

**MINUTES OF ACP-2023-015 ASSESSMENT MEETING
HELD ONLINE ON 17th April 2023**

18th April 2023

To be distributed to all meeting attendees.

Present	Appointment	Representing
██████████	Airspace Regulator (Technical)	CAA
██████████	Airspace Regulator (Utilisation)	CAA
██████████	Airspace regulator (Consultation & Engagement)	CAA
██████████	Airspace Regulator (Environment)	CAA
██████████	Head of Aviation	Apian (change sponsor)
██████████	Co-founder & medical director	Apian (change sponsor)
██████████	Airspace Lead	Apian (change sponsor)
██████████	Consultant & advisor 1 (on behalf of Apian)	Cyclops Air

Apologies from ██████████ - CAA RPAS Technical Inspector

CAA Assessment Meeting (Airspace Trial) Opening Statement

The CAA noted the following: Statement of Need and Assessment Meeting Agenda; 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. 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 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. For a Trial (in terms of the ACP type) please note that the requirements of CAP1616 para 312-328 must be met. The purpose of the Assessment Meeting (set out in detail in CAP 1616) was:

- 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 its provisional 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>Item 1 – Introduction</p> <p>All meeting attendees introduced themselves.</p> <p>The Airspace Regulator (Technical) opened the meeting at 1135 and read the CAA Assessment Meeting Opening Statement (see above). The CAA has received and read the Statement of Need (SoN), and expects the presentation to be redacted and uploaded after this meeting.</p> <p>Apian’s Co-Founder and Medical Director introduced Apian as the ACP sponsor and outlined the project’s objectives - to measure healthcare improvement as a result of using drones.</p> <p>Apian’s Co-Founder and Medical Director explained that Apian has continued to develop use cases with Northumbria NHS, and discussed how Apian’s current Northumbria project Phase one had progressed and what had been achieved so far. An up to date flight summary of stage one was provided and any learnings would be shared with the CAA.</p>	
<p>Item 2 – Statement of Need (discussion and review)</p> <p>Co-Founder and Medical Director summarised the SoN:</p> <p>Apian are looking to build on from the current trial (ACP-2022-031), and create a central hub, providing distribution networks across a number of hospitals (3-4) in Northumbria. BVLOS operations are needed due to the geographical locations of these, and to achieve the objectives set out by the NHS.</p> <p>Apian’s Co-Founder and Medical Director then discussed the hospital locations required for this trial and the healthcare challenges they face. It was confirmed that there would be one hub across the whole route.</p> <p>Apian would like to also explore the potential to include Pharmacies GPs, Care Homes and Patient homes as part of the delivery sites. If included, these would be contained within the TDA area, along the routes between the hospitals to ensure the TDA dimensions are kept to a minimum.</p> <p>(Follow up comment from CAA RPAS Technical Inspector) This increases the complexity and Ground Risk. Apian are the Sponsor and not an operator. During development of the ACP, involvement from the selected Operator will be necessary from the ACP stage through to OSC and completion stage. Any operations involving dangerous goods will need to be considered and managed appropriately.</p> <p>(Response from apian)</p> <ul style="list-style-type: none"> ● All proposed operations will ensure safety risks are mitigated to a level that is tolerable and ALARP as required by regulation and CAA policy. 	

- Apian are experienced as an Airspace sponsor and work closely with the UAS operator conducting flights within the airspace. Furthermore, Apian also has support from the CAA innovation services through a paid for project, and detailed work is on-going to ensure safe operation for these flights.
- The majority of the cargo will not be categorised as dangerous goods. Apian have a detailed understanding of Dangerous Goods and approvals required for carriage by air, and these will be processed as required.

Consultant & Advisor 1 confirmed Apian are aware of the challenges associated with the operational authorisation element of this type of delivery service.

Airspace regulator (Consultation & Engagement) requested to discuss further with the Airspace Regulator (Technical) to understand the implications of the novel case for stakeholder engagement.

Apian Airspace Lead shared the proposed routing for this trial and explained that whilst ideally they would like to fly BVLOS direct to the hospitals, we understand this is not always feasible, and as such the route takes into account Newcastle Airport operations. Apian highlighted the on-going discussions with Newcastle Airport ATC, who are supportive with the proposal to date (acknowledging there are further detailed discussions to be had).

Apian Airspace Lead informed the CAA that Apian had made contact with numerous stakeholders pre-submission to discuss this routing. Apian would be looking for a similar TDA to stage one, with TDA dimensions containing the appropriate contingency and airspace safety buffer.

Apian stated that they are aware conversations need to happen in regards to flying BVLOS in controlled airspace and that they continue to work with their consultant from the CAA Innovation Team to identify the best approach forward.

