MINUTES OF TDA CONNECTING THE UK WITH CONTINENTAL EUROPE FOR UAS CARGO OPERATIONS (ACP-2020-096) ASSESSMENT MEETING HELD ONLINE ON 18th DECEMBER 2020

18/12/2020

Distribution List

Present	Appointment	Representing
[redacted]		CAA
		CAA
		CAA
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		CAA
		Windracers Ltd
		Windracers Ltd
		Windracers Ltd

CAA Assessment Meeting Opening Statement

The CAA has received the Statement of Need, Agenda and presentation 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 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
Item 1 – Introduction All attendees were introduced. [redacted]read the CAA opening statement (as above). [redacted]invited Windracers to present their Statement of Need.	
Item 2 – Statement of Need (discussion and review) [redacted] did a presentation, covering the following points: **i. Project objectives:** • Trial an 'airbridge' service delivering critical medical cargos between the UK and continental Europe using the ULTRA UAS, • Generate real data to deepen our understanding of the regulatory, economic and operational challenges of cargo operations using UAS between the UK and the EU, and	

- Deliver high speed logistical service between the UK and the centre of the EU logistical network benefiting organisations and individuals on both sides.

ii. Proposed operations

- 102nm route connecting an airstrip on the east coast of Essex with Woensdrecht in the Netherlands
- Flexible range of altitude for TDA (anywhere between surface to 5000ft)
- TDA only extends to the London FIR boundary
- North Sea Area Amsterdam TMZ will be used to navigate the remainder of the journey safely using electronic conspicuity
- Standard radiotelephony procedures
- >95% flight over sea.

iii. TDA design principles

Design principles were divided into two groups:

- Technical requirements
  The design should pose low ground risk
  The entire BVLOS flight phase (on UK side) should be performed within the TDA.

- Related to air traffic
  Flexibility of cruise altitude – dependant on stakeholder requirements
  Strategic separation (Stakeholder engagement)
  Low impact on stakeholders.

iv. Initially Identified Stakeholders

- Great Oakley Airfield
- General Aviation Alliance (GAA)
- Stanstead Airport
- Southend Airfield
- Clacton Airfield
- RAF Wattisham
- Aeronautical Rescue Coordination Centre (ARCC) / Maritime and Coastguard Agency (MCA)
- London Array, Greater Gabbard and Galloper Windfarms
- Border Force
- MOD
- Blue light Services.

v. Proposed design

An initial draft of a TDA was presented. This is a rectangle of ~1.54 NM width and 38 NM length joining Great Oakley Airfield with the London FIR boundary.

vi. Risk mitigations

A series of risk mitigations have been considered and are believed to provide additional means of separation between the UAS other traffic.

- Flight plans and GAR to be filed
- UAS crew will be signed in with suitable ATSU.
- Electronic conspicuity: Mode S and ADS-B in/out will be operated in the UAS at all times.
- Windracers will require an ATSU to provide DAAIS/DACS for the TDA.

○ The UAS features redundant navigation systems and advanced failsafe mechanisms. ○ The UAS is large and equipped with position and navigation lights, making it visually conspicuous. **vii. Work to date** Windracers had recent experience with similar operations, flying between mainland England and the Isle of Wight, and between Land's End and St Mary's in the Isles of Scilly. As mentioned before this experience has left a number of lessons learnt with regards to operational procedures, deconfliction and system's performance that have been successfully applied. The company is confident that can carry out safe BVLOS point-to-point operations. **viii. Proposed Timeline** • Assessment meeting: 18th December 2020 • Stakeholder engagement: 4th January 2020 – 19th February 2021 • Final Submission: 26th February 2021 • Decide Gateway: TBD (~ 26th March 2021) • Publish: TBD (~6th May 2021) • Implementation: TBD (~20th May 2021)	
Item 3 – Issues or opportunities arising from proposed change [redacted] noted that since this is the first commercial point-to-point international UAS operation for the UK, there is likely to be issues within the engagement process. However, Windracers have the support of Dutch partners Aviolanda and Delft University, who will help engage with the Dutch CAA and Dutch airspace stakeholders. [redacted] added that he believes there is potential for government interest in this project. [redacted] asked whether the operations on the Dutch side would be carried out within the North Sea TMZ. [redacted] explained that although the TMZ will cover the vast majority of the route, an airspace change will still be required to cover a gap between the boundary of the TMZ and the Woensdrecht CTA. [redacted] noted his initial concern about the distance of the mission was the range of Radio Line of Sight (RLOS). However, the use of LTE and SatCom for command and control of the aircraft would resolve this. **SP** also recommended that Windracers should obtain the necessary LTE OfCom licence and update the safety case before submitting an application for this mission. [redacted] confirmed that use of an LTE network would only be done under the appropriate OfCom license, and that the amended OSC for this mission would fully explain any changes reflected in the new TD2 aircraft. [redacted] also requested clarification about the choice of Mode S transponder and its certification status. [redacted] explained that the chosen transponder is TSO compliant and awaiting certification, but not fully certified yet. A future meeting will be required to discuss this.	

