

CAA AIRSPACE CHANGE DECISION

INTRODUCTION OF RNAV (GNSS) INSTRUMENT APPROACH PROCEDURES AT LIVERPOOL JOHN LENNON AIRPORT

Organisation proposing the change: Air Traffic Control Services Ltd (ATCSL) assisted by Certisa International Ltd.

Date of Airspace Change Proposal: 28th October 2015

Documents considered by the CAA:

- LJLA RNAV (GNSS) Approaches Operational Report - CERT/ENG/140602/4405 Issue 1
- LJLA RNAV (GNSS) Approaches Environmental Report - CERT/ENG/140602/7601 Issue 1
- LJLA RNAV (GNSS) Approaches Safety Case - CERT/ENG/140602/4301 Issue 2
- LJLA RNAV (GNSS) Approaches Consultation Report - CERT/ENG/140602/7501 Issue 1
- CAA Operational Assessment
- CAA Consultation Assessment
- CAA Environmental Assessment

1. INTRODUCTION

2. On 28 Oct 15, the CAA received a formal Airspace Change Proposal (ACP) from Certisa International Ltd. on behalf of ATCSL, the Air Navigation Service Provider (ANSP) for Liverpool John Lennon Airport (LJLA). ATCSL aim to establish new RNAV (GNSS) Instrument Approach Procedures (IAPs) to both runways to improve the operational resilience of its services. Upon receipt of the proposal, CAA staff undertook a detailed analysis of the operational requirements, the environmental assessments and the consultation process. The purpose of this document is to provide you with an overview of the proposal and the CAA's decision.

3. INFORMATION THAT HAS BEEN CONSIDERED

4. In making this decision, the CAA has considered a number of documents including the sponsor's consultation document, the change sponsor's original ACP, subsequent re-designed Draft SID Charts and the CAA's Operational Report, Consultation Report and Environmental Analysis. These documents will be published on the CAA's website shortly.

5. PROPOSAL OVERVIEW

6. ATCSL, as the sponsor, proposed the introduction of RNAV (GNSS) GNSS Lateral Navigation (LNAV) and combined Lateral/Vertical Navigation (LNAV/VNAV) IAPs for runways 09 and 27.
7. The introduction of RNAV (GNSS) IAPs aligns with the global modernisation of navigation standards to reduce reliance on ground-based navigation aids and

allows airlines to operate using increased capability of their respective Flight Management Systems (FMS).

8. Following discussion with the CAA, ATCSL decided that the proposal should replicate existing arrival tracks as closely as possible. The sponsor examined several options that would take advantage of advances in aircraft equipment of GNSS systems to fleets using Liverpool John Lennon Airport as well as considering the 'do nothing' option. Four options for RNAV IAPs (including the proposed option) were examined as well as the possibility of investing in new ILS, DME and NDB equipment to mitigate the possibility of equipment failure.

9. **CONSULTATION**

10. The Sponsor undertook a 12-week stakeholder consultation and a consultation with aviation stakeholders through NATMAC. The Stakeholder Consultation Document will be published on the CAA's website shortly.
11. Additionally, the CAA's Safety and Airspace Regulation Group (SARG) has conducted its own assessment of the consultation. This assessment will also be published on the CAA's website shortly. The CAA concluded that the Consultation Report and associated material met the CAA's requirements.
12. Sponsors must conduct their consultation exercise in accordance with the criteria set out in the Cabinet Office's Consultation Principles (2013 Update).
13. The CAA has carefully considered this information and is satisfied that the consultation was conducted in accordance with the requirements of CAPs 724 and 725. This was a well-run consultation and the Sponsor demonstrated a willingness to engage with the various stakeholders in order to mitigate the issues raised.

14. **STATUTORY DUTIES**

15. The CAA's statutory duties are set out in Section 70 of the Transport Act 2000 (the Act), the CAA (Air Navigation) Directions 2001, as varied in 2004 (the Directions), and Guidance to the CAA on Environmental Objectives relating to the exercise of its air navigation functions.
16. In summary, the CAA's primary duty under section 70(1) of the Act requires that the CAA exercises its air navigation functions so as to maintain a high standard of safety in the provision of air traffic services. This duty takes priority over the remaining factors set out in section 70(2). Where an airspace change proposal satisfies all of the factors identified in section 70(2) and where there is no conflict between those factors, the CAA will, subject to exceptional circumstances, approve the airspace change proposal. Where an airspace change proposal satisfies some of the factors in section 70(2) but not others, this is referred to as a conflict within the meaning of section 70(3). In the event of a conflict, the CAA will apply the material considerations in the manner it thinks is reasonable having regard to them as a whole. The CAA will give greater weight to material considerations that require it to "secure" something than to those that require it to "satisfy" or "facilitate". The CAA regards the term to "take account of" as meaning that the material consideration in question may or may not be applicable in a particular case and the weight the CAA will place on such material considerations

will depend heavily on the circumstances of the individual case. The analysis of The CAA's statutory duties is set out below.

