



Northumbria Healthcare
NHS Foundation Trust

Aviation Stakeholder Engagement Material Part 2

ACP-2023-015 Northumbria NHS Air Grid

Northumbria NHS Air Grid

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Request from us to you

We have identified you as a key aviation stakeholder for our proposed airspace change request (ACP-2023-015), which is requesting airspace to conduct Beyond Visual Line of Sight Operations (BVLOS), Uncrewed Aircraft System (UAS) flights in Northumberland.

We would like to thank those of you who have responded to our initial stakeholder feedback. As a result of that feedback, we have made some adjustments to our proposed trial temporary danger area (TDA), and would like to hear your feedback on these revisions.

These slides will provide you with a detailed summary of our adjusted proposed TDA for you to review. This targeted stakeholder engagement period will take place between 27th October and 8th December 2023. We welcome any feedback, comments and/or suggestions relating to the safety and operational aspects of this proposal.

We kindly ask that responses are submitted using this [survey link](#) to Apian by 8th December 2023. All of the feedback received regarding this proposal will be anonymised, shared with the CAA and uploaded to the ACP portal. This will then be taken into consideration before a final TDA design is submitted to the CAA.



Louisa Smith
Head of Aviation



A quick reminder

It's been a while since we spoke to some of you, so here is a quick reminder of who we are, and what this project is all about.

Apian is a UK healthcare logistics company founded by a team of NHS doctors. Apian's mission is to use UAS technology to improve health outcomes, the environment and staff wellbeing by bringing on-demand, sustainable logistics to the NHS and healthcare industry.

Apian's aviation team, with decades of experience in flying, controlling air traffic, and developing aviation technology, works with leading drone operators to consistently deliver safe and efficient flights.

To validate the expected benefits of using UAS to deliver critical medical payloads to enhance supply chain responsiveness and improve patient outcomes, Apian and the Northumbria Healthcare NHS Foundation Trust will conduct feasibility flights to specific hospitals, GP surgeries, care homes and other healthcare facilities in Northumberland for an initial period of six months, from 14 May to 14 November 2024.

What you said...

We really appreciate the feedback we have received during our first period of stakeholder engagement from the general aviation, RPAS and model aircraft communities as well as non-aviators who believed it affected them. We have used your feedback to work with the UAS Operator to design a TDA that we believe will allow a safe and workable airspace whilst achieving our healthcare goals.

The following slides cover the concerns expressed by the aviation community.



What you said....	What we have done...
<p>You raised concerns about local airstrips Hexham and Stanton, and the impact on their operations.</p>	<p>We have updated the TDA design to move both Hexham and Stanton outside of it. We have discussed with those airstrips a suitable avoidance distance of their operations and reflected that in this revised TDA. TDA heights have been adjusted to ensure climb out routes from those airstrips are not affected.</p>
<p>You raised concerns about the airspace to the east of Newcastle CTR, as flying along the coastline it is a popular route for GA to operate. You said that the proposed TDA would force GA out to sea.</p> <p>You also stated that the gap between the Newcastle CTA and the TDA was not sufficient and increased air risk.</p>	<p>As a result we have moved the edge of the TDA inland, to ensure GA can follow the coastline routing when required. We have re-designed the edge of the TDA in this location to allow airspace users who enjoy flying from the coastline the ability to do this, with minimal impact.</p> <p>We have also reduced the heights of the TDA in this area, to ensure suitable space is provided between the TDA and Newcastle CTR.</p>
<p>You raised concerns with the heights of the TDA and the amount of airspace requested, you commented that the design would create choke points for GA in the area of the 'Hexham gap' (from Newcastle CTA to Otterburn and Spadeadam danger areas).</p>	<p>Some of the more advanced flightpath management features of the UAS have been adjusted, this allows us to safely reduce the UAS operating area and reduce the TDA vertical limits. We will be limiting the UAS movements to below 400 ft AGL. We believe this will provide safer transit routes and negate having to call Newcastle ATC for zone transits.</p>

