



Guy's and St Thomas'
NHS Foundation Trust

Stakeholder engagement material

ACP-2023-061 London Health Bridge



London Health Bridge

- 01** Request from us to you
- 02** Who are Apian?
- 03** Project overview
- 04** Improving healthcare services
- 05** Temporary Reserved Area
- 06** UAS operator
- 07** FAQ
- 08** Contacts
- 09** Additional Information



Request from us to you

We have identified you as a key aviation stakeholder for our proposed temporary airspace change request (ACP-2023-061) which is requesting airspace to conduct Beyond Visual Line of Sight Operations (BVLOS) Uncrewed Aircraft System (UAS) flights between Guy's and St Thomas' Hospitals in London within a Temporary Reserved Area (TRA).

These slides will provide you with a detailed summary of our proposed TRA for you to review. Our targeted stakeholder engagement period will take place between **6th October 2023 and 17th November 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 directly to Apian by 17th November via email to london.airspace@apian.aero. Please clearly indicate in your response whether you support, oppose, or neither support nor oppose the proposal. All comments received regarding this proposal will be taken into consideration before a final design is submitted to the CAA.

Thank you

Louisa

Head of Aviation





Who are Apian?

Apian is a UK healthcare logistics company founded by a team of NHS doctors.

Apian's mission is to use UAS technology to transform NHS logistics by bringing on-demand, sustainable logistics to the NHS and healthcare industry.

Apian's aviation team, with decades of experience as aircrew, in air traffic control and in aviation research and development, partners with leading UAS operators to consistently deliver safe and efficient operations.





Project overview

Apian has partnered with Guy's and St Thomas' NHS Foundation Trust (GSTT) to trial a daytime on-demand drone delivery service for high-priority pathology samples between the laboratories at the two hospitals.

This service has the potential to greatly increase access and efficiency to best-in-class diagnostic platforms, thereby enhancing patient care, saving costs, and promoting sustainability.

This project has been selected to be part of the CAA's Regulatory Sandbox under *CAP2540 - Regulatory Sandbox for BVLOS Accommodation Airspace Policy Concept*.

Whilst the project has many healthcare objectives, the overarching aviation objective is to successfully trial operational procedures to support the safe integration of BVLOS UAS operations in Class D airspace.



Guy's and St Thomas'
NHS Foundation Trust



Improving healthcare services

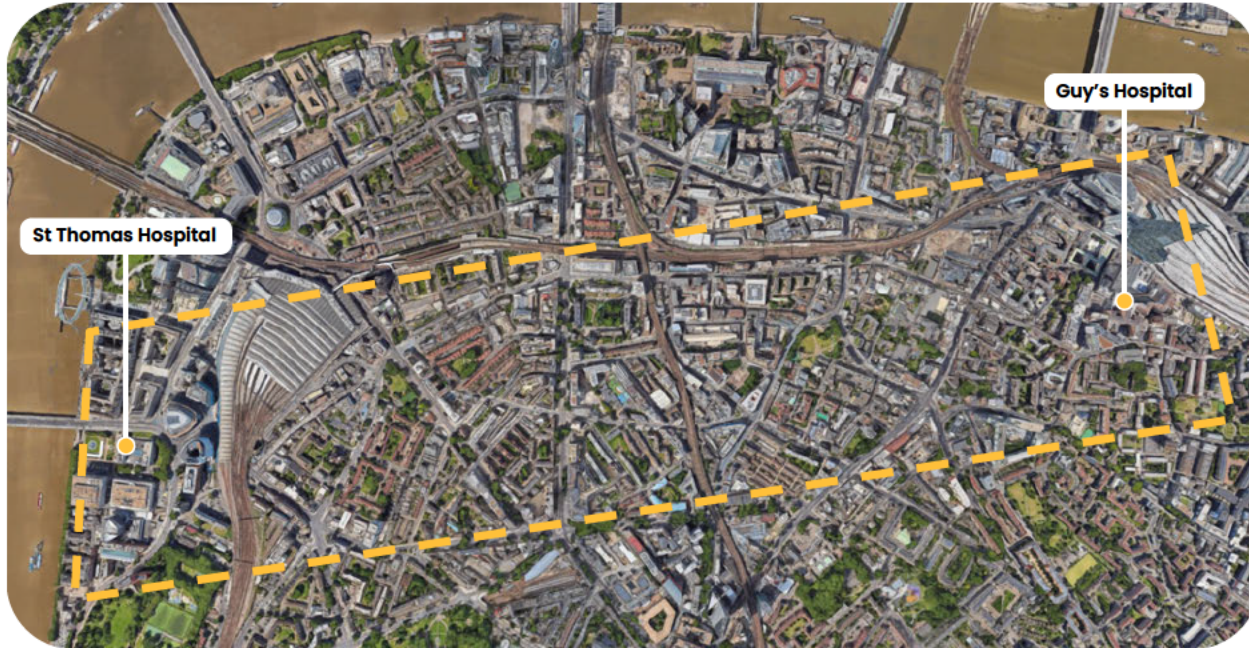
Whilst we are asking you to comment on the aviation safety and operational aspects of this proposal, we feel it is important to highlight the significance of the use case and healthcare aspects.