17. **Safety**

18. The CAA's primary duty is to maintain a high standard of safety in the provision of air traffic services and this takes primacy over all other duties. It is recognised that the introduction of these procedures introduces an additional level of safety by providing alternative approach options that are not solely reliant on ground based systems. The introduction of these procedures introduce no additional risk as existing airspace constructs remain the same.
19. The CAA is content that the introduction of these procedures will have a positive safety benefit for operations into Liverpool John Lennon Airport by providing an alternative method of approach to each runway.

20. **The most efficient use of airspace**

21. The CAA is required to secure the most efficient use of the airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic.¹ The CAA considers that the most efficient use of airspace is defined as:

“The most aircraft movements through a given volume of airspace over a period of time in order to make best use of the limited resource of UK airspace from a whole system perspective.”

22. The CAA is confident that the introduction of RNAV (GNSS) IAPs will also have a positive impact on efficiency as this procedure provides an alternative approach option that might prevent a missed approach, associated delays and possibly diversions in poor weather conditions.

23. **Requirements of aircraft operators and owners**

24. The CAA is required to satisfy the requirements of operators and owners of all classes of aircraft.²
25. All operators will be able to take advantage of these new procedures if their aircraft are suitably equipped. Those aircraft not yet fitted with RNAV compatible equipment will still be able to conduct conventional approaches. Additionally, the introduction of these procedures provides a training opportunity for those carrying RNAV compatible equipment.
26. The CAA's Operational Assessment will be published on the CAA's website shortly.

27. **Interests of any other person**

28. The CAA is required to take account of the interests of any person (other than an owner or operator of an aircraft) in relation to the use of any particular airspace or the use of airspace generally. The CAA examined a number of anticipated

¹ Transport Act 2000, Section 70(2)(a).

² Transport Act 2000, Section 70(2)(b).

impacts, but no negative comment was received during the consultation process outlined above.

29. In this respect, the CAA is content that the consultation exercise attracted a range of diverse comments and no objections were highlighted. The CAA is also content that the impact of noise has been considered and the introduction of RNAV (GNSS) IAPs will have minimal, if any, noise impact.

30. Guidance on environmental objectives

31. In performing the statutory duties, the CAA is obliged to take account of the extant guidance provided by the Secretary of State,³ namely the 2014 Guidance to the CAA on Environmental Objectives.

32. The Environmental Research and Consultancy Department (ERCD) has undertaken an assessment of the environmental impact of this change, the findings of which will be published on the CAA's website.

33. Having carefully considered this information, the CAA has concluded that the change will have no significant environmental impact.

34. Integrated operation of ATS

35. The CAA is required to facilitate the integrated operation of ATS provided by or on behalf of the armed forces of the Crown and other ATS.⁴

36. This proposal and its associated implementation will not change either the dimensions or class of local airspace structures. In this respect the CAA is content that there are no impacts on the integrated operation of ATS as a result of the establishment of the RNAV (GNSS) IAPs at LJLA.

37. Interests of national security

38. The CAA is required to take into account the impact any airspace change may have upon matters of national security.⁵

39. In this respect the CAA is content that there are no impacts for national security as a result of the establishment of the RNAV (GNSS) IAPs at LJLA.

40. International obligations

41. The CAA is required to take into account any international obligations entered into by the UK and notified by the Secretary of State.⁶

42. In this respect the CAA is content that there are no impacts for national security as a result of the establishment of the RNAV (GNSS) IAPs at LJLA.

43. No conflicts

³ Transport Act 2000, Section 70(2)(d)

⁴ Transport Act 2000, Section 70(2)(e).

⁵ Transport Act 2000, Section 70(2)(f).

⁶ Transport Act 2000, Section 70(2)(g).

44. In accordance with section 70(3) of the Act and the CAA published policy, Group Director SARG is required to consider whether the airspace change proposal produces any conflicts between the material considerations identified in section 70(2). For the reasons given above, the CAA does not consider that there is any conflict between the factors that must be taken into consideration.
45. **REGULATORY DECISION**
46. The CAA is content that the proposed airspace design is safe, which satisfies our primary statutory duty. For the reasons given above, the CAA is also content that the proposed change has a positive or neutral impact on each of the other factors identified in section 70(2) of the Act. In such a case, and in the absence of exceptional circumstances, it is CAA policy to approve the airspace change proposal. There are no exceptional circumstances in the instant case to justify departing from the CAA's standard practice.
47. The procedures will become effective from (AIRAC 8/2016) promulgated via a double AIRAC cycle on 21 Jul 16. Any queries are to be directed to the SARG Project Leader, [REDACTED] on 020 7453 [REDACTED] or via e mail: [REDACTED]
48. In line with our standard procedures the implications of the change will be reviewed after one full year of operation, at which point, CAA staff will engage with interested parties to obtain feedback and data to contribute to the analysis.

Date: 7th April 2016

Civil Aviation Authority