



NBEC Temporary Danger Area Assessment Meeting

ACP-007-2020

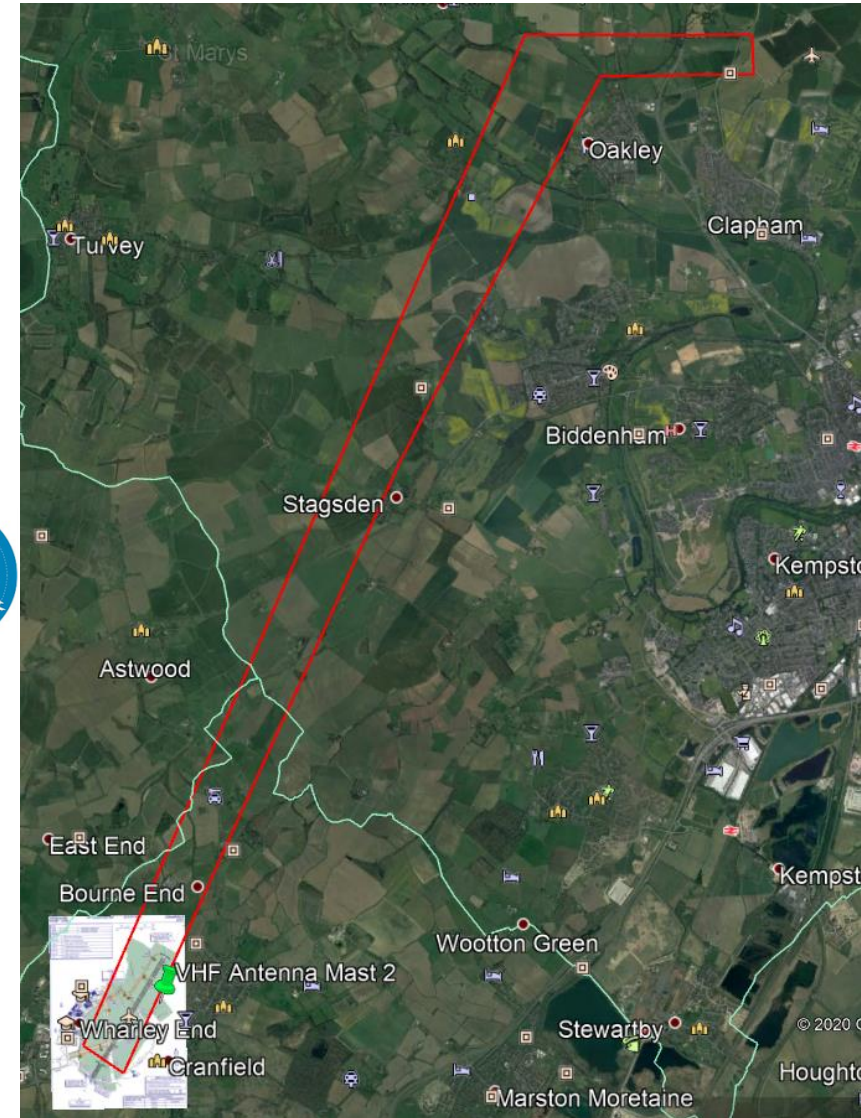
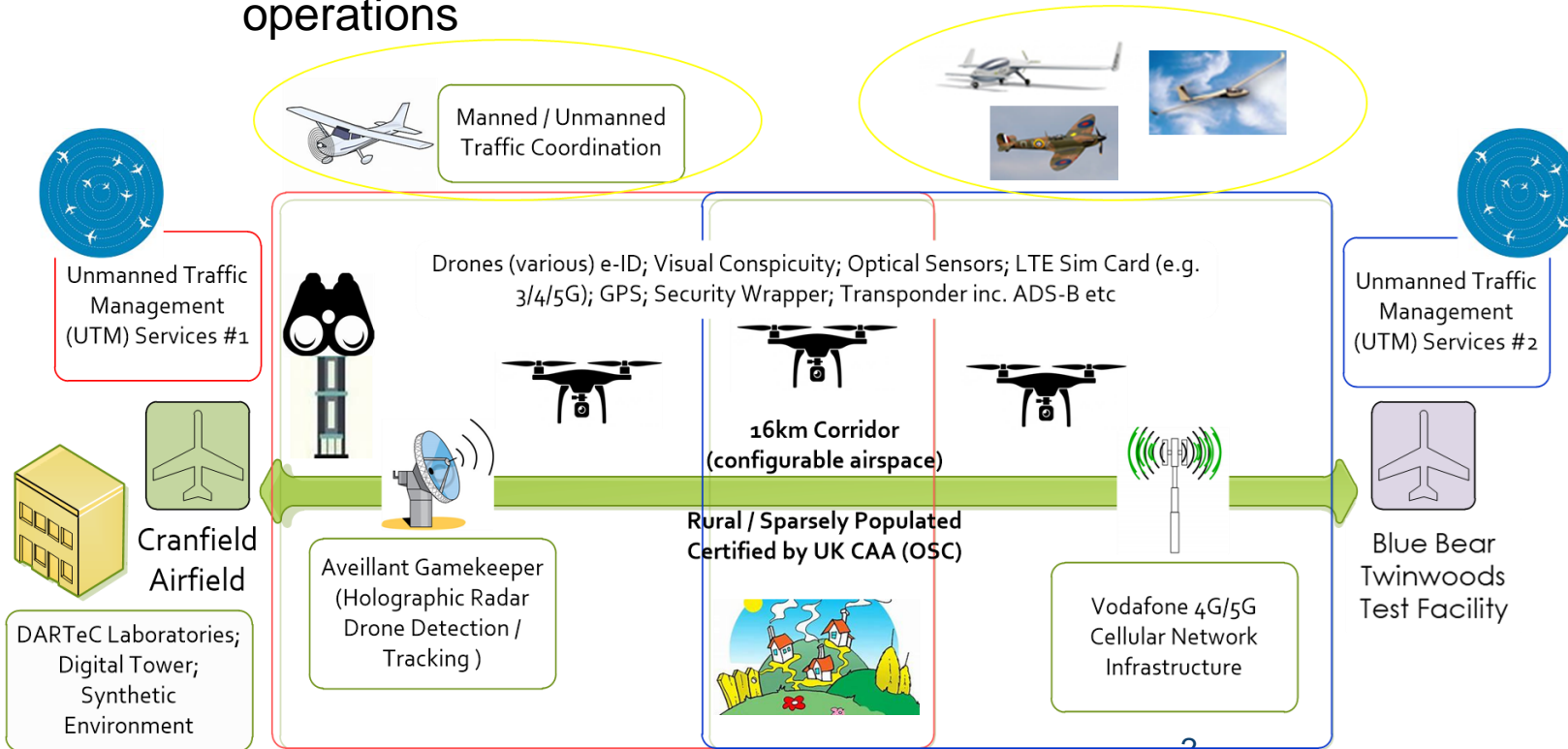
13th October 2020