- Our aim is to provide faster, reliable deliveries to more patients for less emissions.
- Our initial focus is on delivering urgent blood samples from Guy's to St Thomas' Hospital.
- UAS can guarantee deliveries in <4 minutes by avoiding (and reducing) congestion.
- This improves patient care through faster results, treatment and discharge and increases NHS efficiency by saving unnecessary staff time chasing and scheduling.





Temporary Reserved Area

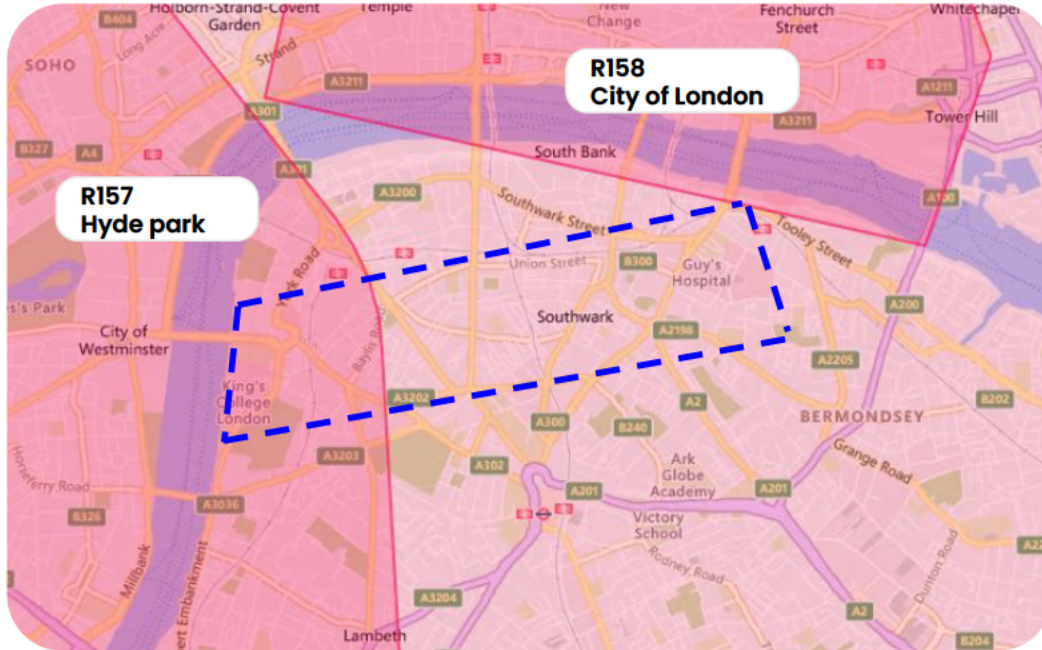


Route	UAS will depart Guy's hospital deliver to St Thomas and return to Guy's hospital
TRA dimensions	Lat/Long: As per Table 1 Height: Surface level to 400ft AGL (120m)
Activation period	Monday - Friday 0900-1700L (daylight hours only)
Frequency	Approx 10 return flights per day
Dates of operations	From 12th Feb 2024 - 12th August 2024 (6 months)
Activation	NOTAM minimum of 24hrs in advance

--- Visual illustration of TRA outline



Temporary Reserved Area



Proposed TRA outlined on London Heli-route chart

Proposed TRA outlined with airspace restricted areas indicated



Temporary Reserved Area

We have included lateral and vertical limits of the proposed TRA below for your reference;

