

ACP-2023-015 Apian Northumbria NHS Air Grid Feedback event

[Summary of meeting](#)

[Attendees](#)

[Discussion summary](#)

Summary of meeting

Apian invited members of the aviation community to a feedback session was held at [Wansbeck Hospital](#) on 24th August 2023, 5-7pm. The purpose of the session was to discuss and gather feedback on ACP-2023-015 airspace change proposal. Members of the aviation and healthcare teams at Apian, along with representatives from the NHS and the drone operator were present to listen and answer questions where possible.

Stakeholders who had already been identified to Apian were invited via email, with notification of the event added to the Airspace Change Portal. Individuals were asked to confirm in advance of attendance to allow a suitable venue to be located at Wansbeck hospital.

Attendees

Members from the Northumbria NHS Foundation Trust, Apian Aviation and Healthcare team and Zipline (UAS operator) were joined by 19 representatives from the aviation industry, these included;

- General Aviation (Crewed aircraft)
 - Pilots who operated in the Northumbria airspace.
 - Pilots who operated from Athey's Moor, Stanton Airstrip, Hexham Airstrip.
 - Members of the British Gliding Association, Northumbria Gliding Club, who operated within the region based at Currock Hill
- General Aviation (uncrewed aircraft)
 - UAS operators who conduct operations for business purposes
 - Model flying clubs
- Airports
 - Newcastle International Airport Air Traffic Services

Discussion summary

- The NHS representative (NHS 1) for the Northumbria NHS Trust introduced the event. The strength of opinion about the current proposal was recognised and understood, and the purpose of the session was to talk openly about the plans, gather feedback from attendees, and try to

respond to as much of that as possible. The proposal was subject to change and further iteration, where its current state was most likely not reflective of what the ultimate position would be. In order for these iterations to happen, feedback and data from the community was required. Both Northumbria and Apian confirmed that the engagement process itself was a meaningful one and that both organisations wanted to hear the feedback from individuals and respond to it wherever possible. Following this, each attendee introduced themselves.

- A question was put forward regarding why the event was unable to be recorded. NHS 1 confirmed that they asked that it was not recorded to permit an open and honest discussion, as well as not being able to give recording permission on behalf of other attendees. However, they strongly encouraged those who could not attend to contact Apian to provide feedback through the portal or in discussion with Apian, and asked the group to forward that message to those who they knew wanted to attend but were unable to.
- NHS 1 stated that the first trial had provided many learnings, what had worked well and what had not worked well. Northumbria Healthcare covers a large geography and has a stretched range of services - with logistics being critical to ensuring these had the right supplies at the right time in the right place. Tests using drones as well as other vehicles are therefore important to see if there is or is not a benefit. NHS 1 then went on to discuss one use case of replenishing surgical implants urgently for upcoming surgical procedures, where ordering replenishments to minimum stock levels by drone could potentially speed this process up.
- Attendee commented that it was concerning that there was a reliance on the weather for a drone delivery when a van can do the job just as quickly.
 - NHS 1 stated that drones would work alongside other forms of transportation. Stating that if using drones can reduce delays in care then it is worthwhile. Data will be gathered and monitored throughout and the use cases will be evaluated, meaning if a use case was not found to be viable it would be removed from the trial.
- Apian stated the challenges of providing critical healthcare to patients when there are last minute changes to their treatment, a drone could reduce the wait time for a delivery. Noting that they are always keen to add on a capability if this provides them with resilience when treating patients.
- Attendees commented that other forms of transportation (i.e a van) could complete the task in just as quick a time. Attendees also commented that they did not believe this was financially feasible from the NHS.
- This discussion moved to the trial plan documentation. An attendee asked a question regarding supplies 24/7 and NOTAMS
 - Apian stated that feedback had been received, asking for confirmation of NOTAMS and confirmed that procedures for cancelling NOTAMS were followed. Apian also stated that they had already been in discussions with the CAA to identify options for improving this process for Stage 2.
 - Apian agreed that TDAs were not the ideal solution, but current regulations mean it is required and Apian wants to do this as safely as possible. Apian stated that this is all about introducing phases not just in healthcare but in aviation too, to help get to a more integrated airspace for all.

