

**MINUTES OF ACP 2022-102, 2022-103, 2022-104 ASSESSMENT MEETING  
HELD VIA TEAMS ON 03 MAY 2023**

03 May 23

CAA  
CAELUS 2

<b>Present</b>	<b>Appointment</b>	<b>Representing</b>
[REDACTED]	Airspace Change Account Manager	CAA
[REDACTED]	Airspace Regulator (Technical)	CAA
[REDACTED]		
[REDACTED]	Airspace Regulator (Engagement and Consultation)	CAA
[REDACTED]	Airspace Specialist (Engagement and Consultation)	CAA
[REDACTED]	ATS Inspector Northern Region	CAA
[REDACTED]	RPAS Team	CAA
[REDACTED]	National Programme Manager NHS Scotland	CAELUS Consortium
[REDACTED]	National Innovation Programme Lead NHS Scotland	CAELUS Consortium
[REDACTED]	CPC	CAELUS Consortium
[REDACTED]	NATS (Acting GM ATS Glasgow)	CAELUS Consortium
[REDACTED]	NATS (ATC Glasgow)	CAELUS Consortium
[REDACTED]	NATS	CAELUS Consortium
[REDACTED]	Manager ATC Aberdeen Airport	CAELUS Consortium
[REDACTED]	Trax International Ltd	CAELUS Consortium
[REDACTED]	Trax International Ltd	CAELUS Consortium
[REDACTED]	Skyports Ltd	CAELUS Consortium
[REDACTED]	Skyports Ltd	CAELUS Consortium
<b>Apologies</b>		
[REDACTED]	Airspace Regulator (Environment)	CAA
[REDACTED]	Airspace Regulator (Environment)	CAA
[REDACTED]	ATS Inspector	CAA
[REDACTED]	Head of Aerodrome Strategy AGS Airports	CAELUS Consortium

**CAA Assessment Meeting (Airspace Trial) Opening Statement**

CAA noted that the following Statement of Need, Agenda and Presentation Slides were received in advance of the Assessment Meeting and confirmed that the documents must be published by the sponsor, together with minutes of the meeting, on the Airspace Change Portal page. CAA explained the purpose of the meeting and confirmed that the meeting was an Assessment Meeting. The CAA reinforced that the sponsor was required to provide a broad description of their proposed approach to meeting the CAA's CAP 1616 Airspace Trial 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.

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 airspace change process.

	ACTION
<p><b>Item 1 – Introduction</b></p> <p>All parties were introduced on the call and the opening statement was read by [REDACTED]. Trax agreed to share a copy of the draft minutes within 2 weeks to enable comment and agreement from the CAA before a copy of them were to be uploaded to the ACP Portal together with a copy of the slides presented.</p>	
<p><b>Item 2 – Statement of Need (discussion and review)</b></p> <p>It was confirmed that all parties had reviewed the Statement of Need for ACP 2022-102, 103 and 104 as uploaded on the portal. This Assessment Meeting and the Statement of Need was in relation to 3 ACPs which form part of the larger CAELUS project. Both the NHS real life use cases would be highlighted by the NHS colleagues on the call and the BVLOS Concept of Operations (ConOps) would be addressed by the NATS colleagues on the call. With each of the routes considered for each ACP there was considerable scoping carried out to balance what was achievable and what could bring benefit to real life use cases aiming to transform patient experience within Scotland looking at a drone-based network to help deliver urgent and dynamic medical requirements. The NATS airspace integration ConOps will be tested and validated through these trials. The ConOps will be looking to the future and within the TDAs as proposed the ConOps can be replicated within a safe piece of airspace within the 3 different innovation regions. [REDACTED] highlighted that CAELUS is a consortium led AGS Airports Ltd on behalf of NHS Scotland and funded by Innovate UK through the Industrial Strategy Challenge fund, Future Flight competition. This ACP forms part of 5 ACP trial submissions to demonstrate a validated concept of operations around airspace structure and use that is scalable and sustainable.</p>	
<p><b>Item 3 – Issues or opportunities arising from proposed change</b></p> <p>[REDACTED] articulating that this is a Once for Scotland approach utilising the innovation in the hubs. Not only will there be a reduction in patient travel as articulated but the 3 ACPs will allow CAELUS to address the different challenges in the different regions. There will a step change in the quality and outcomes for cancer patients, similar benefits in blood cross matching and the NHS will be able to spread the learning and benefits across the regions more rapidly. The NHS are also engaging with the Scottish Ambulance Service to enable benefits to be shared from the CAELUS project.</p> <p>[REDACTED] providing background as to the CAELUS ConOps and emphasising the nuances that the trials bring in that the Future Flight Challenge has been above moving towards the operational availability of the services being trialled by the end of the project. CAELUS have been developing a ConOps that is scalable and repeatable in the near term. This project has been about developing an eco-system within which UK space will operate, embracing three different airspace constructs. CAS where crewed aviation dominates but uncrewed operates through to UTM where uncrewed will dominate. Within the TDAs CAELUS will seek to validate the trial plan. The best in class in the UK, EU and US have been considered to include in the development to create this repeatable, scalable process. The other key element in development this evolution has been the different phases, or horizons. Mapping has taken place in consideration of the different elements that will develop each of the horizons, be it regulation, technology, demand etc. For Horizon 1 CAELUS will look at what is required in the step change to Horizon 2 and how does the overall market start to evolve. Horizon 2 is a full service but limited to geographical regions but moving to Horizon 3 CAELUS will consider how to remove those geographical limitations.</p> <p>Validation objectives have been detailed and stem from the FFC programme with the clear objectives that were being aimed for. The process evolved to map those FFC objectives through to the validation requirements and then to the trial areas and how they differ to each of the locations.</p>	

