



DAP1916 - Statement of Need

Tracking Code: N4ZLQ65

BEFORE YOU BEGIN

- ☐ Please ensure the contents of CAP 1616f, Guidance on airspace change process for permanent airspace change proposals are referred to prior to completing this form. *

TYPE OF CHANGE

1. Category of Airspace Change

Does your proposal concern Changes to Notified Airspace Design or Planned and Permanent Redistribution of Air Traffic? *

- ☒ Changes to Notified Airspace Design ☐ Planned and Permanent Redistribution of Air Traffic

Which of the following categories is the proposal being progressed under? *

- ☐ Permanent ☒ Temporary ☐ Trial

2. Title of proposal

Please enter a title for this intended change, (max 80 characters - the title should be succinct and include a location (where appropriate)): *

Darlington and Surrounding areas TMZ for BVLOS Drone Delivery Services

- ☐ Have you previously submitted a Statement of Need?

SPONSOR

3. Change Sponsor Details

Please select the appropriate category and complete. *

- ☒ A Company
☐ An Unincorporated Association or other body
☐ Individual (including sole traders and partnerships)

3a. A Company

Registered Company name (in full) *

Amazon UK Services LTD

Registered Company Number

03223028

Trading Address (primary site)

1 Principle Place, London

Trading name (if applicable)

Amazon Prime Air

E-mail

Postcode

EC2A 2FA

Registered Office Address

1 Principle Place, London

Country of Company Registration

UK

Country

United Kingdom

Postcode

EC2A 2FA

Email *

Confirm Email *

[REDACTED]

[REDACTED]

☒ Do you require access to the CAA's Airspace Change Portal?

Telephone *

[REDACTED]

Primary Point of Contact Name *

[REDACTED]

Website address

Additional Contacts

You can add up to 4 additional contacts (this is useful to ensure that periods of absence are covered)

Contact 1


Contact Name *


☐ Do you require access to the CAA's Airspace Change Portal?

Telephone *

Email *

Confirm Email *

 DELETE CONTACT

 Add Contact

STATEMENT OF NEED

Independent Aviation/Airspace Consultancy

☒ Is an Independent Aviation/Airspace Consultancy involved in this proposal?

Aviation Consultancy

Registered Company name (in full) *

Registered Company Number

Country of Company Registration

Registered Office Address

Postcode

Trading name (if applicable)

Trading Address (primary site)

4000 Parkway, Whiteley, Fareham, Hampshire

Country

United Kingdom

Postcode

PO15 7FL

Website address

Primary Point of Contact Name *

[REDACTED]

Primary Contact

☐ Should the CAA use the Independent Consultancy as the primary point of contact for this airspace change proposal?

☒ Do you require access to the CAA's Airspace Change Portal?

Telephone *

[REDACTED]

E-mail *

[REDACTED]

Additional Contacts

You can add up to 4 additional contacts

+ Add Contact

Statement of Need

Please complete the following four sections.

What is the objective of the proposed change? *

Amazon Prime Air, the airspace sponsor, has been selected by the UK CAA under CAP2616 to participate in the Regulatory Sandbox for the development of capabilities, processes, and procedures to integrate Unmanned Aerial Systems (UAS) into unsegregated airspace. Prime Air is looking to demonstrate its concept of operation (ConOps), including beyond visual line of sight (BVLOS) capabilities and to trial airspace integration concepts that will safely enable the transition of UAS from segregated to unsegregated airspace.

As part of the Regulatory Sandbox, Prime Air is seeking to establish a Temporary Reserved Area (TRA) with a Transponder Mandatory Zone (TMZ) to support these demonstration activities. The TRA+TMZ has been defined using the principles of flexible use, shared airspace established by the UK's Airspace Modernisation Strategy (CAP1711) and the Airspace Policy Concept for the Integration of BVLOS Unmanned Aircraft (CAP2533). The TRA+TMZ will cover an area that includes Darlington and surrounding villages spanning both Class G and Class D airspace (Teesside CTR).