The Airspace Regulator (Technical) asked about maximum altitudes within Newcastle CTR. Apian Head of Airspace confirmed discussions were still taking place with Newcastle, but our expectations would be to operate approximately 400ft.

Airspace Regulator (Technical) highlighted the need for the safety buffer policy dispensation, and noted the differences between this routing and the previous ACP. They stated that Newcastle Airport and the CAA would need to consider the risk of providing this dispensation. The Head of Aviation offered support to any early conversations with the CAA on this topic if this would be beneficial.

The Airspace Regulator (Technical) confirmed any agreements with Newcastle Airport would need to be included in the submission.

The Airspace Regulator (Technical) confirmed the SoN had been assessed and that there were no further comments.

Item 3 – Issues or opportunities arising from proposed change

Apian Co-Founder and Medical Director summarised the opportunities arising from the proposed change:

- Northumbria geographically vast - needs UA to deliver faster, smarter, greener healthcare to patients and clinicians (important for NHS England)
 - The Trust can dynamically receive the product in minutes rather than hours and even days at times. So the improvement that Apian wants to be able to bring to them will transform the area.
- Continue development from current trial (validations, integration with healthcare)
 - Apian would like to continue working on health care validation as well as aviation regulation. Identifying temperature and vibration validation for sensitive products.
 - Apian will integrate the digital systems so that Trusts can use these services in real time as part of the next stage.
- Trial will see active delivery of use case not just a demonstration
 - Apian wants to emphasise that in this ACP they would conduct deliveries from day one and the healthcare validation and testing would be conducted prior to the first flights.
- Collaboration with local airspace users to identify requirements for permanent BVLOS operations in Class D and G airspace.
- Helping the NHS transition towards a net zero future
 - Apian wants to help the NHS Trust transition to a position of net zero even faster. The Trust is already keen on doing that because of the existing infrastructure in place.

Apian Airspace Lead summarised the issues arising from the proposed change

- Electric Conspicuity - Use of SSR and ADS-B being considered (SSR for Newcastle Airport) EC CAP 1391
 - Apian are in discussions with Newcastle ATC
- CAA Safety Buffer Policy - Apian wish to have dispensation to operate in close proximity to Newcastle Airport
 - Apian are in discussions with Newcastle ATC
- OA and ACP alignment - Need to ensure alignment of OA request, ensuring it can be issued alongside the TDA process.
 - Apian are aware that they are linked and they are going to be submitting them alongside each other.

The Airspace Regulator (Technical) confirmed he would be forwarding the minutes to those that could not attend and sent their apologies.

Item 4 - Options to exploit/address opportunities & issues identified

Airspace regulator (Consultation & Engagement) questioned Apian's previous TDA(ACP-2022-031) and were there any lessons learned or feedback from the GA community with regards to engagement with stakeholders?

<p>Head of Aviation confirmed Apian provided regular updates to the Airspace Regulator (Technical) with any request for airspace access and feedback. Apian stated they had received feedback (via the Airspace Regulator Technical) from a microlight pilot who was not aware of our previous ACP. Apian confirmed they had included the British Microlight Aircraft Association in ACP-2022-031 stakeholder engagement. They responded to the microlight pilot and will include them in communications going forward. Apian also received feedback from a local resident who was concerned about the wildlife, particularly the swan population in Berwick. Apian confirmed they spoke to the individual and had included the wildlife trust in previous stakeholder engagement.</p> <p>The Airspace Regulator (Technical) stated that due to the routing being over land that Apian should ensure they have included the appropriate airfields that are in close proximity and which may be affected. Apian Airspace Lead stated they had taken into account these airfields to ensure minimal impact to other airspace users.</p> <p>Apian will also provide a stakeholder engagement plan in which they would welcome a review and any guidance from the CAA in advance of starting stakeholder engagement. Apian confirmed they are aware that this is not a formal approval of the document.</p> <p>Apian Consultant and Advisor 1 confirmed the routes had taken into account existing airspace structures so that we didn't create new obstructions. Airspace Regulator (Utilisation) joined the meeting and the Airspace Regulator (Technical) provided an update.</p> <p>The Airspace Regulator (Utilisation) confirmed that landing sites would be for discussion with the CAA RPAS team. The Airspace Regulator (Utilisation) would only comment to ensure the airspace structure accommodates all operations.</p> <p>Apian anticipates all take off and landing sites will be known prior to the trial start. Any additional sites introduced during the trial will be communicated and coordinated with the CAA regulatory team (and RPAS team through the drone operator's operational authority).</p>	
<p>Item 5 – Process requirements</p> <p>Apian Airspace Lead summarised the identified process requirements</p> <ul style="list-style-type: none"> ● TDA Policy Statement <ul style="list-style-type: none"> ○ CAA identification of CAP 1616 requirements and stages required ● Stakeholder Engagement <ul style="list-style-type: none"> ○ Apian will share the stakeholder engagement plan with the CAA for review and comment. The CAA will inform Apian when this is required. ○ Apian understand this is not an approval at this stage ○ Apian conducts stakeholder engagement. ● Safety Assessment <ul style="list-style-type: none"> ○ The UA Operator will make an application for an OA in the Specific Category. Confirmation of UA operator will be provided by Apian. <p>Airspace Regulator (Technical) asked if Apian is using more than one operator for ACP-2023-015.</p> <p>Apian confirmed just one operator.</p>	

