



Dear [insert name],

We are contacting you as a valued member of the aviation community to kindly request your feedback to the Temporary Airspace Change Proposal ACP-2021-032. The purpose of this project, and therefore the reason for this ACP, is hopefully different in its approach from others you may have seen.

Ultimately, it aims to enable the safe integration of drones, sometimes called Unmanned Aerial Vehicles (UAVs), into unsegregated airspace in an area running parallel to the M4, south of Reading, in the conditions described in the following paragraphs.

The trial is to test ground-based Detect And Avoid (DAA) technology we call *Arrow*[®] and is being tested & evaluated via multiple partners as part of the government's Future Flight programme.

We are working closely with the CAA Airspace Team and following the Airspace Change Process. It is the process for temporary changes to the notified airspace design as detailed in [Part 1a of CAPI616](#).

This ACP process can also be reviewed in the [Airspace Change Portal](#).

Who is Altitude Angel?

Based in Reading, Altitude Angel is an aviation technology company which creates global-scale solutions to enable the safe integration and use of UAVs and autonomous drones into global airspace. Simply put, we build the digital infrastructure necessary to allow drones and manned aircraft to share the same skies together, safely, around the world.

You can find out more about Altitude Angel [here](#).

The Project

We refer to the area described in this ACP as an Arrow Drone Zone. The Arrow Drone Zone will be operated & managed by Altitude Angel and will demonstrate how manned and unmanned aircraft are able to harmoniously share the sky, safely and securely. To clarify, Project Arrow places no special or different equipage requirements on manned aircraft operating in the vicinity.

The proposed Zone has been put forward as part of the CAA's Innovation Sandbox under the moniker 'Project Arrow' and will be situated south of Reading, Berkshire. It will be

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approximately **8km in length and 120m wide** and will serve to extend enhanced DAA capabilities to drones flying within the Zone.

Drones flying within the Arrow Drone Zone will be tracked and monitored via Altitude Angel's UTM (unified traffic management) platform, GuardianUTM O/S, which communicates with ground and aerial infrastructure. In doing so, it provides automated navigation assistance for drones flying within the Zone, pre-flight authorisations and automatic separation assurance.

Nearby manned aviation and even other non-participating drones will be mapped in real-time so safe distances are maintained, and appropriate avoidance actions can be taken if they are predicted to be breached. If a future conflict is predicted, drones involved will be automatically given appropriate avoidance instructions, such as an instruction to change flight path, hold, return or land. A remote pilot will also be alerted, and manual control of the drone can be taken at any time.

Drones flying within the Arrow Drone Zone need no specialist equipment, such as new sensors, to utilise the zone. However, we require all drone operators flying within the Zone cooperatively to be appropriately trained, insured and have the appropriate certifications.

Once the technology has been successfully demonstrated, we believe we can do away with the need for ACPs to be requested where our platform is utilised, therefore allowing both drones and manned aviation to share the same sky safely.

Further details of the intended route and operating times are discussed below or can be found on the CAA Airspace Change Portal.

About ACP-2021-032

The proposed ACP intends to create a corridor between a field (X) and (Y). Ultimately, decisions on the geometry, altitudes and schedule are made based on the feedback from all airspace stakeholders. The earlier we receive this feedback, the easier it is for us to come up with a solution which causes the least impact on everybody's operations.

We do wish to draw attention to the fact it is our strong preference the airspace remains unsegregated, thus allowing manned aircraft to still navigate the area. However, we need to demonstrate and collect evidence to the UAS Team the DAA system is sufficiently effective to enable BVLOS in unsegregated airspace. CAA Policy is BVLOS activity, which has not demonstrated the required DAA capability, be wholly contained in a Temporary Danger Area (TDA). The team will initially start with Visual Line of Sight (VLOS) flight trials, moving on to Extended Visual Line of Sight (EVLLOS) flight trials finishing in August. We will then progress to Beyond Visual Line of Sight (BVLOS).

As you can imagine, if we are successful in this endeavour, this will open more of the sky nationally and hopefully reverse a trend of TDAs being issued for drone operations.

The proposal is therefore requesting a narrow corridor over the lakes to the south of the M4 motorway, between junctions 11 and 12.

