



MINUTES OF ACP-2021-025: GROUP OF TDAS CONNECTING ORKNEY AND SHETLAND ISLANDS FOR SATE UAS OPERATION ASSESSMENT MEETING HELD ONLINE ON 08/07/2021

08/07/2021

Present

[REDACTED]

Appointment

[REDACTED]

Representing

[REDACTED]

CAA Assessment Meeting Opening Statement

The CAA has received the statement of need, presentation and agenda in advance of this Assessment Meeting and can confirm that the documents are required to be published together with the minutes of this meeting on the airspace change portal.

The purpose of the Assessment Meeting as set out in CAP1616 is for the Change Sponsor to present and discuss their Statement of Need, provide information on how it intends to fulfil the requirements of the airspace change process and present its provisional timescales. Lastly, the sponsor is required to provide information on how it intends to meet the engagement requirements of the process.

	ACTION
<p>Item 1 – Introduction</p> <p>All attendees were introduced.</p> <ul style="list-style-type: none"> ■ read the CAA opening statement (as above). ■ invited Windracers to start their presentation. 	
<p>Item 2 – Statement of Need (discussion and review)</p> <ul style="list-style-type: none"> ■ Introduced the Sustainable Aviation Test Environment (SATE): <p>The Sustainable Aviation Test Environment - or SATE for short - Project is part funded by UK Research and Innovation (UKRI) through the Industrial Strategy Challenge Fund. Based at HIALS Kirkwall Airport in Orkney, the SATE project will create the UK's first operationally-based, low-carbon aviation test centre.</p>	

The project was launched as part of UKRI's Future Flight Challenge and it will operate for an 18 month period.

Led by HIAL, the SATE project brings together a consortium of aviation industry specialists, local Orkney and Caithness businesses, public sector bodies and academia.

Consortium members will look at how to implement zero-carbon airport infrastructure using green energy sources, as well as digital networking and the development of resilient communications. Different types of alternatively fuelled and alternatively piloted aircraft will be tested to identify the next generation of air services along with the operational airport infrastructure required to support sustainable aviation. The socio-economic impact of new technologies and services in the region, and the skills and training needed to support them, will also be assessed.

Kirkwall Airport is well suited as a test environment location due to the variety of short routes it offers acting as a hub connecting Orkney's island communities through its inter-island flight service. It also allows flight trials to be undertaken in a 'real life' context. With dedicated infrastructure, the SATE project presents an opportunity for technology partners to utilise the test facility complex at Kirkwall airport, which includes Office, Hangar, Apron, Taxiway.

■ Mentioned that the parties participating in the SATE project are also stakeholders of this ACP-2021-025.

Item 3 – Issues or opportunities arising from proposed change

■ Presented the opportunities which are linked to the statement of need and covered the following points:

i. Use cases

Windracers carried out early engagement with parties in the Shetland and Orkneys islands to identify the user cases and define the routes for the SATE project. Main companies engaged: NHS, Royal Mail, Oil and Gas industry. A logistic gap affects these companies in these areas and can be filled in by ULTRA UAS technology.

ii. Routes

ULTRA SATE operations will connect mainland Scotland, the Orkney and Shetland Islands applying the technology to actual use cases. The routes covered are the following:

- Wick – Kirkwall
- Kirkwall – Eday – North Ronaldsay
- Kirkwall – Fair Isle
- Kirkwall – Lerwick
- Kirkwall – Unst

iii. ULTRA UAS

ULTRA UAS has been designed and built for robustness and reliability with multiple redundancy of critical systems. The aircraft is equipped with electronic conspicuity (Mode-S and ADS-B in/out) and multiple redundancy

of C2 links. An independent health monitoring system is available to monitor critical systems in real time.

iv. Previous point-to-point operations

The first BVLOS point-to-point flight in the UK was carried out by Windracers in May 2020 between mainland England and the Isle of Wight. Following this, in December 2020 another point-to-point flight was completed between Lands' End and the Isles of Scilly.

An airbridge scheduled service was conducted for a month to deliver parcels to the Isles of Scilly from Perranporth. The return flights were successfully completed in a limited time window demonstrating Windracers capabilities to deliver point-to-point missions.

v. Other Opportunities

The technology and the type of operation have already been proven. The operations for the SATE project will have a low ground risk scenario, an active participation of ATSU's and will involve local operators in the planning of the operations. LARS availability will be tested during the project.

vi. Issues and solutions

The airspace is busy with scheduled and unscheduled flights: Loganair main line service and interisland service, Airtask inter island service, Oil and Gas operations. To integrate with this busy airspace Windracers proposes to have spatial and time separation between UAS and scheduled crewed flights and activate the TDA for short periods of time.