What you said....	What we have done...
<p>You raised concerns about the changeable weather in Northumberland which often results in a low cloud base. If the TDA is too high, it restricts where you can safely fly to remain visual with the ground.</p>	<p>We have reduced the TDA dimensions (vertically and laterally) to reduce the airspace being proposed.</p>
<p>You raised concerns around the airspace to the west of Newcastle CTR, and you were concerned that the proposed TDA would mean there was no route available to route north/south.</p>	<p>As a result of this feedback, we have removed outlier delivery sites, and replaced with new sites inside the revised TDA. This has enabled us to reduce the TDA to ensure sufficient space to route to the west of the CTR. We have also reduced the heights allowing a smaller volume of airspace being requested.</p>
<p>You asked why we need to operate 24 hours a day and 7 days a week for this trial.</p>	<p>Whilst we are keen to get as much data as possible, we will now be reducing the hours of operations. Our proposed operations will be Monday to Friday, 0800-1800 hours.</p> <p>Deliveries to Haltwhistle (identified as Area G in the following new TDA dimensions) will now be restricted to a smaller delivery window from Monday to Friday between 0900-1300 hours. This will be published by NOTAM.</p> <p>The six-month trial will include two weekends of extended hours UAS flights, providing valuable data on out-of-hours NHS deliveries. These two weekends will be planned and published well in advance via NOTAM.</p>

What you said....	What we have done...
<p>You raised concerns about GA routing east/west (between Hexham and Haltwhistle) especially when the cloud base is below 2000ft.</p>	<p>We have adjusted our TDA laterally in this area, allowing us to reduce the vertical limits as well. We are also proposing to operate to Haltwhistle (identified as Area G in the following new TDA dimensions) between the hours of 0900-1300, Monday to Friday.</p>
<p>A number of you identified yourself as stakeholders who operate VLOS UAS operations and/or model flying clubs, and raised concerns that our proposed TDA would prevent your operations</p>	<p>We have received your information and are currently ensuring we have 'no fly zones for the UAS flight path' to allow you to conduct your operations, we are likely to require a Letter of Agreement and we will be in contact soon. We encourage VLOS and model flying operators, who have not yet done so, to get in contact to allow us suitable time to adjust our operations, and ask that those who regularly operate within this area contact us as part of the stakeholder engagement period. We will also include contact details in the NOTAM, to ensure those who wish to operate that day can get in touch with us.</p>
<p>You raised concerns that we are not providing a DACS/DAAIS.</p>	<p>We believe the modifications we have made to the TDA will reduce GA requiring a DACS/DAAIS, but this continues to be something we are investigating, and we welcome feedback from the aviation community on this.</p>

New Proposed Temporary Danger Area

We have included lateral and vertical limits as well operating hours of the proposed TDA in the following slides for your reference.

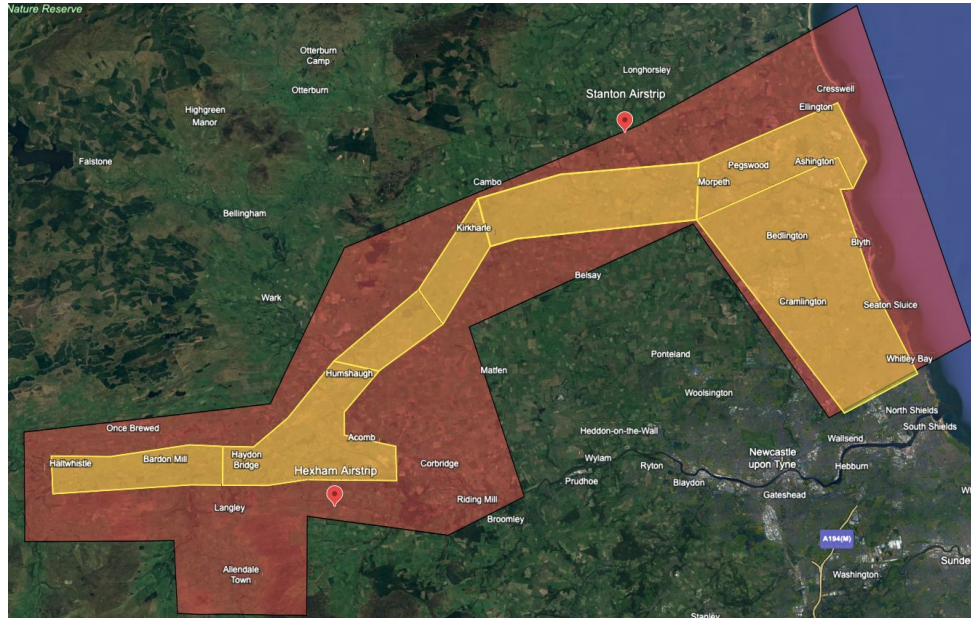
We propose to designate the airspace within Newcastle's CTR as a TSA (Temporary Segregated Area) and the airspace outside the CTR in Class G airspace as a TDA (Temporary Danger Area). This will be reflected in our submission to the CAA.

