North Sea BVLOS operations

ACP-2024-001
Assessment Meeting

13-09-2024

NATS

Agenda

Introduction

Statement of Need (discussion and review)

Issues or opportunities arising from the proposed change

Process requirements – TRA, engagement, safety assessment

Provisional process timescales

Next steps

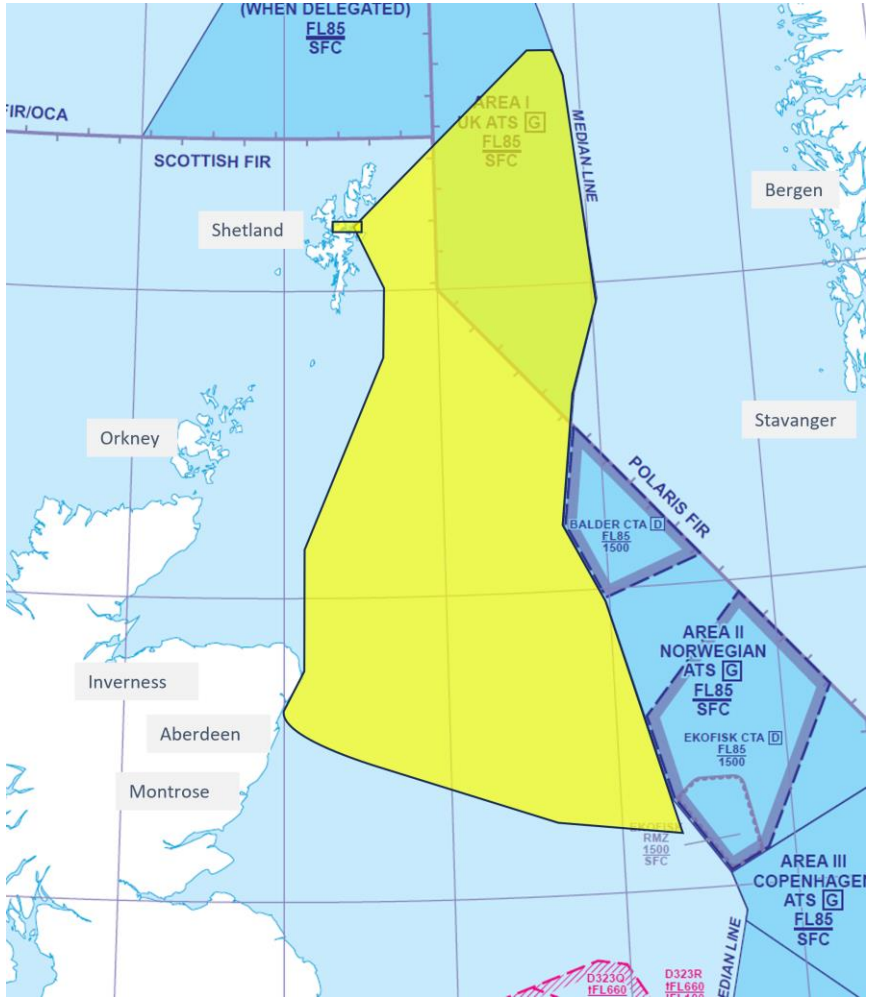
AOB

Statement of need

- The proposed Airspace Trial, led by NATS Services (NSL) will demonstrate the end-to-end scalable solution and innovative technology to enable the safe accommodation / integration of uncrewed and crewed operations.
- Our aim is to develop a safe and scalable solution, in the North Sea that enables strategic deconfliction, flight authorization, managed access to the trial airspace and utilising enhanced situational awareness.
- Whilst providing the benefits of an environmentally friendly service in respect of significantly reduced carbon emissions, the concept will directly support the development of operations that are eventually agnostic to the land or maritime environment.
- NATS Services have partnered with an OSC approved BVLOS operator Flylogix and begun engagement with key stakeholders to demonstrate a safe and effective solution to integrate crewed and uncrewed aircraft into a trial airspace located at the North Sea.
- Via the CAP2616 sandbox process and CAP1616 airspace change process, this trial would expect to establish TRA and ruleset to acquire data on accommodation of both crewed and uncrewed aircraft, potentially with multiple simultaneous uncrewed operations.