To overcome the lack of flexibility of TDAs, DAAIS or DACS services provided from local ATS will be made available with previously agreed separating procedures.

Short notice changes to the schedule are accounted for with a time buffer in the TDA activation times. Tactical deconfliction is provided by continuous communication with key stakeholders.

Non scheduled flights are separated with procedures to give way to crewed flights.

■ mentioned Windracers experience on Lee on Solent with busy airfields and integrating with crewed aircraft.

■ explained how Windracers deconflicted with SARS helicopter operators using loiter positions on Lee-on-Solent

■ Continued the presentation covering ways to address the issues identified:

i. Separation

- Scheduled UAS flights will provide time separation from VFR scheduled flights.
- The UAS routes are designed to provide vertical separation from the IFR procedures.
- Use of segregated airspace informed via NOTAM to occasional airspace users.
- Windracers will command the UAS to give way to crewed aircraft traffic with pre-defined loitering positions and following ATSU instructions.
- Landing circuits and loiter positions will be agreed with the ATSU of each airfield.

ii. Schedule

The schedule is designed to be in the window of time with less airspace usage expected and will be published before starting activity. All TDA segments won't be active at the same time, only one or two segments will be activated together for short period of time to enable the intended operations.

iii. Air traffic services and procedures

Feedback from stakeholders engaged highlighted the lack of flexibility of using segregated airspace. To address this Air Traffic Services are sought to provide DAAIS or DACS, the TDA will be activated for short period of time and continuous communication with key stakeholders will be carried out. The following ATSUS will be contacted during operations:

- Wick ATC
- Kirkwall ATC (DAAIS A-B)
- Sumburgh Radar (pending agreement for DAAIS/DACS C-D-E)
- Lerwick FISO
- Local AGCS (when available)

█ explained that he is aware that the assessment meeting is not to present a solution for the ACP but a proposal, however Windracers has carried out a large amount of work so far on the TDA geometry and procedures during the stakeholder engagement process and this is being presented.

Item 4 – Provisional indication of the scale level and process requirements*

█ The Airspace Change process for this type of ACP is regulated by the CAA Policy for the Establishment of Permanent and Temporary Danger Areas and follows the process detailed in CAP 1616:

- Stage 1: Submission of a Statement of Need clearly stating the temporary nature of the proposed change.
- Stage 3: Related to stakeholder engagement. Length of this stage depending on the engagement strategy. The typical 6-week period can be scaled down depending on specific conditions and previous engagement.
- Stage 4: Compile documentation and submission
- Stage 5: CAA Assessment (Decide Gateway)
- Stage 6: Implementation and monitoring

█ Windracers are knowledgeable of the application process towards an UAS Operational Authorisation. Given the complexity of the ACP and the intended operations it is very important for the UAS Sector to see the Temporary Operational Instructions (TOIs) or Letters of Agreements (LofAs) with Air Traffic Services, SAR Operators and other parties.

█ Requests that, once the ACP provisional timeline has been accepted, a meeting with the UAS Sector is organised to align the timelines of the Safety Case assessment.

█ Advised that the formal stakeholder engagement cannot be initiated until the initial assessment meeting has taken place, however the process allows for the formal engagement period to be scaled and evidence of all the preliminary engagement done to date can be used to support the sponsor's rationale.

<ul style="list-style-type: none"> ■ The approval of the provisional timeline will be depending on the availability of CAA resources for this process. ■ CAA will take away the Sponsor request on validating current engagement as part of the formal stakeholder engagement. 	
<p>Item 5 – Stakeholder Engagement Strategy</p> <ul style="list-style-type: none"> ■ The Sponsors Stakeholder Engagement Strategy has been defined with the following objectives: <ul style="list-style-type: none"> • Reach all the stakeholders that could have interest on the use of the airspace, • Inform all stakeholder of any changes to the ACP in a timely manner, • Provide permanent channels of communication, • Collate and process all feedback, and take action when necessary, and • Make our UAS operations as flexible as possible to reduce impact on current aerial activities. <p>The strategy has been divided in three phases:</p> <p>Preliminary engagement. Started in January 2021. During this period the project socialised with potential user cases and local airspace stakeholders. Information was delivered via email and in face-to-face and online meetings.</p> <p>Formal stakeholder engagement. This phase was formally started on 27th May, when a letter was sent to local authorities, most stakeholders from the NATMAC list and known airspace users.</p> <p>Additionally, a more specific work with key stakeholders has taken place, with the aim of producing Letters of Agreement with regard to separation procedures. This group includes ATSUs, Airports, local GA and Local Operators.</p> <p>The broad group of stakeholders (those with no major interest or that have not replied to the feedback requests) are being kept informed of all changes with regard to the ACP.</p> <p>The proposed end date for the formal stakeholder engagement period is 16th July.</p> <p>Live impact assessment. This phase starts from the Decide Gateway and aims to provide channels of communication before, during and after implementation. This will also include meetings (checkpoints) with key stakeholders to assess whether any operational aspects need to be revised.</p> <ul style="list-style-type: none"> ■ Shows the list of stakeholders that have been included in the scope of the engagement. Some of them have not responded to the request for feedback. However, the majority of key stakeholders and local operators have been in touch. 	