To download a KML file of our proposed TDA, please click [here](#)



TDA Dimensions (Previous vs New Proposal)

This map depicts the previous TDA dimensions and the new proposed TDA dimensions. Also labelled for reference are Hexham and Stanton Airstrips.



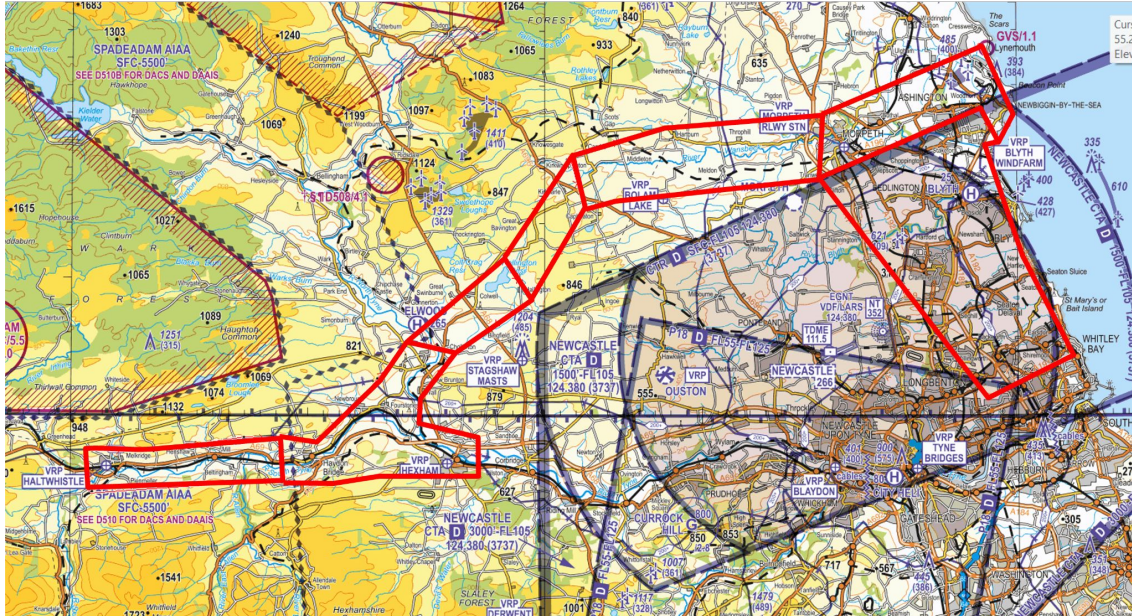
Key:

 Previous TDA dimensions

 New proposed TDA dimensions

New Proposed TDA

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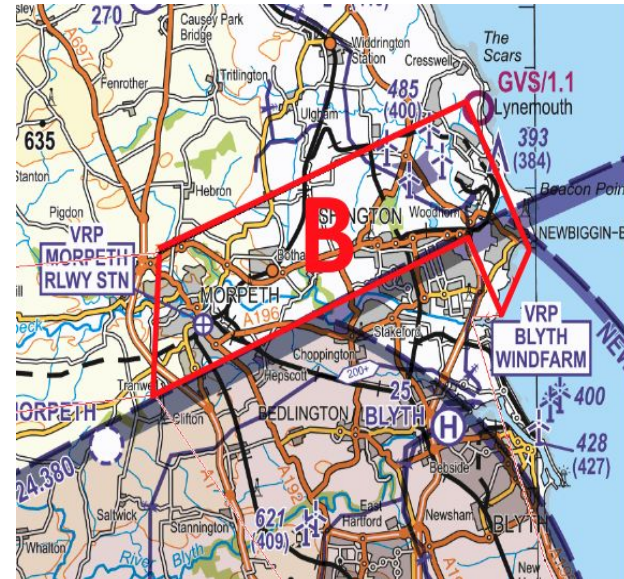
Area A

Lateral Limits	Vertical Limits	Operating Hours
<p>Area bounded by straight lines joining:</p> <p>55°00'35"N 001°31'52"W 55°08'35"N 001°42'32"W 55°11'10"N 001°32'16"W 55°09'52"N 001°31'11"W 55°09'50"N 001°32'07"W 55°05'47"N 001°29'44"W 55°02'12"N 001°26'34"W 55°00'35"N 001°31'52"W</p>	<p>Lower limit: SFC</p> <p>Upper limit: 800 ft AMSL</p>	<p>Monday to Friday 0800 - 1800</p>



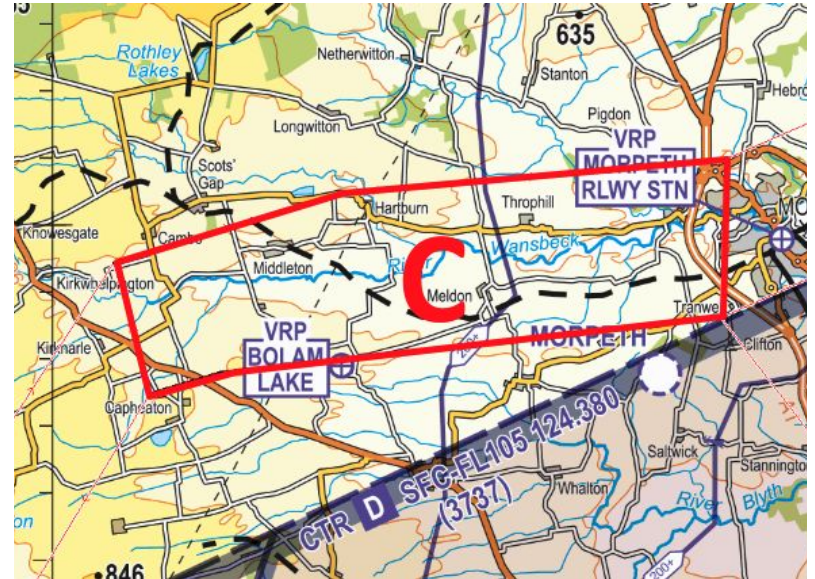
Area B

Lateral Limits	Vertical Limits	Operating Hours
<p>Area bounded by straight lines joining:</p> <p>55°08'35"N 001°42'32"W 55°10'57"N 001°42'23"W 55°13'25"N 001°32'17"W 55°10'59"N 001°30'12"W 55°09'52"N 001°31'11"W 55°11'10"N 001°32'16"W 55°08'35"N 001°42'32"W</p>	<p>Lower limit: SFC</p> <p>Upper limit: 750 ft AMSL</p>	<p>Monday to Friday 0800 - 1800</p>



Area C

Lateral Limits	Vertical Limits	Operating Hours
<p>Area bounded by straight lines joining:</p> <p>55°07'28"N 001°57'26"W 55°09'25"N 001°58'23"W 55°10'27"N 001°52'23"W 55°10'57"N 001°42'23"W 55°08'35"N 001°42'32"W 55°07'47"N 001°55'33"W 55°07'28"N 001°57'26"W</p>	<p>Lower limit: SFC</p> <p>Upper limit: 1000 ft AMSL</p>	<p>Monday to Friday 0800 - 1800</p>