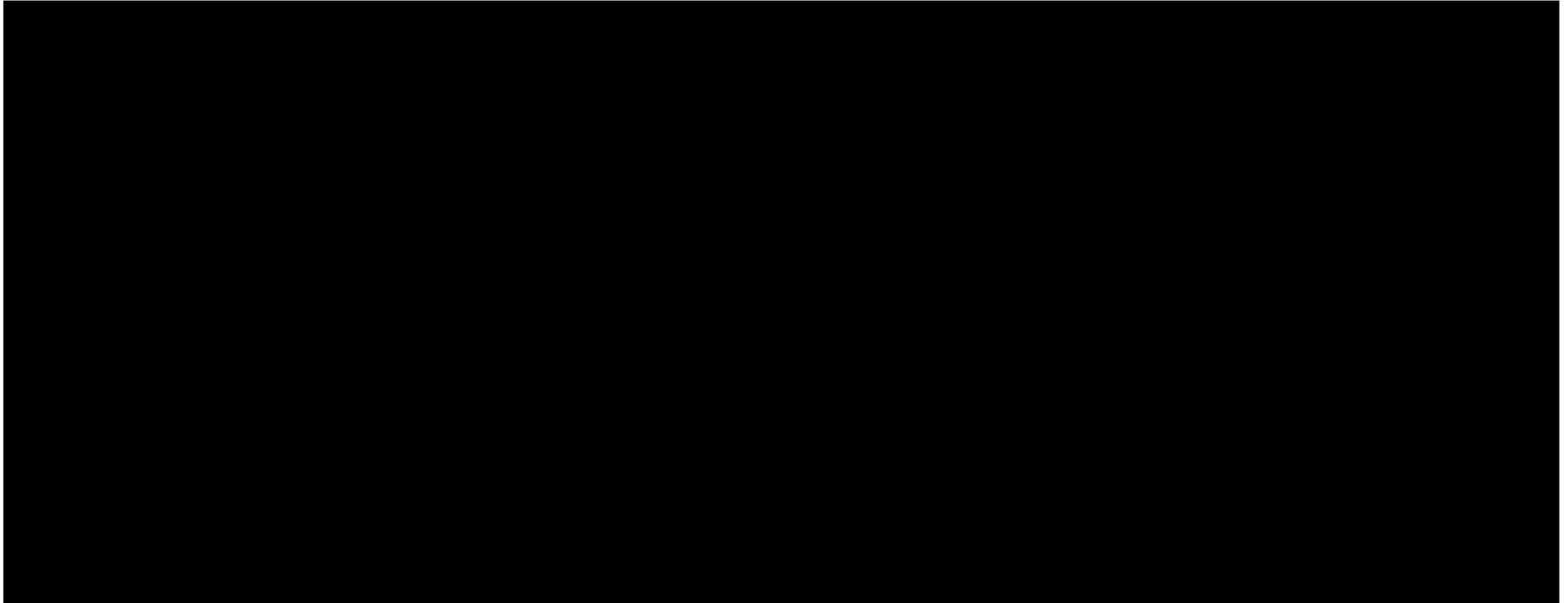
Table 1: Proposed lateral and vertical limits

Lateral Limits	Vertical Limits
An area bounded by: 513008N 0000711W (51.50222, -0.11972) 513018N 0000515W (51.50500, -0.08750) 513002N 0000505W (51.50056, -0.08486) 512950N 0000714W (51.49722, -0.12056)	Upper Limit: 400 Ft AGL (Will be displayed in NOTAM as 410FT ALT for AMSL) Lower Limit: SFC



UAS operations

Apian will be working in partnership with UAS Operator [REDACTED]. [REDACTED].





FAQ

What is a Temporary Reserved Area (TRA)?

A TRA is a defined volume of airspace that is temporarily reserved for a particular use which can be activated as and when required. It uses the classification of the airspace it is in but may also have additional requirements applied to enable the safe trialling or operation of aircraft within it.

How will the activation of the TRA be notified?

The TRA will be notified by NOTAM. Common apps used by operators will show this airspace via NOTAM. If we have completed the deliveries for the day, we will deactivate the TRA asap.

Who can fly in a TRA?

For our proposed TRA, you will need to seek clearance before entering the airspace.