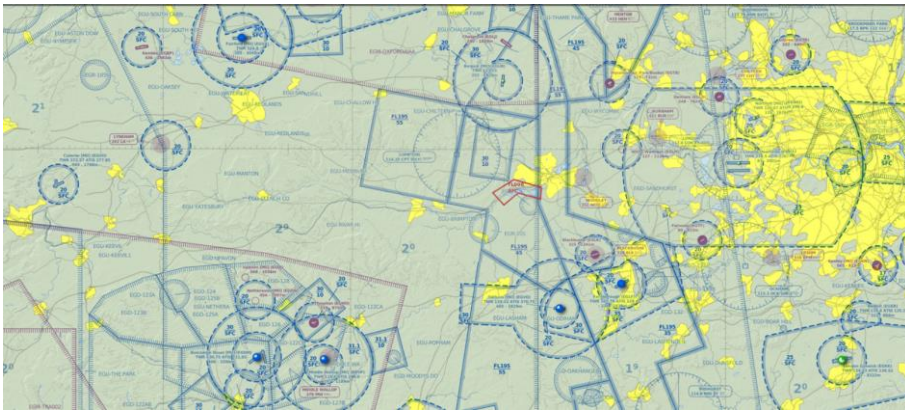


Figure 1 Proposed Arrow Corridor Area Displayed on Skyvector Aviation Chart . TDA is 800ft AMSL

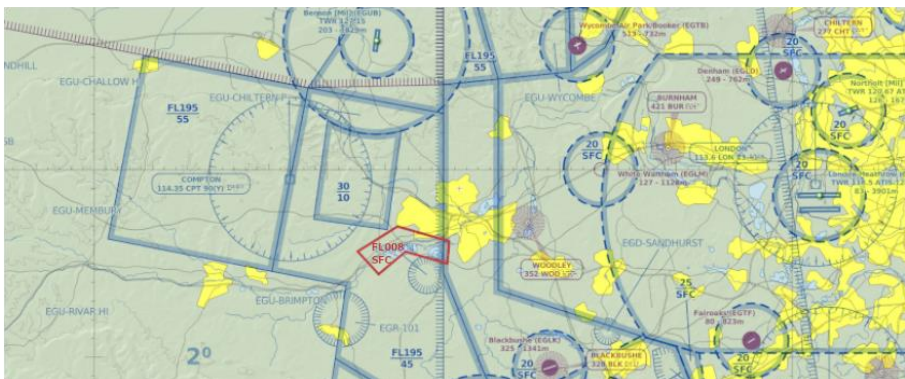


Figure 2 Closer Look at the Proposed Arrow Corridor Area Displayed on Skyvector Aviation Chart TDA is 800ft AMSL

