Overview of proposed changes

Sywell aspires to introduce GNSS Approaches to the airfield. The Air Navigation Service Provider (ANSP) Certificated and Designated at Sywell (under CR (EU) 1035/2011) provides a Flight Information Service (FIS) and consequently does not meet the requirements of Article 183b of the UK Air Navigation Order which requires Air Traffic Control (ATC) Approach Control to be provided in support of a published Instrument Approach Procedure. A safety framework was generated by Sywell, and this forms the basis of the safety assessment.

Summary

The CAA published CAP1122 to assist in establishing GNSS approaches (where suitable) at locations where an ATC Approach Control Service was not established. This CAP sought to enable reasonable use of advancing technologies to support safe operations utilising instrument approach procedures based on satellite navigation (as opposed to traditional 'ground based' navigational aids) which were previously the only viable option. The lack of dependence (for the conduct of an IAP) on ground based infrastructure and services brings into question the suitability of Article 183b in the context of technologies currently available to pilots.

The regulatory framework for Certificated and Designated ANSPs requires change management to be conducted in the form of a safety assessment or safety case for change. CAP1122 sought to enable and facilitate such an assessment being developed by an ANSP, but proved challenging to implement. As a consequence the CAA developed a safety framework tool (hereafter referred to as a 'bowtie' to assist ANSPs and Aerodromes in developing a suitable safety strategy for implementing GNSS Approaches where ATC Approach Control is not provided.

Sywell is a UK National Licenced Aerodrome supporting (typically) between 4 and 10 movements per hour. Movements have declined steadily since 2002, and are reduced during bad weather. Use of the Aerodrome is 'Prior Permission Required (PPR)' and aircraft arriving late (which cannot be accommodated for operational reasons) are informed that the aerodrome is not available to them.

Sywell have committed to operating a slot system for utilisation of the GNSS IAP, with a maximum of nine slots per day (pre-booked by telephone). The CAA has required records of allocated slots to be kept and this forms a condition on the Article 183b exemption certificate.

The Aerodrome's FIS enables control of traffic on the ground (up to the stop bars but including, where utilised, back-tracks). The runway is visible from the Visual Control Room (VCR) and regular runway inspections are conducted. Pilot Reports are acted upon as necessary. Should the runway be obstructed during in Instrument Approach the FIS Officer (FISO) will convey this information to the pilot using Very High Frequency (VHF) Radio Telephony (RTF). Sywell holds Article 205 Approval for its VHF RTF Facilities. The designated operational coverage (DOC) of Sywell's VHF radiostation has been increased to facilitate contact with aircraft commencing the IAP.

Sywell have advised that they will not be operating VFR Procedures when an IAP is being used. The Aerodrome keeps records (flight progress strips) which describe transit requests and routings. The Aerodrome fully understands the classification of airspace surrounding them.

A safety case has been developed and assessed by the CAA. This safety case provides details of mitigations discovered through analysis of traffic outside the Aerodrome Traffic Zone (ATZ) and

demonstrates that risks have been mitigated to a level that is As Low As Reasonably Practicable (ALARP). The Sywell Aviation Managing Director is the Aerodrome Accountable Manager. This role has permanent responsibility and accountability for the IAP through its lifetime. The Article 183b Exemption has a duration of circa 2 years to ensure (through regulatory oversight) that the IAP is regularly reviewed.

FISOs are not trained to manage holding traffic, and as such the IAP has been designed without a hold. This is a key driver to the cap on movements and will drive increased oversight during the initial period of publication of the IAP.

Conclusion

The CAA developed a tool for producing a safety framework supporting the implementation of GNSS approaches at locations where an ATC Approach Service is not provided.

Sywell has utilised this tool (bowtie) to produce a safety framework (including specific mitigations) to justify the implementation of its planned approach.

The ATM Inspectorate has reviewed and accepted this framework, albeit with the need for Sywell to continue to maintain / deliver the mitigations (to which it committed in its safety framework).

In order to develop and retain confidence in the delivery of (and continued function/acceptability of) the defined safety mitigations the ATM Inspectorate is scheduling a programme of enhanced oversight for the coming year, including provision for unannounced audits of the specifics identified in the safety framework.