- Apian was asked why the TDA intended to close two Airstrips, they confirmed that they had been in active conversation with both Airstrip owners in advance of the proposal being distributed, and that it was not the intention to close the Airstrips, but to work with those Airstrips to identify a solution, as they have experience of this in previous trials. Apian apologised that this was not communicated better in the documentation and with the Airstrips. Apian stated that they were still in contact with both Airstrips and would like to continue exploring options, but acknowledged that if both did not want to continue then the group would respect that.
 - Attendee stated that these comments did not come through in the documentation and stated that Apian were putting TDAs all over Northumbria.
 - Whilst an attendee stated the trial was pointless another stated that they did not believe this was true, discussing the need to integrate UAS VLOS operations. They stated the main issue was Electronic Conspicuity.
- An attendee requested to hear Newcastle International Airports ATC (Newcastle ATC) insights. Newcastle ATC confirmed that they have been working closely with Apian and will be providing their feedback separately. Newcastle ATC stated that they did not believe the business case or funding elements were appropriate for them to comment on. If the trial demonstrates the accuracy of the drone operations over 6 months, it would help prove that segregated airspace is not required.
- An attendee asked if the drone is not above 600 ft AGL, why is the TDA so high?
 - Apian confirmed that the drones would be operating below 600ft, predominately at or below 400 ft, but we are required to state the heights in AMSL. Due to the terrain level in some areas, 600ft has been added to the highest terrain.
 - An attendee noted that Stagshaw mast is 480' and is used frequently as a VRP.
- An attendee asked for confirmation regarding the delivery system. Zipline provided information regarding the air system and its operating procedures. Stating the accuracy of the landing area - 6x6 metre zone for delivery. Roughly two car parking spaces
- An attendee stated concerns about delivering to a doctor's surgery and how a package would be dropped when some locations were on the high street.
 - Apian stated that the UAS operator will have to get permission to fly in the UK and they will do this by submitting an operational safety case to the CAA. Exact delivery sites were currently being identified.
- An attendee noted that they did not believe the use of drones would remove the need for taxis (and other services).
 - NHS 1 stated that the use of drones would not remove the need for taxis or other logistics currently used by the NHS as a service. But rather work alongside these services.
- Following a question regarding the funding of the project, Apian confirmed that it is funded by Apian and SBRI, not the NHS. Encouraging the participants to look at the SBRI website that showcases the benefits from all of the projects they support. [\[SBRI Link\]](#)
- Attendee stated that they believed businesses will be affected [if the proposal is approved in its current form]

