Open Forum Discussion</p> <p>██████████ began by explaining that this ACP would be an interim solution until a technical solution to radar interference was available. Radar Line of Sight (LOS) modelling had suggested that the Clash Gour wind turbines would theoretically be detectable by both Royal Air Force (RAF) Lossiemouth and Inverness Airport's Primary Surveillance Radars (PSR), producing radar clutter. ██████████ questioned whether the model used for the analysis had itself been verified so that the results could be acceptable. ██████████ clarified that the radar LOS modelling used was the Advanced Terrain Digital Imaging (ATDI) tool which has provided reliable results of theoretical detectability of wind turbines to PSR systems. ██████████ explained that there was no guarantee that a radar technical mitigation solution applicable to both effected PSRs would adequately remove radar clutter; he continued that the successful conclusion of the ACP would allow the wind farm to be built.</p> <p>Having already provided some feedback via e-mail, attendees were invited to provide any additional information to support comments on the DPs.</p> <p>DP1 Safety: Maintain or enhance current levels of safety</p> <p>██████████ had suggested that the text of the DP be replaced with '<i>Ensure an acceptable level of safety for aircraft within and displaced by the proposed airspace</i>'. He explained that the safety of any aircraft displaced as a result of implementing an airspace solution should be considered as just as important. Any solution should be simple and effective and reiterated that a technical radar solution would be an ideal scenario.</p> <p>██████████ also asked which Air Navigation Service Provider (ANSP) would be responsible for managing the airspace and if there were any funding issues related to this. ██████████ explained that this has not been explored in detail and would be looked at later in the ACP process.</p> <p>DP2 Operational (Resilience): Minimise negative impact on other airspace users</p>

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■ explained that even the use of a Transponder Mandatory Zone (TMZ) or Radio Mandatory Zone (RMZ) would be a block to those airspace users who were not able transit these areas and that any mitigations should be acceptable to all. He wished to see the phrase *'all possible negative impacts upon any airspace user must be mitigated to the satisfaction of that airspace user'* added to the DP.

■ also stated that the use of buffers to increase the size of the airspace are not appropriate and asked what the end game of the radar units was. He questioned whether there was a need for any airspace mitigation, asking whether any traffic from those units actually used that piece of airspace. In order for Force9 to proceed with the ACP, he suggested that both RAF Lossiemouth and Inverness Airport provide statements explaining the operational effect that the wind farm clutter would cause. If there was no operational effect, there was no need for an airspace solution. ■ stated, that both aviation stakeholders have provided a response to the development Section 36 application in which they stated that the development would create an unacceptable impact to respective PSR systems and would require mitigation.

There were no comments on DPs 3 and 4.

DP5 Environmental: Minimise environmental impacts to stakeholders on the ground

■ reiterated that in his view, any aircraft forced to route around the airspace would produce a noise impact in the area away from any airspace solution.

DP6 Economic: Minimise economic impact on aircraft operators and to ensure costs and resources are proportionate

■ explained that the economic impact on GA would be huge. Whilst there are solutions for some aircraft, there would be issues with both the size and power of additional equipment required in some aircraft, and significant financial issues for operators due to the costs of both the equipment and any additional licensing requirements. ■ wished to see the sentence *'all possible additional costs incurred by any airspace user, or user group, must be fully financed by the ACP sponsor to the satisfaction of the airspace user/group'* added to the DP.

Although acknowledging that this meeting was focussed on the development of the DPs, ■ expressed concern that the use of a TMZ was becoming the 'go to' solution for this issue. In his opinion, a proper technical radar solution would be the only acceptable solution as this will not be the only wind farm being developed especially given the Scottish Government's national renewables target for onshore capacity.

DP7 Technical: Base the airspace change on the latest technology available

■ made no further comment other than reiterating that a technical radar solution would be the ideal situation.

Additional Comments

■ commented that the use of a RMZ or TMZ are currently the only tools available in the UK for an issue such as this, and that even these will have a serious impact on GA. He asked whether there were any other practical solutions, such as the Flexible Use of Airspace and possibly turning the airspace on and off when RAF Lossiemouth and Inverness Airport were not operating.

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██████████ added that this was about controlling Class G airspace which by definition, is not controlled. As a local GA pilot, he explained that in his view, a lot of the airspace being discussed was already invisible to the radars in the area and didn't create an operational issue. Both ██████ and ██████ explained that until the operational issues for the units are known (the need for an airspace solution), they were not convinced that there was a requirement.

████ closed the meeting by thanking the participants for their attendance and contribution. All parties agreed that it had been a very useful and productive discussion.