<p> <span style="background-color: black; color: black;">█</span> provided details of the air system to be used which is the Swoop Kite which is suitable for all routes proposed for these ACPs. It is the first time that this will be used in the UK, but it has been flown by Skyports in other locations. The OSC has been submitted for the three routes as detailed on the slides and labelled N1-N3.  The draft airspace is segmented into TDAs and where it falls within CAS, a TSA. During the drafting phase it was raised that we should reduce the number of vertices for ease of communication and plotting. The TDAs will be between 2-4km wide and with a ceiling typically less than 1500ft AMSL. Designs will be adjusted post engagement and within the 8-week window of opportunity the flights are expected to take place during 4 consecutive weeks. The activations will take place via NOTAM. </p> <p> Engagement with stakeholders will take place as per CAP 1616 and CAELUS will incorporate all feedback received into the final submission. The intention is for N2 to take place first in Sept/Oct. It may be that following engagement and review a decision may be taken not to segment the airspace as shown for simplification for other airspace users. N3 will then take place and it has been segmented to reduce where possible the max operating altitudes due to undulating terrain. It is hoped that appropriate ANSPs will provide a DACS/DAIS. N1 will be the final and more complex trial building on the lessons identified in the first two trials. </p>	
<p> <b>Item 4 – Process requirements</b> </p> <p> <span style="background-color: black; color: black;">█</span> invited the CAA SMEs to outline the process requirements. </p> <p> <span style="background-color: black; color: black;">█</span> confirmed that CAELUS will be required to follow the trial process as set out in the CAP 1616 process, the elements which are present from an airspace perspective. With regards to Prestwick confirmation was sought as to why the route to the North from Crosshouse rather than returning South. Where a service provision will be provided to the Skyports operator this may require some change management. It was explained by the CAELUS members on the call that the route to Crosshouse from Arran was mapped to avoid the urban areas and to route under the CTA and therefore minimise disruption to Prestwick air traffic. The route between Crosshouse and Ayr was planned over the sea to minimise population overflight. There was a possibility explored of segmenting the crossing of the final approach to runway 12 to help with integration of the flight with the traffic. There was a suggestion to route south of Irvine from Crosshouse but then it moves closer to Prestwick Airport. Segmentation allows us to de-active the TDAs not required. </p> <p> <span style="background-color: black; color: black;">█</span> confirmed that this for these ACPs it was appropriate for CAELUS to follow the trial process. Part 1b of CAP 1616 details what is required for a trial plan. A safety assessment will be required for the OSC but there is also an ATS element where units will need to undertake change management as per their normal change management process. </p> <p> <span style="background-color: black; color: black;">█</span> asked what the process will be for the communications between ATC and the RPAS operator and how the flights will be conducted, how it will impact other aviation users and what the mitigation will be for safe operations to include procedure for activation and deactivation of the TDA segments. </p> <p> <span style="background-color: black; color: black;">█</span> explained that the remote pilot is geographically displaced but there will be local crew to provide logistical support. There are robust methods of communication as far as dedicated phone lines for changes to operational requirements. The operator can land the air system within 2 minutes should there be a report of an infringement etc and quicker than that should there be a risk of collision. The latency between the air system and the operator is a question of 2 seconds. The pilots hold the required qualifications and undergo significant training and background awareness. The pilots have been involved in the drafting of the ConOps and the routes themselves and so have deep airspace awareness. </p> <p> Further detail was requested with regards to conflict management and <span style="background-color: black; color: black;">█</span> articulated the reduction in population overflight, tracking with a high degree of accuracy and pilot experience. <span style="background-color: black; color: black;">█</span> confirmed that if the pilot initiated an emergency landing, then it can be </p>	