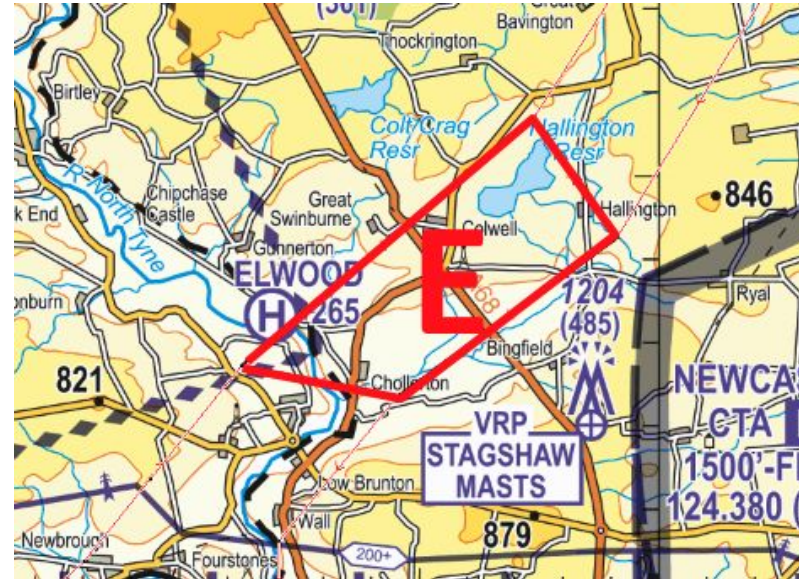
Area D

Lateral Limits	Vertical Limits	Operating Hours
<p>Area bounded by straight lines joining:</p> <p>55°04'15"N 002°00'50"W 55°05'40"N 002°02'36"W 55°09'25"N 001°58'23"W 55°07'28"N 001°57'26"W 55°04'15"N 002°00'50"W</p>	<p>Lower limit: SFC</p> <p>Upper limit: 1150 ft AMSL</p>	<p>Monday to Friday 0800 - 1800</p>



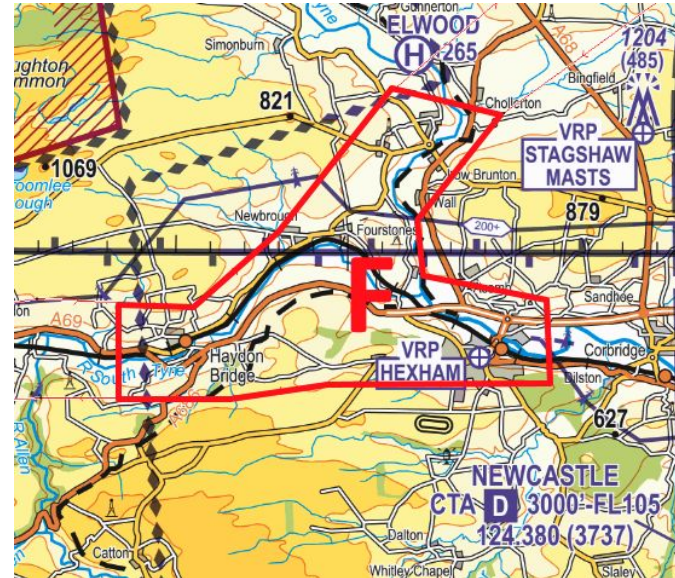
Area E

Lateral Limits	Vertical Limits	Operating Hours
<p>Area bounded by straight lines joining:</p> <p>55°02'42"N 002°08'41"W 55°05'40"N 002°02'36"W 55°04'15"N 002°00'50"W 55°02'20"N 002°05'27"W 55°02'42"N 002°08'41"W</p>	<p>Lower limit: SFC</p> <p>Upper limit: 1000 ft AMSL</p>	<p>Monday to Friday 0800 - 1800</p>