Background

- NATS Services have been selected into the UK CAA Sandbox
- Proposed trial airspace falls within North Sea - Class G
- Majorly helicopter operations to support Oil & Gas
    - Typically operating around 2000-3000 feet, ~145 operations per weekday
- ATS provision by NATS [Services] Limited - Aberdeen ANSP
- This proposal aims to design and establish an appropriate TRA (TMZ) to enable the trial objectives
- Currently, our partner Flylogix is establishing TDAs to conduct their North Sea operations



The proposed trial airspace design is depicted on the AIP chart (left) and the Google Earth map (right). A sample of Offshore installations where Flylogix will conduct operations are marked on the Google Earth map to clarify the rationale behind the trial airspace design.

Issues and/or opportunities arising from the proposed trial

Opportunities

- NATS Services aims to test the combination of new technology with existing ATM procedures to progress ITM environment,
- Support/Inform Policies on the "accommodation" of NAU, gradually move to "integration" for industrialisation,
- Reduce resource and cost burdens associated with numerous TDA/ACP applications,
- Optimise airspace efficiency,
- Enhance safety by the provision of recognised air environment,
- Reduce impact to other airspace users affected by TDAs,
- Reduce carbon footprint, supporting Net-zero initiative,
- Reduce the risk-to-life by replacing crewed with uncrewed operations for certain use-cases.

Issues

- Impact to airspace users,
- Proximity to other sovereign airspace,
- European designated sites (HRA).

Exploiting the opportunities

NATS Services aims to test the combination of new technology with existing ATM procedures to progress ITM environment

- NATS Services will develop the end-to-end safe and scalable solution and innovative technology to enable the safe "accommodation" to "integration" of uncrewed and crewed operations.

Support/Inform Policies on the "accommodation" of NAU, gradually move to "integration" for industrialisation

- TRA (TMZ) will enable access to crewed and uncrewed cooperative users within unsegregated airspace, to collect the evidence required to progress the CAA's 2040 Airspace Modernisation Strategy, and NATS Services strategic objectives.

Reduce resource and cost burdens associated with numerous TDA/ACP applications

- As an alternative to multiple TDA applications, the TRA (TMZ) reduces the time, cost and resource burden for:
  - Cooperative airspace users,
  - Regulatory support,
  - Use-case sponsors,
  - ANSPs.

Exploiting the opportunities

Optimise airspace efficiency

- Creates a recognised air environment that reduces airspace inefficiencies due to ATS restrictions against unknown traffic,
- Reduces ATCO workload through the recognised air environment,
- Supports development of Digital Flight Rules,
- Enhances situational awareness.

Enhance safety by the provision of recognised air environment

- Reduces propensity for unknown traffic encounter,
- Enables/enhances the implementation of DAA capabilities, supporting DAA Policy development,
  - Supports tactical route planning and traffic deconfliction,
- Enables airspace capacity analysis.

Exploiting the opportunities

Reduce impact to other airspace users affected by TDAs

- Reduced re-routing due to TDA restrictions,
- Reduced cockpit workload .

Reduce carbon footprint, supporting Net-zero initiative,

- Reduce the carbon footprint by reducing fuel consumption, as rerouting around TDAs or unknown traffic is no longer needed,
- Replace crewed aircraft with uncrewed aircraft, reducing carbon emissions.

Reduce the risk-to-life by replacing crewed with uncrewed operations for certain use-cases

Addressing the identified issues

Impact to airspace users

- Aberdeen ATC provide "business as usual" air traffic service,
- TRA (TMZ) ceiling is below traditionally observed crewed transit altitude,
- Vast majority of airspace users are professional (commercial) pilots – minimal anticipated GA traffic,
- Vast majority of the traffic is electronically conspicuous and in receipt of ATS by Aberdeen.

European designated sites (HRA)

- HRA shared with NATUREScot, review is in progress,
- Impact expected to be low/negligible.

Proximity to other sovereign airspace

- Teams discussion taken place with Avinor / positive engagement.

Process requirements

TRA proposal

- TRA would encompasses a sectored TMZ in which Aberdeen ATC will provide the UK FIS to crewed aircraft,
- NATS Services will discharge the responsibility of traffic information to the uncrewed traffic by the provision of an appropriate surveillance picture,
- Unless advised by Aberdeen ATC, all traffic will exercise their responsibilities in accordance with the "rules of the air".

Stakeholder Engagement

- Heli operators, GA, maritime operators, SAR, ANSPs, MoD, Oil&Gas, Helimed, NatureScot, and relevant members of NATMAC,
- Conducted early [soft] engagement with MoD, HIAL, Avinor, MCGA, HeliOffShore, NatureScot, and Oil&Gas to assist TRA design,
- Due to the limited number of stakeholders and the early engagement undertaken, we expect to complete the formal engagement period in 4 weeks.