<p>aborted if required.</p> <p>█ will provide questions direct to Skyports and the rest of the consortium once the OSC has been reviewed.</p> <p>█ confirming that the engagement requirements are as per the CAP 1616 process and that the sponsor may wish to capture the engagement approach in an engagement plan. This can be shared with the CAA E&amp;C team in advance and comments will be provided. Trial ACPs require targeted engagement with aviation stakeholders and it is for CAELUS to identify relevant stakeholders. CAA Flight Ops can assist if required. As well as local aviation stakeholders, the NATMAC list provides details of those that the CAA will expect engagement with and where there are entities that have not been engaged with, justification as to why. The duration of formal stakeholder engagement should be based on the potential impact of the proposal with 6 weeks being a reasonable starting point. Careful thought should be given as to how the overall project is explained as the stakeholders will need to understand the overall journey as well as the impact from each route. Consideration should be given to minimising stakeholder engagement fatigue. Where pre-engagement has taken place, this should be detailed and the outcome of that should be articulated. Timescales should be made clear, together with provisional dates and possible amendments. This may mitigate the need for re-engagement should changes occur.</p> <p>Evidence of the engagement should be recorded as this will be used to assess the validity of the engagement activity. A report should be produced setting out and analysing the feedback and how that has informed the final submission. There should be a list of stakeholders including the rationale for selecting them, together with a summary of methodology and approach. Copies of original materials should be provided so that the CAA can see how the effect has been articulated. If a trial is permitted then there is a requirement at para 318 of CAP 1616 to explain to all impacted stakeholders that a trial has been approved. Any noise impact assessment will inform the stakeholder requirements for this obligation. Para 319 states the need to continually engage with stakeholders during the trial and collate and monitor and report any complaints to the CAA.</p> <p>█ seeking confirmation that where CAELUS have identified stakeholders on the NATMAC list that are not impacted by the ACP then engagement will not be required. █ confirming that the expectation will be for all NATMAC members to be engaged but rationale for not engaging will be considered. With regards to the requirement to inform non-aviation stakeholders, this will be informed by the noise assessment. If there is no impact, then there are no stakeholders to inform. Where there may be stakeholders identified, i.e., helipads linked to hotels, that prove difficult to contact then these should be highlighted in the engagement report.</p> <p>█ will provide an up to date NATMAC list.</p> <p><b>Complete</b></p> <p>█ requesting the AIC to be submitted in draft at the time of the final submission to allow data to be cross-checked.</p>	<p>CAA</p>
<p><b>Item 5 – Provisional timescales*</b></p> <p>Although these are independent ACPs the timelines are dependent on each other as far as Skyports are limited with personnel and aircraft so the TDAs will be run consecutively rather than concurrently. Timelines will be reviewed and submitted to the CAA for agreement together with the draft minutes.</p> <p><b>Action. CAELUS to confirm provisional timescales for approval.</b></p> <p><i>* The timeline agreed may become subject to change by the CAA. This is because the Secretary of State for Transport has directed the CAA to prioritise RNP Instrument Approach Procedures (IAPs) without an Approach Control proposals; this may impact Airspace Regulation resource and consequently timelines.</i></p>	<p>CAELUS</p>

<p><b>Item 6 – Next steps</b></p> <p>Copy of draft minutes to be submitted by 10 May to the CAA. Once agreed a suitably redacted version is to be uploaded by 17 May to the CAA ACP Portal.</p> <p><b>Action. Draft minutes to be provided to the CAA by 10 May.</b></p>	<p><b>Trax</b></p>
<p><b>Item 7 – Any other business</b></p> <p>Post-meeting note: the environmental assessment requirements are given in CAP1616 Appendix B paragraphs B81 to B85 for temporary changes to airspace design and CAP1616 Appendix B paragraphs B88 to B89 for airspace trials.</p>	

**ACTIONS ARISING FROM ACP 2022-102, 103, 104 ASSESSMENT MEETING**

<b>Subject</b>	<b>Name</b>	<b>Action</b>	<b>Deadline</b>
Tech	CAA	<b>CAA to provide updated NATMAC list.</b>	█ has provided details in order to obtain an up to date NATMAC list
Tech	CAELUS	<b>CAELUS to confirm required flight dates iot to finalise provisional timescales.</b>	10 May
Admin	Trax	<b>Draft minutes to be provided to the CAA.</b>	10 May

AGS  
ACP Sponsor