[redacted] agreed to review stakeholder engagement material before the start of the process on 4th of January. Also noted that the impact of the proposed TDA on routes flown by aircraft below 7000 ft would need to be acknowledged and addressed as part of Windracers' formal proposal submission. [redacted] noted that the TDA will have to meet the AIS schedule, and that the UKK CAA will require evidence of the appropriate provisions for use of Dutch airspace. Windracers will also have to devise a notification process whereby the UK and Dutch AIS providers are notified about the activation of the TDA together. [redacted] added that the relevant Dutch ANSPs need to be included in any engagement process. [redacted] explained that the UK CAA will need to have a good understanding of the planned operations across all of the Dutch airspace including the TMZ, CTA and any other airspace in order to ensure that Windracers have the required permissions.[redacted] also noted that Windracers would need to take into account the CAA buffer policy when planning the TDA design. [redacted] clarified that the planned range of altitude will be anywhere from SFC-5000ft and would be determined to minimise the impact on the operations of airspace stakeholders. [redacted] advised on the proposed timeline and how it met the AIC cycle (updated as seen above) [redacted] advised that once the engagement timeline is approved, it must be followed by Windracers. Reminders should be sent as regularly as necessary to ensure responses are received from all stakeholders. [redacted] added that AIC and AIS schedules may not align between the UK and the Netherlands, so the timeline must be planned to align with both authorities.	
Item 4 – Process requirements [redacted] noted that these requirements were previously discussed under item 3.	
Item 5 – Provisional Timescales [redacted] noted that the planned timescales were also previously discussed under item 3.	
Item 6 – Next Steps [redacted] listed the following actions to be taken by Windracers: • List of stakeholders to be submitted directly to [redacted] for review • OSC to be submitted to UK and Dutch CAA • Further discussion with [redacted] and UAS sector regarding electronic conspicuity	

• Procurement of the appropriate OfCom licenses for the mission.	
Item 7 – Any Other Business [redacted] requested clarification of how far the discussions with Dutch CAA have gone so far. [redacted] explained that our Dutch partners, who have experience of this type of operations in the Netherlands, have begun preparing a proposal to the Dutch CAA, but that official applications have not been submitted. [redacted] requested that any evidence submitted to the Dutch CAA to enable operations within the TMZ could also be submitted to the UK CAA, to enable greater understanding of the required procedures. [redacted] stated that the proposed timescales have been noted by the CAA, but not fully accepted until further discussion with management. [redacted] reminded Windracers that any relevant stakeholder engagement completed to date should be recorded and summarised accordingly in the formal submission to the CAA at step 4. [redacted] noted that deconfliction agreements will be necessary with SAR (MCA and ARCC) and blue light services. [redacted] noted that after 1st of January Windracers may need TCO third country operator approval from EASA to conduct these operations.	

ACTIONS ARISING FROM TDA CONNECTING THE UK WITH CONTINENTAL EUROPE FOR UAS CARGO OPERATIONS (ACP-2020-096) ASSESSMENT MEETING

Subject	Name	Action	Deadline
Meeting Minutes	Windracers	Complete meeting minutes and submit	21/12/2020
Stakeholder Engagement	Windracers	Submit stakeholder engagement material for review	21/12/2020
Project Timeline	Windracers	Agree on timeline with CAA	04/01/2021
Meeting Minutes	Windracers	Upload meeting minutes	04/01/2021
Operating Safety Case	Windracers	Submit UAS OSC application	04/01/2021

Windracers Limited
ACP Sponsor