

NPAS BVLOS Trial

Stage 1 Define
Assessment Meeting
ACP-2024-035

14 August 2024

NPAS -

NATS -

Vehicle Supplier –



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Agenda

- Introduction
- Statement of Need (discussion and review)
- Issues or opportunities arising from the proposed change
- Process requirements – TRA, Engagement, Safety Assessment
- Provisional timescales
- Next steps
- AOB



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Statement of Need

“This 6-month trial aims to support the integration of new airspace users by operating a Remotely Piloted Aircraft System (RPAS), launched from NPAS Almondsbury, in an established Temporary Reserved Area (TRA) alongside crewed aircraft.

Under current legislation, a TRA is required to enable Beyond Visual Line Of Sight (BVLOS) flight operations with RPAS that are not equipped with Detect and Avoid systems similar to the principle of See and Avoid.

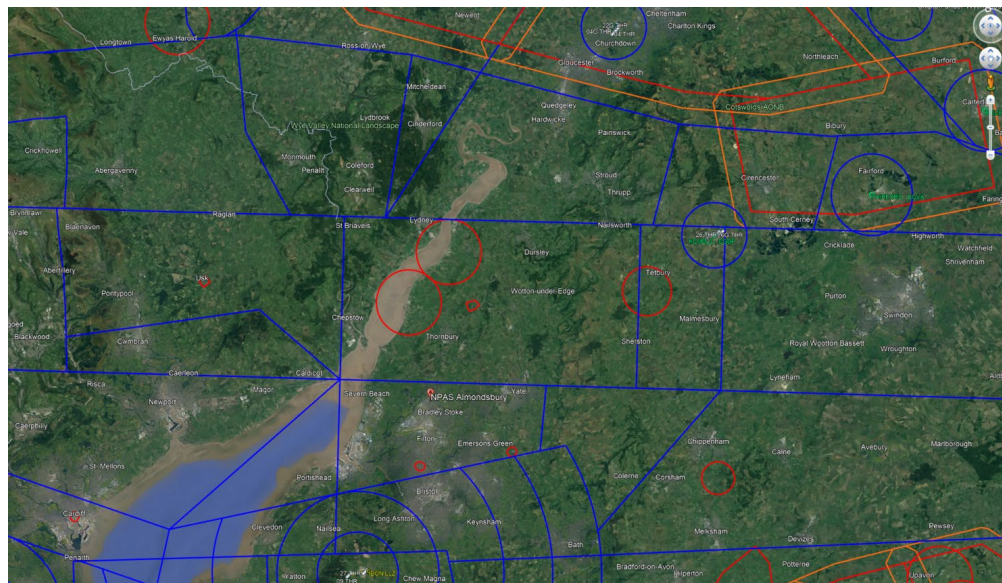
The trial will collect data to help inform the production of new policies on the integration of new airspace users. As well as investigate the use case for RPAS to be a cost-effective addition to existing crewed aircraft operations, enabling a diverse, efficient, and responsive fleet for emergency services.”



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Background

- NPAS Almondsbury's base is located in Class G airspace adjacent to the Bristol CTA (base of CAS is 4,000ft).
- Nearby there is a bird sanctuary, restricted areas R145 & R154, gliding sites, and Bristol Airport.
- NPAS Almondsbury base is shared with the air ambulance and both organisations' aircraft will continue to operate as normal.
- NPAS operates one helicopter from Almondsbury at around 1,000ft with a basic service from Bristol ATC.
- This proposal aims to design and establish an appropriate TRA to allow the objectives to be achieved. The trial would consist of several phases with criteria to progress to the next.



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Issues and/or Opportunities arising from the Proposed Change

Opportunities

- Inform policies on the integration of new airspace users
- Home Office funding for 'Futures and Innovation'
- Linked to the NPCC Police Aviation Strategy (2019-2029)
- Long-term opportunity to:
 - Reduce policing costs
 - Reduce carbon footprint of policing
 - Increase duration of operational activities
 - Respond to incidents more efficiently

Issues

- Restricted access to TRA
- Environmental impacts
 - Overflights of protected landscapes
 - RPAS noise nuisance



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Exploiting the Opportunities

Inform policies on the integration of new airspace users

- TRA will allow access to specific users including NPAS crewed aircraft operating alongside RPAS, to allow the trial to gather information on how they react and operate together.

