



## 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

### 2. Title of proposal

Please enter a title for this intended change, (max 80 characters): \*

Develop BVLOS Drone Operations in non-segregated airspace

- 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) \*

Trax International Ltd

Registered Company Number

Trax International Ltd

Country of Company Registration

Trax International Ltd

Registered Office Address

[REDACTED]

Postcode

[REDACTED]

E-mail

[REDACTED]

Trading name (if applicable)

Trading Address (primary site)

Country

Postcode

Website address

www.traxinternational.co.uk

Primary Point of Contact Name \*

[REDACTED]

Requires Airspace Portal Access ?

Telephone \*

Mobile Number (for Airspace Portal) \*

Email \*

### Additional Contacts

You can add up to 4 additional contacts

#### Contact 1

Contact Name \*

Requires Airspace Portal Access ?

Telephone \*

Mobile Number (for Airspace Portal) \*

Email \*

#### Contact 2

Contact Name \*

Requires Airspace Portal Access ?

Telephone \*

Email \*

## STATEMENT OF NEED

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### 4. 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

Telephone

Email

Trading Name (if applicable)

Trading Address (primary site)

Country

Postcode

Website address

Primary Point of Contact Name \*

Primary Contact

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

Requires Airspace Portal Access ?

Telephone \*

Email \*

### Additional Contacts

You can add up to 4 additional contacts

### 5. Statement of Need

Please provide a brief 'Statement of Need' clearly explaining what issue or opportunity this proposal is seeking to address.

Further information can be found in CAP1616 \*

#### The Existing Situation

1. CAP722, CAP1861 and CAP1915 indicate that, Beyond Visual Line of Sight (BVLOS) operations in the UK are possible in unsegregated airspace, subject to the 'Detect and Avoid' capability of the Unmanned Air System (UAS) being as good as the 'See and Avoid' capability of conventional aircraft under Visual Flight Rules (VFR).
2. If a UAS will be operating BVLoS with no detect and avoid capability, then segregated airspace (a Temporary Danger Area (TDA)) should be established. TDAs are required, because they reduce risks to conventional traffic imposed by Remotely Piloted Aircraft System (RPAS) to as low as practically possible.
3. It is understood that there are currently multiple live applications with the CAA for the establishment of TDAs to enable BVLoS RPAS operations. There is a risk that accepting these requests will create a patchwork of temporary airspace segregations across the UK which will quickly become unsustainable due to the impact on safety and efficiency, specifically:
  - SAFETY more temporary segregated airspace increases the risk of infringements by other aircraft into the protected zone, which may result in mid-air collisions.
  - EFFICIENCY more temporary segregated airspace limits access to aircraft into the protected zone, constraining the operations of other aviation activities (some which will also be essential to CV19 responses).

#### The Proposed Solution

4. The project aims to gradually demonstrate BVLoS operations in non-segregated (Class G) airspace are safe, can meet with regulatory approval and integrate seamlessly with manned aviation whilst still providing safe and efficient access to the airspace by all airspace users.
5. The solution will provide RPAS operators (and other equipped aircraft) with real-time, shared situational awareness of the airspace, enabling the remote operator to strategically and/or tactically detect and avoid other aircraft during BVLoS operations.
6. The eventual solution has three components, based on available and mature technologies and procedures, that are applied together in a new configuration:
  - a. A Transponder Mandatory Zone (TMZ) that enables aircraft to enter the airspace, providing they transmit a basic international standard of Electronic Conspicuity (EC) information.
  - b. A surveillance and broadcast environment created by a network of ground stations that receive the EC information from aircraft and rebroadcast it to all as an integrated air picture via international standards.
  - c. An Unmanned Traffic Management (UTM) system that provides the software and interface for remote RPAS pilots to strategically and/or tactically detect and avoid other aircraft.

#### What this proposal will involve

7. This project has received funding from Innovate UK as part of the Drone solutions for COVID-19: Innovate UK Article 25 competition and the aim is to conduct a live trial of BVLoS operations in non-segregated airspace.
8. It is proposed that the location of the trial and trial preparation will be at Goodwood Airfield, who currently have a TDA in place for drone operations. This project has the full support of the Goodwood TDA applicant, the Goodwood Aviation Innovation Centre and Goodwood Aerodrome. This project aims to integrate with Goodwood's current operation to ensure minimal impact on the current airspace users.
9. The project will develop an airspace trial plan in accordance with CAP1616. The trial plan will contain the evidence necessary for the CAA to approve a live demonstration of BVLoS operations within an established Temporary TMZ within Class G airspace. The evidence for the trial will first be gained from testing within the protection of the Goodwood TDA (1). For this reason, it is likely that we will seek an extension to the timescales and/or operating hours of the existing TDA.
10. The proposal involves a series of phases:

#### Phase Proposed Activity Approx. Timescales

Existing Goodwood Installation of a network of EC receivers and TDA transmitters with a robust and effective coverage down to below 400ft AMSL.

Q4 2020

VLoS RPAS flights integrated with controlled fixed wing aircraft that demonstrates both the coverage and technical specifications of the air/ground receive/transmit functions and UTM system.

TMZ Preparation A consultation with aviation stakeholders on the specific aspects of the BVLoS trial, including the size, Q4 2020 location and equipage requirements of the TMZ.

Submission of a trial plan to the CAA including a safety assessment in accordance with CAP1616 for an airspace Q1 2021 trial to demonstrate BVLoS operations within non-segregated airspace (TMZ).

Introduction of TMZ The establishment of a Temporary TMZ for a live demonstration of BVLoS operations which can be Q1/2 2021 accessed by all suitably equipped airspace users.

Close of TMZ Trial A final trial report outlining the requirements that enable BVLoS operations within non-segregated airspace. Q2 2021

(1) The BVLoS Development Pathway (CAP1861) suggests, that tests in segregated airspace should precede tests in a non-segregated environment.

## 6. Administrative Changes

- Does your proposal represent an administrative change to the Aeronautical Information Publication (Proposed Level 0 change)?

## 7. Instrument Flight Procedures

Does your proposal have the potential to include a change to and/or new IFPs?

## 8. 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?

## 9. 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 and/or funding deadlines):

# SUBMISSION INSTRUCTIONS

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## Submission

Date and Time: **24 Sep 2020 10:13:17 AM**

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

Application Submission Number: **DAP1916V2-134**

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](#). Please refer to CAP 1706: CAA Airspace Change Portal Sponsor Training Manual provides for further information/guidance on how to use the Airspace Change Portal.

Once your submission has been assigned, 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 airspace change. 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
- Target AIRAC

The CAA holds Gateway Assessment Meetings on a monthly basis and the annual schedule is published on the [CAA website](#).

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 [Commission Regulation \(EU\) No 73/2010](#) (updated by 10/29/2014) and [CAP 1054: Aeronautical Information Management](#) guidance material for further information. These requirements will be discussed in greater detail 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.