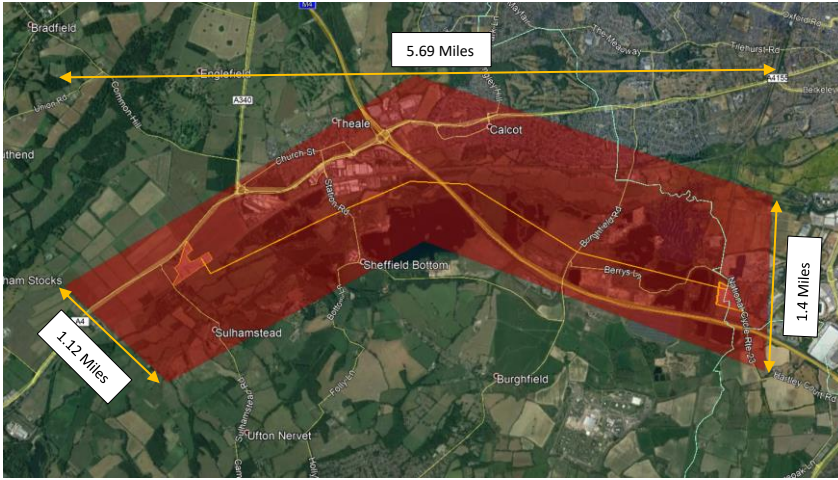


Figure 3 Proposed Dimensions of Airspace Request

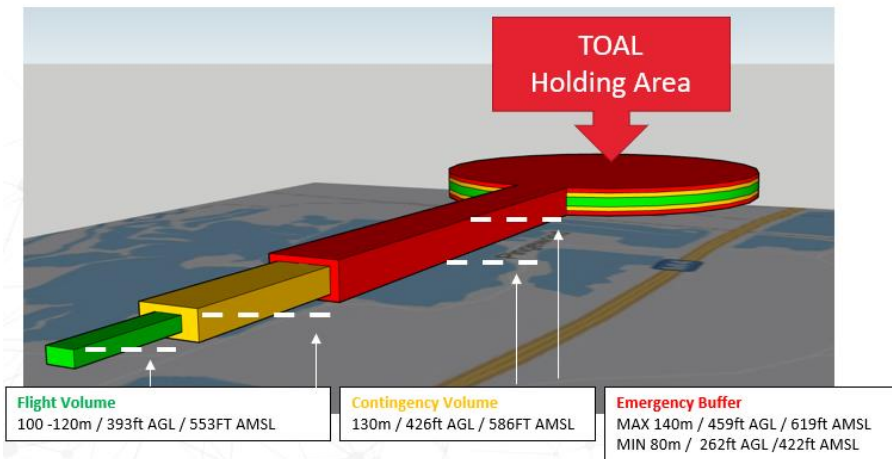


Figure 4 Cross Section of Flight Volumes Altitudes Of Arrow Corridor

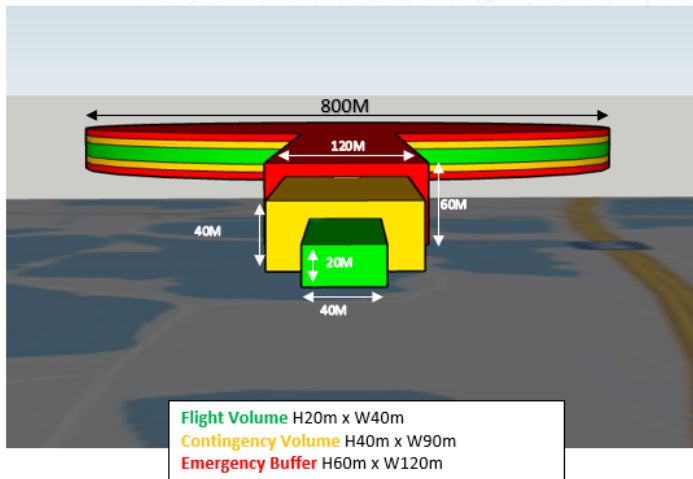


Figure 5 Cross Section Flight Volumes Dimensions Of Arrow Corridor

It is anticipated the ACP will be activated via NOTAM 24 hours in advance and will operating Monday – Friday 9am-6pm / dusk (whichever is first). Prior to operations starting, Altitude Angels DAA surveillance system will ensure there is low airspace activity before approving flights. This will continue over a period of up to 90 days. We are proposing operations will commence in September 2021.

Why are we contacting you?

During the planning of this airspace change we have identified several members of the aviation community which may be affected or may have interest in this airspace change, and we believe you (or the organisation you represent) fall into this group. You have been contacted as part of a targeted stakeholder engagement outreach programme intended to:

- ensure the safety and operational viability of the project,
- keep you informed of any changes to the ACP-2021-032 process,
- make sure that the principles of design and the proposed ACP will not have a harmful on other aviation activities, and
- develop deconfliction procedures with selected agencies to preserve adequate separation between the Unmanned Aircraft and other frequent airspace users.

Additionally, we believe - as we are sure many of you do - the solution to integrating commercial drone aviation into our skies safely is not further segregation, but safe integration. We therefore welcome and encourage any feedback you have on this ACP and our endeavours. We look forward to engaging on any challenges you foresee such that we can resolve them in support of this goal.

How to submit your feedback

Feedback can be submitted either electronically to stakeholder_engagement@altitudeangel.com or by post to:

Project Arrow – Stakeholder Feedback

Altitude Angel,
6th Floor, The Blade,
Abbey Square,
Reading, RG1 3BE

If you have any queries, please do not hesitate to include them in your feedback and we will aim to get in touch within three working days. Please submit your feedback by 09:00 on Monday, 26 July 2021.

We look forward to hearing from you.

Yours sincerely,

David Walters
Altitude Angel
Project Arrow Lead