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NBEC Introduction

1. National Beyond Visual Line of Sight (BVLOS) Experimentation Corridor (NBEC) being setup between Cranfield Airport and Blue Bear Twinwoods Research Facility
2. Installation and performance validation of required technical infrastructure to ultimately enable routine BVLOS drone operations





NBEC Statement of Need

1. Incremental series of drone flight trials to support the evidence gathering to demonstrate the technology capabilities performance (as per CAA Detect and Avoid ecosystem guidelines), starting with VLOS and EVLOS in order to demonstrate readiness and capacity to conduct routine drone BVLOS operations. 4 steps planned:
 - i. BVLOS in ATZ (closed to other traffic)
 - ii. BVLOS in ATZ (open to other traffic)
 - iii. Segregated BVLOS in NBEC (with TDA) – as agreed with CAA Innovation Hub
 - iv. Non-segregated BVLOS in NBEC (no TDA)
2. Both rotary and fixed-wing platforms will be operated in the sub 20kg MTOW category and will be flown under both EVLOS and (subsequently) BVLOS rules in accordance with CAP-722.
3. Targets low-level airspace (<400ft AGL)
4. TDA for NBEC needed to ensure that the risk of issues occurring during BVLOS trials are mitigated as effectively as possible



Issues and Opportunities

From CAA Innovation Hub engagement to-date

1. Detect & Avoid Ecosystem v5 (20200922), Trials Plan v5 and OSC/s structure
 - Homing in on 4 BVLOS trials approach (seg BVLOS in NBEC would require TDA)
 - Only need to apply for OSC for BVLOS (that will reference info gained from LOS/EVLOS)
2. In brief, CAP 722 requires DAA for BVLOS operations
 - require “non-human” SAA that ensures ‘Rule 8’ can be complied with
 - includes management of the airspace to ensure segregation from other aircraft
 - Assumption is that this requires ‘Trials Airspace’ of an appropriate classification (CAP 1616)
 - Cannot (currently) fly BVLOS in Class ‘G’ airspace unless a Temporary Danger Area is established



Proposed timeline

1. Systems installation
 - October 2020 - Vodafone Radio Positioning System
 - December 2020 – Holographic radar (primary / short range within ATZ)
 - February 2021 – Air Traffic Control display system with ADS-B sensor
2. Flight Trials
 - October 2020 – March 2021 - VLOS and EVLOS to gather evidence on deployed technologies performance
 - July-August 2021 – BVLOS unsegregated in entire corridor / Class 'G' – need TDA in place
3. DAP TDA process
 - 6-9 months process, planned for latter
 - Public engagement process essential
4. Given timescales extend beyond the end of the year, CAA UAS advised that the new EU drone regs may have an impact and will be discussed in detail once test plan is ready to share with the CAAUAS team.



Next Steps

1. Confirm proposed timeline
 - Systems installation dates
2. DAP TDA process
 - Formally kick-off process through portal



AOB / Questions