- stated that some interested stakeholders choose to wait with providing a response until assessment meeting minutes with additional information are published on the airspace change portal.
- Asks whether the Sponsor is aware of the military exercise Joint Warrior expected to take place at end of September. It's important to remark that if the activities overlap, the military exercise will take priority.
- Advises that the Sponsor is aware we have been asked to participate before and will contact the Royal Navy directly to ensure there is no conflict of these activities.
- So far, the response from the MoD DAATM to the ACP engagement has been positive.
- Suggested the sponsor considers contacting local flying and gliding clubs due to location of the proposed ACP and asked the sponsor to provide a for full stakeholder list to check with Flight Ops team colleagues whether there are any other stakeholders that should have been included.
- Will send to the CAA the complete list of stakeholders that have been contacted along with the engagement material.

Item 6 – Provisional process timescales*

■ – The Statement of Need for this ACP was submitted on March 2021 and the initial expectation was to complete the project during summer 2021. Unfortunately, the CAA has not been able to process this ACP. With the current timeline and expected AIC cycle (implementation September 2021), it is no longer possible complete the scope of the project before winter, when the weather is very limiting for the operations. Therefore, it is necessary to split the operations in two phases, the first one to take place between September and October 2021 and the second one to take place during March and April 2022. The proposed timescale is as follows:

26th March	Statement of Need
27th May	Start formal Stakeholder Engagement
15th June	Application UAS-45065
8th July	Initial Assessment Meeting
16th July	End of Stakeholder Engagement
23rd July	ACP final proposal submission
13th August	Decide Gateway
23th September	Implementation
25th September– 17th October	Phase 1 Operations
March-April 2022 Operations	Phase 2 Operations

- – advised that splitting the operations in to two phases now may potentially impact and as result raise a different response from stakeholders.
- - further stated the Sponsor should consider due to the size of the change whether a double AIC notification period should be considered due to the scale.

After Meeting Note:

Post reviewing the above schedule the CAA agreed to the following timetable requiring an increase in formal engagement time but noting the substantial pre-engagement work the sponsor had conducted.

26th March	Statement of Need
27th May	Start formal Stakeholder Engagement
15th June	Application UAS-45065
8th July	Initial Assessment Meeting
12 July	Commencement of Formal Stakeholder Engagement
1 August	End of Formal Stakeholder Engagement
4 August	ACP final proposal submission
13th August	Decide Gateway
23th September	Implementation
25th September– 17th October	Phase 1 Operations
March-April 2022 Operations	Phase 2 Operations

To approve the TDA it will be necessary for assurance that both the Operational Safety Case and any relevant Temporary Operating Instructions will be approved and in place prior to the implementation dates. Airspace Regulation will seek this approval from the relevant sections within the CAA.

Item 7 – Next steps

- Explained the actions required from the assessment meeting:
 - Meeting minutes uploaded by 22th July after being checked by CAA
 - Agree on a UAS Operation Safety Case application timeline

- Statement the next steps for the ACP sponsor:
 - Generate letters of agreement to define ATSU's participation
 - Upload documents from the assessment meeting to the portal
 - Work on the application towards UAS-OA

Item 8 – Any other business

- The ACP Sponsor would like to formally request the following:
 - Extension of the ACP implementation period so that the intended activity can be carried out in two phases: one during autumn 2021 and one during Spring 2022.
 - Once the provisional timeline for the ACP has been approved, WR would like to have a meeting with the UAS Sector to coordinate and agree on the OSC Application timeline.

3. Approval of the current process of Engagement as the formal process of Targeted Stakeholder Engagement, after analysis of the methodology, scope, and engagement materials.	
--	--

ACTIONS ARISING FROM GROUP OF TDAS CONNECTING ORKNEY AND SHETLAND ISLANDS FOR SATE UAS OPERATION (ACP-2021-025) ASSESSMENT MEETING

Subject	Name	Action	Deadline
Meeting Minutes	Windracers	Complete meeting minutes and submit	15/07/2021
Meeting minutes	Windracers	Upload meeting minutes	22/07/2021

Windracers Limited
ACP Sponsor