- **For emergency services or military access** we have partnered with NATS and are finalising procedures to ensure the TRA will remain accessible to emergency aircraft or military aircraft on operations at short notice. These have been designed with feedback from these operators. 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.
- **For UAS VLOS operators** who require to operate within the area will be accommodated as much as possible. The NOTAM will contain contact details to discuss with the operations team. We encourage UAS VLOS operators to get into contact with us as soon as possible 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.



FAQ

Will this affect aircraft operating along the heliroute H4?

All operations will be contained within the TRA which will be below 400 ft AGL, and overland to the south of the river. Therefore, aircraft operating along the H4 heliroute can continue as normal.

What stage is this within the airspace change process?

We are currently at Stage 1 of the 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](#).

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 anyone, 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 and feedback mechanisms will be provided. However, we do not anticipate these taking place until we have had the TRA approved by the CAA. More details of these planned events will be included in the formal ACP submission, which follows this stakeholder engagement period.

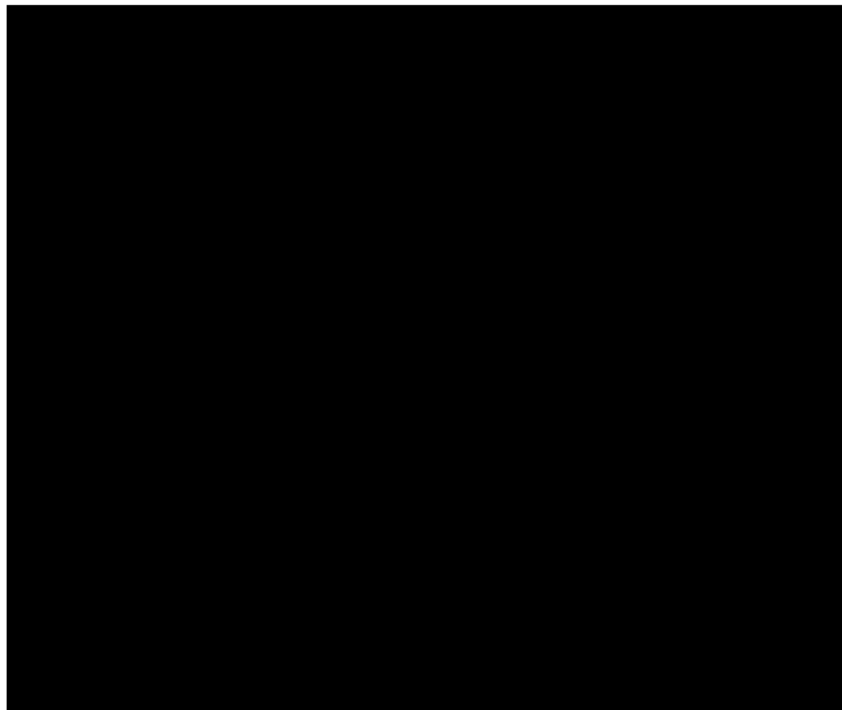


Contact

As a reminder, our targeted stakeholder engagement period will take place between 6th October 2023 and 17th November 2023. We would welcome any feedback, comments and/or suggestions relating to the safety and operational aspects of this proposal.

We kindly ask that responses are submitted directly to Apian by 17th November via email to london.airspace@apian.aero. We would be grateful if you could clearly indicate on the response whether you support/oppose or neither support or oppose the proposal. All comments received regarding this proposal will be taken into consideration before a final design is submitted to the CAA.

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





Additional detail



What is CAP2533/CAP2540?

In April 2023, the CAA published [CAP2533](#) Airspace Policy Concept: Airspace Requirements for the Integration of Beyond Visual Line of Sight (BVLOS) Unmanned Aircraft. The CAP presents an airspace policy concept that describes a pathway forward to deliver that integration. The concept utilises specific types of airspace structures to transition from segregated BVLOS operations, through the managed accommodation of a varied range of airspace operations, toward the ultimate objective of enabling integrated, unsegregated operations for all airspace users in standard ICAO classifications of airspace.

Alongside CAP2533, the CAA launched a regulatory sandbox to assess and refine the details of the BVLOS policy concept. [CAP2540](#), Regulatory Sandbox for BVLOS Accommodation Airspace Policy Concept, provides information about the sandbox which will see the use of temporary reserved areas (TRA) in conjunction with appropriate procedures and/or technology to accommodate the operation of UAS in unsegregated airspace. Apian were successful applicants and this ACP forms part of that regulatory sandbox.