Noise Assessment

- Minimal noise impact – ≤45dB LASmax at 400ft above ground level (AGL) at a distance of 1km, we expect minimal/no impact.

Safety Assessment

- Flylogix has 6 years of BVLOS flight experience. Flylogix's approved TDA OSC is used as a basis to develop TRA OSC. Flylogix will submit TRA OSC at ACP Stage 4 in line with CAP1616(G).

Provisional timelines

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

Activity	Estimated Date(s)
Assessment Meeting	13 September 2024
HRA Screening Minutes and timeline shared with CAA Share engagement strategy and material with CAA	17 September 2024
CAA's feedback/approval for minutes and timeline	24 September 2024
Publish Minutes	24 September 2024
CAA HRA response Feedback from the CAA on engagement strategy and material	1 October 2024
Kick-off engagement	2 October 2024 (4-week engagement period)
Stakeholder engagement - end	30 October 2024
Submit ACP	27 November 2024 (6-week assessment period)
CAA decision	9 January 2025
AIC cutoff	23 January 2025
Publish/Go live	6 March 2025

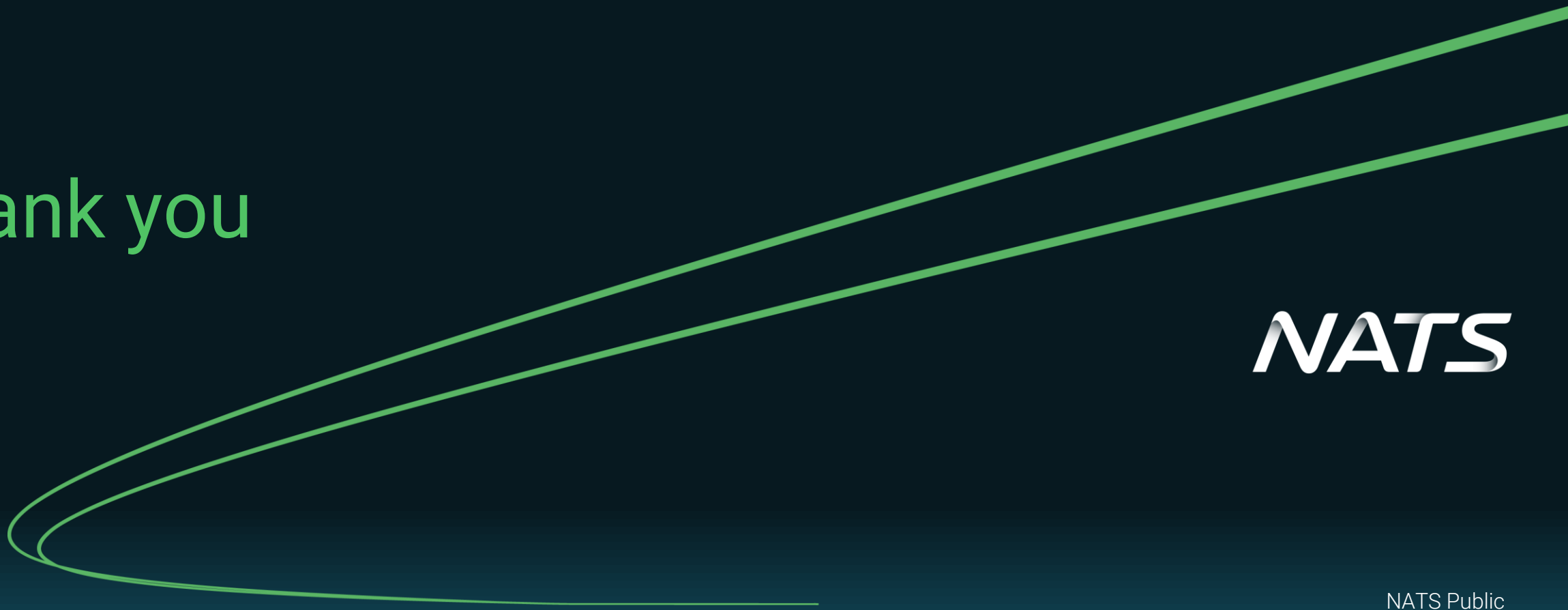
Next steps

- Publish Minutes,
- Share engagement strategy and material,
- Kick-off Stakeholder engagement after response from CAA,
- Update OSC documentation.

AOB

Does anyone have any questions/comments they would like to raise?

Thank you



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