



National Beyond Visual Line of Sight (BVLOS) Experimentation Corridor





The goal of the National Beyond Visual Line of Sight Experimentation Corridor (NBEC) is to provide a safe, managed environment to test and develop concepts, principles and the related technologies to enable flying unmanned aircraft systems beyond visual line of sight (BVLOS) in non-segregated airspace.

Developed in collaboration with Aveillant, Blue Bear Systems Research, Thales and Vodafone, NBEC is provided as part of Cranfield's Airport air traffic service that extends to Blue Bear Systems Research facilities, thus making it an ideal place to develop the foundations and key enablers towards unsegregated BVLOS flights.

Cranfield University and its NBEC collaborators believe that the future of drone operations is not through segregation but through integration so ensuring fair and equitable use of airspace for all.

NBEC is part of the Civil Aviation Authority (CAA) Innovation Hub Sandbox and the work completed to-date has been instrumental in informing CAA guidelines and processes to enable BVLOS unsegregated operations.

NBEC will be available as a unique national facility for use by developers of infrastructure, platforms, sensors and advanced airspace management systems who wish to evaluate specific use cases and concepts in unsegregated flight operations.

Benefits

The NBEC will be characterised by:

- Reconfigurable and scalable certified airspace management infrastructure, with full redundancy and increasing in size over time, enabling future collaborative UAS Traffic Management (UTM) and/or drone systems development.
- Multiple, multi-sourced, UTM systems with supporting communications (e.g. 4G and 5G) and surveillance technologies working in collaboration within the NBEC.
- NBEC UTMs to enable interoperability and future de-confliction between manned and unmanned assets operating within the same airspace, or transiting through one sector to another.
- Information service transaction, enabling safe and secure flight, will be exchanged between all connected UTM and ATM systems.

The NBEC will be the first in the UK for safely testing 4G and 5G enabled drones and will develop the key enablers (in terms of concepts, operational safety cases cases and technologies) towards achieving unmanned flights under BVLOS conditions, in unsegregated airspace.

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