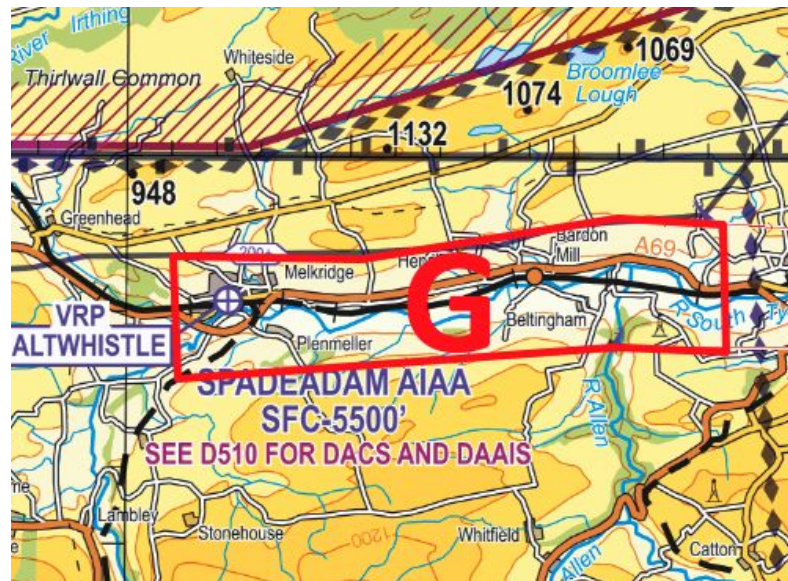
Area F

Lateral Limits	Vertical Limits	Operating Hours
<p>Area bounded by straight lines joining:</p> <p>54°57'33"N 002°16'37"W 54°59'09"N 002°16'37"W 54°59'04"N 002°14'25"W 55°00'21"N 002°11'57"W 55°01'20"N 002°10'35"W 55°02'42"N 002°08'41"W 55°02'20"N 002°05'27"W 55°00'36"N 002°07'54"W 54°59'39"N 002°07'53"W 54°59'12"N 002°04'12"W 54°57'47"N 002°04'06"W 54°57'48"N 002°10'36"W 54°57'33"N 002°13'24"W 54°57'33"N 002°16'37"W</p>	<p>Lower limit: SFC</p> <p>Upper limit: 1200 ft AMSL</p>	<p>Monday to Friday 0800 - 1800</p>



Area G

Lateral Limits	Vertical Limits	Operating Hours
<p>Area bounded by straight lines joining:</p> <p>54°57'07"N 002°28'49"W 54°58'41"N 002°28'58"W 54°58'40"N 002°24'43"W 54°59'12"N 002°19'01"W 54°59'09"N 002°16'37"W 54°57'33"N 002°16'37"W 54°57'33"N 002°18'53"W 54°57'07"N 002°28'49"W</p>	<p>Lower limit: SFC Upper limit: 1200 ft AMSL</p>	<p>Monday to Friday 0900 - 1300</p>



FAQ

What stage is this within the airspace change process?

We are currently engaging on our proposed airspace design (Stage 3 of the trial's airspace change process), this allows us the opportunity to gain feedback from our targeted aviation stakeholders on our proposal before we submit to the CAA for review and approval. For more information on the process please see the [Airspace Change Portal](#).

Who can fly in a TDA?

If the trial is approved, the TDA is the responsibility of the airspace sponsor. While the TDA is active, the only aircraft that can operate within the TDA will be the UAS aircraft as part of our submission. Any aircraft needing access for emergencies or vital military tasking will have procedures in place with the airspace sponsor.

What approvals do UAS need to fly in a TDA?

There are two approvals needed, one is for the airspace and one is an authorisation to conduct the flights. The ACP process establishes whether the airspace can be used and the UAS operator also requires an authorisation from the CAA to carry out the flights. During the UAS application process, there is an extensive assessment of each aspect of the operation to ensure the flights will be safe. If you would like more information on what is assessed, you can find it in this CAA document [CAP 722A](#).

When will the trial TDA commence?