- NHS 1 confirmed that we do not want to close businesses down, we are aware of local businesses who believe they will be affected and we want to work with them to understand how we may be able to complete the trial alongside their businesses.
- Attendee noted that the business case was not a problem for them, but that the TDA was and would close airstrips. They asked how we prevent using a TDA.
 - Apian stated that until we evidence the safe use of drones in UK airspace and policy and regulations are re-evaluated, segregated airspace is required, and hence the need for a TDA.
 - Newcastle ATC stated that to move away from a TDA, trials like this have to go ahead to prove drones can operate safely.
- Attendee asked what difference this trial provided (over previous)
 - Apian stated that the platform was different and allowed data to be collected for evaluation.
- Apian provided an overview of the Airspace Change Process, and confirmed that feedback was essential to support this phase of the process.
- The following feedback was provided from attendees regarding the routings they fly and the TDA;
 - There are numerous GA [including me] who travel to Southern England frequently and the TDA stops us from doing that. We have just had summer flying taken away from us because of weather, multiple years previously because of Covid and you are now taking another summer of flying away from us.
 - If you fly south of Eshott NB 1500' you avoid CAS by two miles. Your TDA won't allow this route.
 - Hexham high ground cuts us off from the south of England so we would have to route high Hexham gap 1500-2000'
 - With the weather even at its best, you're blocking up a southerly route.
 - East to west routing to Kirkbride is the only safe route and you have blocked that too.
 - I was airbourne yesterday and I was at approximately 2000'
 - The TDA pushes us out over the sea on the east coast, we regularly route around the outside of Newcastle CTR, the TDA reduces the airspace we can fly in.
- Attendee asked what the latest update and communication was with the Hexham airfield owner?
 - Apian stated that they were provided with some really useful information and their concerns were discussed. Apian stated that they are continuing to work with them and hope to be able to find a solution where the trial could take place alongside the operations at both Hexham and Stanton Airstrips.
- Attendee asked why the material stated no DACS was needed.
 - Apian stated that this question had been mentioned in the feedback we have received, and review of this requirement will take place as part of the review of the proposal following stakeholder engagement.
- Attendee stated that the width needs changing too, as it is too wide. They then gave the example that when gliding, they can't always maintain a constant height or heading and the TDA

will put pressure on this because they don't want to infringe airspace, but also need to land in fields sometimes.

- Apian confirmed that all the feedback received will be considered as part of the review of the TDA
- Attendee stated the document referenced traffic not being affected below 7000 ft, which was incorrect as they were affected.
 - Apian confirmed this was in reference to commercial aircraft and this will be reworded for future versions of the document to ensure this is clear.
- Attendee highlighted that the airfields that the TDA will potentially close are also emergency airfields so what happens if they are closed?
 - Newcastle ATC reminded the group that if you're in an emergency you should do what you need to do to be safe.
 - Apian reiterated that they were not intending to close either of the Airstrips as previously mentioned.
- Attendees then asked for more details regarding the drone;
 - How fast is the drone?
 - The drone on average operates between 50-56 kts.
 - What are the weather limitations?
 - The UAS operator confirmed it could operate in Instrument Meteorological Conditions.
 - What are the wind limits?
 - Zipline clarified that the aircraft can safely fly in wind speeds above 48 kts (25 m/s) in flight; however, Zipline will not launch the aircraft if headwinds or crosswinds exceed 19 kts (9.8 m/s), or if tailwinds exceed 8 kts (4 m/s).
 - Does the UAS have ADS-B in and out?
 - Zipline confirmed they have ADS-B in at the moment, but that they are looking into ADS-B out.
 - Attendee stated that once you start adding ADS-B the costs will start going up which isn't good.
 - Attendee asked Zipline how many drones would operate and how many controllers would that require? They also noted that they feel this would be a big cost.
 - Zipline provided information that there are likely to be 8 aircraft. They stated that it is a highly automated UAS and the controllers will be expected to control a number of these at a time.
- Attendee asked how the teams are planning to measure elevation/high ground?
 - Zipline uses Digital Elevation Models (DEM) to model terrain and a system for transit planning and delivery manoeuvres. They would be happy to provide more information on this if required.
- Attendee asked if there was any way of alternating the TDA?
 - Apian confirmed they now have more knowledge of the local area flying routes, this is something they will look into. Apian added that there is limited data regarding general aviation, and their regular flying routes and heights in Northumbria. Apian said that this

is why the meeting is so helpful, to gain an understanding of areas they like to fly and areas they like to avoid as an example.