In summary, Amazon Prime Air's proposed TRA+TMZ will support the CAA's ambition to migrate BVLOS operations from segregated airspace to non-segregated airspace in a controllable and safe manner, whilst aligned with the UK's Airspace Modernisation Strategy. The TRA+TMZ will be used as an opportunity to test available Detect And Avoid (DAA) solutions to support the proposed airspace change.

Please provide a summary of the issue or opportunity this proposal is seeking to address including any safety, operational, technical, environmental or economic factors. *

The proposed TRA+TMZ seeks to address the emerging opportunity of safely integrating drones into the UK's airspace system and supports the goal of exploring the policies, operational, and technical requirements to allow routine BVLOS UAS operations across both controlled and uncontrolled classes of airspace in the future. The establishment of a TRA+TMZ within the Teesside CTR and adjacent uncontrolled airspace is a strategic response to the growing demand for rapid, cost-effective, and environmentally friendly delivery services that Prime Air drone technology can offer. There have been no recent airspace changes in the area.

These activities, as part of the regulatory sandbox, will help inform the UK CAA's policy decision making and contribute to the development of a comprehensive regulatory framework, including for BVLOS operations, which is crucial for adoption and safe integration of drones into the UK airspace. This airspace change will be underpinned by the following principles, which are in alignment with the UK's Airspace Modernisation Strategy:

Safety: The TRA will provide a controlled environment to rigorously demonstrate the safety protocols required for BVLOS operations, demonstrating equivalent levels of safety to crewed aviation, ensuring that drones can coexist with crewed aircraft in the national airspace. The TRA+TMZ supports the 'accommodation' phase of Prime Air operations, before progressing to 'integrated' operations (as described in CAP2533).

Operational: By demonstrating operational processes, safety protocols and new technologies within the TRA, the proposal aims to streamline the integration of drone flights into daily airspace operations by focussing on low-level, low-usage airspace, thereby improving airspace utilisation and setting precedents for future drone operations.

Technical: Prime Air has developed a suite of drone and drone management technologies required for airspace integration that includes (but not limited to) an on-board DAA system that can independently ensure safe separation from crewed aircraft by detecting and avoiding airborne and ground-based obstacles supplemented by ground-based lower airspace traffic monitoring. The TRA+TMZ also allows for DAA validation activities as a means to meet the intentions of SERA.3201 and SERA.3205, and to support the CAA's development of its DAA and BVLOS policies.

Environmental: The Prime Air drone delivery system offers a significant reduction in carbon emissions compared to traditional road-based delivery methods. This proposal supports the UK's environmental goals by facilitating the adoption of green technology in logistics, as outlined in the 'Future of Flight Action Plan' (<https://assets.publishing.service.gov.uk/media/66018a4fa6c0f7bb15ef920a/future-flight-action-plan.pdf>).

Economic: Economically, drone delivery promises to enhance last-mile logistics and delivery sectors by reducing transit times and associated costs when compared to road-based equivalent services. It can also stimulate economic growth in related and supporting industries by creating skilled jobs in innovation and technology sectors. This has been highlighted in PwC's 2022 study into the potential positive impacts of routine drone use on the UK economy, jobs, productivity, and quality of life (<https://www.pwc.co.uk/intelligent-digital/drones/skies-without-limits-2022.pdf>).

Please provide a description of the current airspace design (i.e. the airspace structure and flight procedures) relevant to this proposal. *

The proposed operating area spans both uncontrolled airspace and the Teesside International Airport (TIA) Class-D Control Zone (CTR).
The TIA CTR extends 10km to the South-West and 20km to the North-East, from the surface to 6,000ft Above Mean Sea Level.

A flight restricted zone (FRZ) is also in place surrounding TIA, however, no Prime Air operations are planned within this area.

This area is predominantly used by a mixture of passenger /air-cargo flights operating out of Teesside International Airport (TIA), as well as TIA based operators engaged with trials/research operations to the North-East.

The TIA CTR benefits from primary and secondary radar surveillance and associated Air Traffic Service offered by TIA with entry into the CTR is based on a clearance from TIA air traffic control.