Item 6 – Provisional timescales*

The timescales were presented by Apian as follows:

- Stakeholder engagement: 2nd June (8 weeks)
- Submission: 4th August 2023
- Decision: 1st September 2023
- Submission of AIC: 8th September 2023
- AIC publication date: 19th October 2023
- Implementation/Start ops date: 20th October 2023

The Airspace regulator (Consultation & Engagement) asked Apian to confirm why they believed 8 weeks was a suitable duration to conduct stakeholder engagement.

Apian Head of Aviation stated that stakeholder engagement with key stakeholders has already started, and have continued as a result of our current operations in Northumbria (ACP-2022-03).

Apian proposes to hold a briefing with all those that responded to our previous stakeholder engagement to share with them the output of the project associated with ACP-2022-031, and to highlight the next steps we would like to conduct under ACP-2023-015. Apian therefore believed 8 weeks for stakeholder engagement was suitable.

The Airspace regulator (Consultation & Engagement) understood the justification. They stated that Apian would need to consider local stakeholder engagement for delivery sites at patient’s homes. They confirmed they would need to be informed of the operations. Apian Co-Founder and Medical Director stated that as part of Apian’s investigations they complete engagement on the healthcare side with support from the NHS Trust. This can include surveys, engaging with communities in the local area, talking to patient groups and presenting in town halls to gain any feedback possible.

**** 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.***

Item 6 – Next steps

Apian presented the next steps as follows

- CAA confirmed minutes need to be sent to the CAA for review and uploaded to the portal once approved within 2 weeks.
- CAA requested a review of the stakeholder engagement plan and will provide a date for this.
- Apian to commence stakeholder engagement

This was approved by the Airspace Regulator (Technical) and the Airspace Regulator (Technical) followed up the meeting by sending a confirmatory email that:

- The proposal falls within the scope of the CAP1616 Airspace Change Process.
- The proposal requires an ACP for a temporary change on the basis that a TDA will be required on a temporary basis.

<p>Item 7 – Any other business</p> <p>The Airspace Regulator (Environment) highlighted the application’s noise assessment requirements (found in CAP1616 Appendix B paras B81-85).</p> <ul style="list-style-type: none"> ● Noise impact below 7,000 ft. from Apian’s own operations as well as consequential impact from any rerouted/displaced air traffic must be assessed. ● There is no requirement to assess other environmental metrics (CO2, local air quality, biodiversity, or tranquillity). ● Details on the exact route, flight frequency and typical operational altitudes must be provided. ● A qualitative description of the changes to traffic patterns of flights below 7,000 ft. ● LAmox noise levels at key locations e.g. schools, places of worship and hospitals must be evaluated and correlated with frequency/altitudes/times these locations will be overflown. ● Operational diagrams illustrating routes, traffic patterns, key locations, etc. must be used to support the assessment. ● Noise data from the drone manufacturer may be used to determine impact. ● Noise levels from other common sources e.g. aircraft, car, typical household items may be included for comparison. ● Communities must be informed and provided with all details so they know the impact of noise before and after the airspace change is implemented. ● If Apian believes that a scaled noise assessment is more appropriate then the rationale and supporting evidence must be provided to the CAA in accordance with CAP 1616 Appendix B para B26 ● CAA/Apian can agree on a noise assessment methodology going forward. <p>The Airspace regulator (Consultation & Engagement) outlined expectations for stakeholder engagement requirements (found in CAP1616).</p>	
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ACTIONS ARISING FROM ACP-2023-015 ASSESSMENT MEETING

Subject	Name	Action	Deadline
Meeting minutes	Airspace Regulator (Technical)	CAA to review minutes	28th Apr 2023
Stakeholder Engagement Plan	Apian	Apian to send to CAA Case officer	1st May 2023
Minutes and Presentation	Apian	Redact and upload presentation and minutes to ACP portal	3rd May 2023

Apian
ACP Sponsor