

**MINUTES OF VIRGIN ORBIT ROCKET FLIGHT FROM SPACEPORT CORNWALL  
ASSESSMENT MEETING HELD VIA TELECONFERENCE ON 14<sup>TH</sup> JULY 2021**

14-July-2021

CAA – Attention: [REDACTED] (Account Manager)

<b>Present</b>	<b>Appointment</b>	<b>Representing</b>
[REDACTED]	Airspace Regulator (AR) (Technical)	CAA
[REDACTED]	AR (Technical)	CAA
[REDACTED]	AR (Economist)	CAA
[REDACTED]	AR (Engagement & Consultation)	CAA
[REDACTED]	Principal AR	CAA
[REDACTED]	Virgin Orbit CAA POC	CAA
[REDACTED]	Policy Specialist	CAA
[REDACTED]	AR (Environmental)	CAA
[REDACTED]	AR (Engagement & Consultation)	CAA
[REDACTED]	AR (Environmental)	CAA
[REDACTED]	[REDACTED]	Virgin Orbit
[REDACTED]	[REDACTED]	Virgin Orbit
[REDACTED]	[REDACTED]	Virgin Orbit
[REDACTED]	[REDACTED]	Virgin Orbit
[REDACTED]	[REDACTED]	Virgin Orbit
<b>Follow Up Meeting</b>		
[REDACTED]	AR(Airspace Modernisation)	CAA
[REDACTED]	AR (Technical)	CAA
[REDACTED]	[REDACTED]	Virgin Orbit
[REDACTED]	[REDACTED]	Virgin Orbit

CAA Assessment Meeting Opening Statement

The CAA has received the Assessment Meeting Agenda and a copy of the presentation in advance of this Assessment Meeting and can confirm that the documents are required to be published together with the minutes of this meeting on the airspace change portal.

The purpose of the Assessment Meeting as set out CAP1616 is for the Change Sponsor to present and discuss their Statement of Need, provide information on how it intends to fulfil the requirements of the airspace change process and present its provisional timescales. Lastly, the sponsor is required to provide information on how it intends to meet the engagement requirements of the process.

	<b>ACTION</b>
<p><b>Item 1 – Introduction</b> [REDACTED] welcomed the attendees and led introductions of the CAA team followed by the team representing Virgin Orbit (VO). The opening statement was read to the attendees. [REDACTED] then invited [REDACTED] to present the presentation material starting with an overview of the Virgin Orbit program.</p>	
<p><b>Item 2 – Statement of Need (discussion and review)</b> The Statement of Need was detailed in the presentation, presenting the problem to CAA for Virgin Orbit's operations. The topics covered in the Statement of Need were the following:</p>	<b>Sponsor</b>

<ul style="list-style-type: none"> <li>• Request of a Temporary ACP <ul style="list-style-type: none"> <li>○ CAA noted that this is a change from the original statement. Virgin Orbit's requirements have changed for the first rocket launch, allowing a temporary ACP rather than permanent.</li> <li>○ ██████████ mentioned that a temporary ACP changes the timelines and stages.</li> <li>○ <i>Action to Virgin Orbit: review differences in Temporary ACP.</i></li> <li>○ ██████████ stated that for future launches a new ACP will be required (VO confirmed)</li> </ul> </li> <li>• Requesting consideration for the VO 747 to be treated as a standard 747 within the current airspace structure <ul style="list-style-type: none"> <li>○ To facilitate this request the CAA would require VO to present a safety assessment and evidence that stakeholders accept the operating model and procedures are sufficient to allow safe departure from Newquay Spaceport.</li> </ul> </li> <li>• Flexible solution to VO's launch trajectory within controlled airspace <ul style="list-style-type: none"> <li>○ CAA asked how far off the coast the danger areas would start (VO answered roughly 135nmi)</li> </ul> </li> <li>• Segregated airspace requirements <ul style="list-style-type: none"> <li>○ ██████████ asked if aircraft are assumed to be within the hazard area when calculating probability of impact (VO answered aircraft are assumed to be in the area. An internal follow up with the flight safety analyst confirmed this to be the case).</li> </ul> </li> <li>• <i>Action to VO: Statement of Need on the Portal will need to be updated</i></li> </ul>	
<p><b>Item 3 – Issues or opportunities arising from proposed change</b> A review of the issues or opportunities was presented.</p> <p>No CAA comments noted</p>	
<p><b>Item 4 – Options to exploit opportunities or address issues identified</b> A review of the options to exploit opportunities and address issues was presented.</p> <p>No CAA comments noted</p>	
<p><b>Item 5 – Provisional indication of the scale level and process requirements*</b> The Temporary ACP was again noted. The process is different and it was emphasized that VO will need to modify the ACP request. ██████████ noted that Page 88 of CAP1616 details the Temp ACP process.</p> <ul style="list-style-type: none"> <li>• <i>Action to Virgin Orbit: review Temp ACP process</i></li> </ul> <p><b>Post Mtg Note:</b> <i>An additional mtg held on Wed 28 Jul between the CAA and VO further highlighted some of the process requirements including CAP1616 detail and the CAA Policy Statement for the Establishment of Danger Areas.</i></p>	<p><b>Sponsor</b></p>