No alterations to the current airspace structure (outside of the TRA+TMZ) are proposed.

The TIA CTR may, on occasion (e.g. ATC duty time requirements), revert to Class-G airspace during Prime Air operational hours.

Please provide a description of the current prevailing air traffic situation (i.e. frequency and number of movements) and an indication of estimated forecast growth (where applicable). *

Teesside Airport has approximately 20,000 movements per year, peaking during summer months, with a flat forecast for 2025 and 2026. The majority of movements are made up of General Aviation, on-site Aero Club and scheduled passenger / air-cargo flights. Occasional transit is required by military, air ambulance and police flights. The proposed TRA location, geometry and height have been designed to enclose the Prime Air operation and minimise disruption to established operations in the region. Stakeholder engagement, as part of this ACP will gather any additional requirements for further consideration of the TRA design.

Five-Letter Name Codes (5LNC)

- ☐ Does this request solely concern the reservation of new Five-Letter Name Codes (5LNC) in advance of a future proposal?

Secretary of State for Transport's priorities

- ☐ Is the proposal being progressed under any of the priorities set by the Secretary of State for Transport or any other CAA priority such as safety or national security?

Airspace Modernisation Strategy *

- ☒ Is the proposal supporting the delivery of the Airspace Modernisation Strategy? If not, please use the text box below to explain how the proposal is not inconsistent with the Airspace Modernisation Strategy

Additional Information

Please use the box below to add any further information which the CAA should be aware of when considering this submission (for example dependencies on other airspace change proposals, proposed operating date(s) and/or funding deadlines)

The project is currently targeting commercial operations by December 2025, supported by a program of work developed with the CAA.

SUBMISSION INSTRUCTIONS

Submission

Your form has been successfully submitted. Please keep a copy of this acknowledgement for your records.

Date and Time:

18 Dec 2024 3:41:10 PM

Application Submission Number:

DAP1916V2-1393

Please note that the Airspace Regulation team will contact you to acknowledge receipt of your Statement of Need and to confirm the unique ACP reference number (ACP-YYYY-NNN) allocated to this submission. Following receipt of your unique ACP reference number, you will be required to create an associated airspace change proposal on the **CAA's Airspace Change Portal** (<https://airspacechange.caa.co.uk/>). Please refer to CAP 2385 Airspace Change Portal Important Information Guide.

Given the high number of new airspace change proposals (ACP), together with those proposals which are already in the system, it is possible that the proposal may not be assigned to a Technical Regulator/Account Manager immediately following submission of the Statement of Need. New proposals are allocated on a first come first served basis, unless the proposal is directly related to safety or national security matters, or as directed by the Secretary of State for Transport's priorities.

Once your submission has been assigned to an Account Manager/Case Officer, arrangements will be made for you to attend an Assessment Meeting. One of the key outputs from this meeting will be an indicative timeline for the proposed ACP. For Permanent changes (Level 1 and Level 2 only), to enable the CAA to consider your proposed timescales, you will be expected to present dates for the following milestones at the Assessment Meeting:

- DEFINE Gateway
- DEVELOP & ASSESS Gateway
- CONSULT Gateway
- Formal Airspace Change Proposal Submission
- DECIDE Gateway
- Target AIRAC

The CAA holds Gateway Assessment Meetings on a monthly basis and the annual schedule is published on the **CAA's airspace change portal** (<https://airspacechange.caa.co.uk/about-airspace-change/>).

Finally, you should also note that from September 2018 any amendments submitted by a Data Originator or ANSP for onward promulgation in the UK IAIP will be subject to the Aeronautical Data Quality Requirements. See Regulation (EU) No. 73/2010 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018 and **CAP 1054: Aeronautical Information Management** (<https://publicapps.caa.co.uk/modalapplication.aspx?appid=11&mode=detail&id=6808>) guidance material for further information. These requirements will be discussed in greater details during the course of your initial meeting with the CAA.

When you have completed this form, click this button to submit the form for processing. Do not click this button more than once. You will then be provided with further instructions.