- Attendee suggested a possible consideration was to alternate the routes, i.e Apian would be using the west route and then the next day using the coastal route, as an example. This would allow them to have one route available at all times.
- Apian said it would be useful to know what heights work for aviation in the different segments of our TDA?
 - Attendee suggested the drone stay below 500' and general aviation stays above and that would allow separation.
 - Apian reminded the meeting that this is not possible in line with regulations.
- Attendee - How will you work with model aircraft/radio controlled areas? Cramlington model flying club fly up to 400 ft.
 - Apian asked if they could get some more details from Cramlington regarding their operations.
 - Attendee confirmed they would send this through via email but they utilise a 500m box up to 400 ft for model flying.
- An attendee informed the meeting that in their opinion, the teams [Apian and partners] would just tweak the airspace but won't change it and the regulators won't allow it.
 - Apian reassured that all the feedback was important and they would be using it to review adjustments.
- An attendee stated that they believed that the teams (Apian and partners) will need to go down the electric conspicuity route.
 - Newcastle ATC added to the meeting that they should take the opportunity to define what an agreed approach was to EC between all in the room, and provide this as feedback. The ideal being that industry leads regulation on what to implement.
- Attendee told the meeting I will see this same TDA when you start in Feb.
- Attendee asked why the CAA are not in attendance at the meeting to see this?
 - Apian confirmed the CAA will review all stakeholder engagement as part of submission.
- Attendee asked why we need to operate at Haltwhistle as there are no implants there.
 - Apian and NHS 1 confirmed implants are only one of the use cases. We are testing out how drones could impact and be integrated in the wider NHS organisation across a range of services. Although there are no implant operations conducted there, Haltwhistle is one of the two outlier hospitals within Northumbria that are the hardest to reach from a geography point of view. There are other use cases that the trial is looking at with Haltwhistle.
- Attendees stated that blood bikes do a good job already.
 - NHS 1 agreed that blood bikes provide a great service, but that as they are a charity it is not operationally viable to rely on them all of the time given the volumes of products that need to be transported.
 - Another attendee stated that blood bikes do not transport organs.
- Attendee asked how is this cost effective when we have bad weather and you have Drones sitting doing nothing?

- Apian said when an urgent delivery is required or an item has missed a round robin, it is during these times that drones add significant benefits and resilience to the patients and clinicians. Drones are an augmentation and an additional layer to the existing ground infrastructure.
- Attendee confirmed the need to shorten the width of section C of the TDA and the middle bit of Spadeadam.
- Attendee informed the teams that the heights need to be brought down.
- Apian asked the glider pilots if they use Flarm, ADS-B or something else?
 - Attendee answered that they normally use Flarm and ADS-B out.
- Attendee wanted to make the teams aware that the edge of the TDA runs directly down the runway of Stanton Airfield.
 - Apian acknowledged this.
- Attendee asked are you going to close these airfields?
 - Apian reiterated no, they do not want to close them.
- Attendee wanted the meeting to know that the CAA are promoting electric conspicuity.
- Attendee asked Apian how the feedback will be fed back to the CAA?
 - Apian confirmed that they have to pass all the feedback responses to the CAA as part of their submission for the trial.
- Attendee asked will there be an opportunity to provide more feedback after submission?
 - Apian confirmed that the cut off date for feedback to be included in our submission is the 22nd September 2023, but you can still provide us with any detail you feel necessary for the trial, it just won't be included in the formal submission to the regulator after that date. Apian confirmed feedback throughout the trials, subject to approval, is also welcomed and information on how to do that will be included in any submission documentation.
- Attendee asked Apian what their endgame was?
 - Apian confirmed they want to improve healthcare for patients, improve working environments for clinicians and demonstrate cost savings.
 - NHS 1 advised the meeting that drones are going to be considered as part of logistics from a healthcare, aviation and an environmental perspective.
- Attendee asked if the NHS are taking into account loss of business?
 - NHS 1 confirmed this would always be taken into consideration and added they do not want this to happen.
- Attendee wanted the teams to know that some stakeholders struggled to make a 5pm start due to work commitments and travel. They asked if they could consider a better time if we choose to do another event.
- Attendee informed Apian that there are UAS working in Hexham.
 - Apian requested further information about this be shared if possible via email.
- Attendee noted that they would be interested to see the drone racetrack if that would be ok?
 - Zipline were happy to accommodate this and would discuss it with them after the meeting or via email.