The proposed start date will be the 14th May 2024 and last for 6 months.

How will the TDA impact emergency services or military access?

We will ensure the TDA is accessible to emergency aircraft or military aircraft on operations at short notice. The procedures and agreements between these parties will form part of our ACP submission and will be assessed by the CAA as part of the approval process.

How will the activation of the TDA be notified?

The TDA activation/deactivation will be notified by NOTAM. We understand there were concerns raised about NOTAMs from feedback during our previous trial, and we can assure you the TDA was always cancelled when not in use. If the TDA is not required during the trial, we will cancel it as per the NOTAM process. Cancellations of TDA usage are due to daily limitations, therefore cancellations are not often seen in advance. This approach to TDA utilisation is taken to complete as many deliveries and capture as much data for the NHS as possible. We have already raised the concerns highlighted to us by stakeholders with the regulator following feedback on our previous trial and are finalising details with the CAA of an improved process.

Why is the TDA published in AMSL?

All TDA ceilings should be reported and briefed as AMSL in accordance with ICAO Annex 11 2.30.2.

Do drones need permission from the CAA to deliver dangerous goods?

Yes. We will ensure any payloads that are considered dangerous goods for carriage by air have the required approval from the CAA. We also work closely with our healthcare partners to ensure we have the approvals needed to transport the cargo. Dangerous goods will not be carried without approval.

Where can I find more about the UAS operator?

Information about the UAS operator is available [here](#) in our trial plan on the ACP portal. Our UAS operator will be flying from surface to 400ft AGL on planned routes within the TDA.

Why is UAS a good solution for the NHS?

UAS, combined with trucks and vans in a multi-modal transportation network, can provide significant improvements for the NHS, including better patient care, a reduced carbon footprint, and more efficient supply chains. While other modes of transport play an essential and critical role, some rely on volunteers and can only offer limited services during out-of-hours emergencies. This multi-modal network provides the best solution for patients and clinicians in Northumberland.

Does the UAS have Electronic Conspicuity?

For this initial stage of the trial, the UAS will be equipped with ADS-B in. This trial forms the first phase of Apian's roadmap to integrated flights. We are closely monitoring the progress of the [Airspace Modernisation Strategy](#) and [Electronic Conspicuity regulation and policy development](#) in the UK as that will ultimately determine the technical requirements for integrated flights.

Where are you delivering to?

We will be delivering to sites such as NHS hospitals, care homes, mental health service, general practices, health centres, pharmacies and postal depots.

How will the TDA impact VLOS and Model flying operations?

We believe strongly in the flexible and equitable use of airspace. VLOS and model flying operators who need to operate within the area will be accommodated as much as possible. We do not want their operations to stop and will be working with them to ensure their operations can continue. We encourage VLOS and model flying operators, who have not yet done so to get in contact to allow us sufficient time to adjust our operations, and ask that those who regularly operate within this area contact us as part of the stakeholder engagement period.

I have not been identified as a stakeholder but believe I am, what should I do?

We try our best to ensure we include all the aviation stakeholders we believe may be impacted by the operations, but unfortunately we may have missed some local users who are not on centralised lists. We encourage feedback from such users, so please get in contact with us and we can add you to our stakeholder list.

Will the general public be informed of this trial?

Yes. Apian, with partners, have a number of events planned to update the general public on the project. However, we do not anticipate these taking place until we have had the TDA approved by the CAA. More details of these planned events will be included in the formal ACP submission, which follows this stakeholder engagement period.

Contact

As a reminder, our follow-on targeted stakeholder engagement period will take place between **27th October 2023 and 8th December 2023**. We would welcome any feedback, comments and/or suggestions relating to the safety and operational aspects of this proposal.

We kindly ask that survey responses are submitted via this [link](#) directly to Apian by 8th December. All comments received regarding this proposal will be taken into consideration before a final design is submitted to the CAA. Every piece of feedback received regarding this proposal will be anonymised, and included in the final submission to the CAA.

If you require any further information or require assistance to please contact Apian's Aviation team at northumbria.airspace@apian.aero.