Home Office funding for 'Futures and Innovation'

- This funding has been set aside for innovation. This must be used within this financial year – as reflected in the proposed timelines.
- Although using NPAS Almondsbury as the base / trial site, the findings will impact NPAS activities across England and Wales.

Linked to the NPCC Police Aviation Strategy (2019-2029)

- By adding RPAS to the fleet, response times to safety incidents can be decreased. It will give NPAS the ability to provide longer endurance of air support over protracted scenes which reduces risk to the public.



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Exploiting the Opportunities

If the trial leads to RPAS vehicles being put into routine service, then there are long-term opportunities to:

- Reduce policing costs
 - RPAS vehicles are more fuel efficient than traditional helicopters.
- Reduce carbon footprint of policing
 - RPAS vehicles are more fuel efficient than traditional helicopters.
- Increase duration of operational activities
 - No need to return to base for crew handovers.
 - Aircraft could travel further or stay in an area for longer.
- Deploy uncrewed aircraft more proactively
 - As they cost less to run, they could be operated prior to a high-risk event to mitigate against incidents occurring, rather than helping to resolve an incident once it occurs.
- Potential to increase public safety through police presence and reassure the public by having a long loiter police presence.

This trial will provide the knowledge and understanding of these vehicles, in live operation (and alongside helicopters) in order to work out if they are a practical addition to the fleet and allow these opportunities to come to fruition.



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Addressing the Identified Issues

Restricted access to TRA

- The TRA will be made of segments which can be activated via NOTAM so that the minimum amount of airspace is restricted at any time. Most operations should occur during nighttime hours limiting the impact on other airspace users.

Overflights of protected landscapes

- A HRA Screening Form will be sent to the CAA for review at the earliest opportunity. Geofencing around certain European sites could be used to reduce noise impacts.

RPAS noise nuisance

- The RPAS has an internal combustion engine (with optional additional muffler) and is a 'traditional' helicopter design. Therefore, we assume it does not emit high frequency noise per an electric multirotor RPAS. This was one of the key selection criteria in selecting the RPAS. Further noise metrics will be provided in due course.



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Process Requirements

TDA Policy – A TRA made of several sections will be used to facilitate this trial along with a TMZ and a basic service from Bristol ATC. TRA activation would occur via NOTAM.

Stakeholder Engagement – An engagement period of 4 weeks will be used to give stakeholders time to consider and respond to the proposed trial operations. This would occur in Oct/Nov 2024, via e-mail, and there are no holiday periods during this time.

Safety Assessment – The sponsor will submit an OSC at Stage 4 (Submit) in line with CAP1616(G). The early trial phases would seek to test the vehicles EC technology before using it in later trial phases. The RPAS will initially be piloted by the supplier with qualified NPAS pilots alongside. These NPAS pilots will be trained in BVLOS piloting for subsequent phases.



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Provisional Timelines

This ACP is for a 6-month trial and will follow the Trial ACP process as set out in CAP1616G.

Due to funding requirements, an ACP decision is required by 31st March 2025.

Activity	Estimated Date(s)
HRA early screen assessment for CAA review	Aug 2024
Engagement materials for CAA review	Oct 2024
Engagement	Oct/Nov 2024 (4-weeks engagement period)
Submit ACP	28 th Feb 2025 (4-week assessment period)
AIC submission date	18 th Apr 2025
AIC date	29 th May 2025
Fly	29 th May 2025



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Next Steps

Planned next steps

- Publish formal RPAS vehicles supplier selection,
- Expand on extant ConOps and OSC documentation,
- August Town Hall Event – “Show and Tell” for local stakeholders as required by Air Ambulance,
- Submit Screening Criteria Form and await response from CAA.



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Does anyone have any other points/questions/comments they'd like to raise?



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