<p><i>Further guidance was provided on stakeholder engagement and in particular a requirement to engage with the North Atlantic Systems Planning Group (NATSPG). It was agreed that VO would formally request via the CAA NATSPG Rep to present at the appropriate working group within the NATSPG.</i></p> <ul style="list-style-type: none"> <li>• <i>Action to Virgin Orbit: formal request to the CAA NATSPG Rep to present at the NATSPG.</i></li> </ul> <p>Follow Up Meeting Notes:</p> <ul style="list-style-type: none"> <li>• VO to request a meeting with NATSPG</li> <li>• Review CAP 1616, Pages 88-89 for an overview of the temporary change process</li> <li>• Exact coordinates of the airspace structure are required</li> <li>• Eurocontrol will help with impact modelling <ul style="list-style-type: none"> <li>○ Produce potential windows for review, reduce impacts</li> <li>○ Deconflict with airlines</li> </ul> </li> <li>• Produce an engagement consultation document to send to key stakeholders <ul style="list-style-type: none"> <li>○ Review stakeholder responses and answer any received questions</li> </ul> </li> </ul>	<b>Sponsor</b>
<p><b>Item 6 – Provisional process timescales*</b></p> <p>A review of the timeline was presented</p> <ul style="list-style-type: none"> <li>• [REDACTED] provided a summary of the engagement requirements as follows: <ul style="list-style-type: none"> <li>○ Engagement with relevant aviation stakeholders (specifically air navigation service providers, aerodromes and airspace users) and relevant members of the National Air Traffic Management Advisory Committee (NATMAC) is expected.</li> <li>○ Change sponsor will need to explain the methodology used for identifying relevant aviation stakeholders; consider those directly/indirectly impacted and those who will have an interest in the ACP</li> <li>○ In terms of the length of engagement, the change sponsor is responsible for determining a suitable period for stakeholders to review, consider and comment on the proposal. This will vary for each ACP depending on the number of stakeholders involved, the engagement methodology and the complexity of the proposal.</li> <li>○ Scope of engagement should be on the safety and operational viability of the proposal</li> <li>○ Clear audit trail must be maintained as the CAA will expect to see evidence of what was said, what was heard and what was done with that information and why. A report summarising the results of the engagement activity (i.e. how stakeholder feedback has/hasn't influenced the proposal) will need to be included within the formal airspace change proposal submission.</li> <li>○ Whilst there are no Gateways in the temporary airspace change process, change sponsors can seek CAA review and comment on a draft engagement strategy should they wish to do so.</li> <li>○ If airspace below 7000ft is impacted, regional stakeholders will need to be informed of the change and the likely impacts prior to implementation (if approved).</li> <li>○ Change sponsor will be required to collate, monitor and report to the CAA on the level and contents of any related enquiries/complaints (if approved).</li> <li>○ All engagement evidence will need to be published on the airspace change portal.</li> </ul> </li> </ul>	<b>Sponsor</b>

<ul style="list-style-type: none"> <li>• [REDACTED] stated that there would be no need for a formal appraisal and stakeholder engagement is enough A permanent ACP would require an appraisal</li> <li>• [REDACTED] noted that the CAA is required to consider the sponsor's assessment of the noise impact of each proposed temporary change, unless the specific details of the proposal mean that this is not needed, and there is no requirement to assess any other environmental impacts as these are likely to be negligible for a short-term change. As this is likely to be a Temporary Danger Area (TDA) the consequential noise impacts of aircraft re-routing around the TDA should also be considered. However, as all changes are likely to be over the sea, noise impacts can likely be scoped out with a robust rationale. Further details of the assessment requirements can be found in CAP1616 B81 to B85. The detail of the required assessment should be agreed with the CAA at an early stage of the sponsor's planning.</li> </ul> <p><i>* The provisional timeline put forward at this assessment meeting will be subject to change by the CAA. This will currently mainly be for two reasons;</i></p> <ol style="list-style-type: none"> <li>1. <i>The SoS has directed us to prioritise GNSS applications which may have an impact on your ACP if we need to direct resource accordingly.</i></li> </ol>	
<p><b>Item 7 – Next steps</b> Next steps were conveyed to the attendees and reviewed.</p> <ul style="list-style-type: none"> <li>• [REDACTED] noted international engagement will be required for rocket hazard areas <ul style="list-style-type: none"> <li>○ What is a reasonable amount of time that people had to review?</li> <li>○ Want to see that rationale in the submission</li> <li>○ Complete the 2-way engagement</li> <li>○ Need to identify the stakeholders</li> </ul> </li> </ul>	
<p><b>Item 8 – Any other business</b></p>	

**ACTIONS ARISING FROM VIRGIN ORBIT ROCKET FLIGHT FROM SPACEPORT CORNWALL ASSESSMENT MEETING**

<b>Subject</b>	<b>Name</b>	<b>Action</b>	<b>Deadline</b>
Temp ACP	[REDACTED]	Review differences in Temporary ACP	
Portal	[REDACTED]	Statement of Need on the Portal will need to be updated	
Temp ACP	[REDACTED]	Review Temp ACP process	
Minutes	[REDACTED]	Complete meeting minutes and submit to CAA	19-JUL-21

[REDACTED]  
 Virgin Orbit  
 ACP Sponsor