

Birmingham International Airport Northbound Standard Instrument Departures from Runway 15: CAA decision

CAP 1398a

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Chapter 1

Executive summary

Objective of the Proposal

1. In the CAA's decision regarding [Birmingham International Airport Standard Instrument Departures from Runway 15](#), the northbound SIDs were required to be redesigned following a trial of the proposed routes.
2. The CAA's above decision document sets out the objectives of the main proposal and the background to it. In short, following a planning application decision on 2 November 2009 the physical length of the runway at Birmingham International Airport (BHX) was extended. This enabled BHX to declare an extended runway length, in both directions. To declare a revised runway length it was necessary for BAL to publish new departure and arrival procedures for both runways.
3. The proposal subject to the decision in CAP 1398 originally contained 6 SIDs departing from runway 15.4 used by aircraft on routes to the south and south-east of the airport and 2 used by aircraft on routes to the north.
4. BAL suspended its request that the CAA approves its proposals in respect of the SIDs departing to the north. The CAA approved the permanent implementation of the Option 6 southbound departures from runway 15 at BHX.
5. The decision document states *"BAL is to re-design the originally submitted northbound SIDs from runway 15 (Option 4) to resolve the track keeping performance such that traffic tracks closer to the nominal track and away from the north side of Balsall Common (as originally proposed and consulted upon).*

Once the designs have been completed the CAA will assess whether the re designs require a new consultation. The CAA will then consider whether to approve that element of this airspace change proposal that relates to the northbound SIDs."

6. This decision document considers the redesigned northbound SIDs.
7. In developing the redesigned SIDs, the airport outlined four key objectives:
 - Design procedures which are safe, flyable by all aircraft and in line with International Civil Aviation Organisation (ICAO) and CAA standards for flight procedure design when using RNAV-1 criteria
 - Design procedures which match as closely as possible the northbound SIDs as submitted within the original ACP
 - Meet the requirements of the Prestwick Lower Airspace Systemisation (PLAS), now known as Future Airspace Strategy Implementation (FASI) North, which has two specific requirements:
 - o Develop one SID to take all traffic north (Whitegate not being replicable due to it being removed as part of the FASI North project)
 - o Align to a new reporting point to the north of Lichfield named LUVUM (referred to as BIMBA in the consultation documentation). Due to the location of LUVUM the retention of the Whitegate SID would not be feasible.

Summary of the decision made

8. The CAA has decided to approve the following changes to the structure of UL airspace:
9. The implementation of the proposed Instrument Flight Procedure – one northbound Standard Instrument Departure route (SID) from Runway 15 designated as LUVUM.

Next steps

10. The CAA's Post Implementation Review (PIR) of the changes approved by the CAA in this decision will commence at least one year after implementation of those changes. It is a condition of the CAA's approval that the sponsor provides

data required by the CAA throughout the year following implementation to carry out that PIR.

11. The sponsor is required to provide detail on the volume of traffic utilising the new SID.
12. The sponsor is required to provide feedback from all airspace users.
13. The change sponsor is required to collate related stakeholder observations (enquiry/complaint data) and present it to the CAA. Any location/area from where more than 10 individuals have made enquiries/complaints must be plotted on separate maps displaying a representative sample of:
 - aircraft track data plots; and
 - traffic density plots
14. The plots should include a typical days-worth of movements from the last month of each standard calendar quarter (March, June, September, December) from each of the years directly preceding and following implementation of the airspace change proposal.
15. The PIR is the seventh stage of the CAA's airspace change proposal process (set out in [CAP 725](#), the Guidance on the Application of the Airspace Change Process¹) and will consider whether *"the anticipated impacts and benefits, set out in the Airspace Change Proposal, have actually been delivered"*. The policy states that if those impacts and benefits have not been delivered then the review should *"ascertain why and ... determine the most appropriate course of action"*.² (See Annex B paragraph 22 for more information.)

¹ www.caa.co.uk/CAP725

² There are therefore a wide range of possibilities for the conclusions of a PIR; they include a rejection of the proposal, the imposition of further requirements on the proposal, and the making of wider recommendations, albeit that the success of the proposal is not dependent upon them.

Chapter 2

Decision Process and Analysis

CAA's Role

The CAA's role in airspace change decisions, the legal framework, the policy background and relevant UK international obligations

16. It is necessary to understand the CAA's role in airspace change decisions, the legal framework, the policy background and relevant UK international obligations in order to understand the decision[s] the CAA has taken.
17. This information is set out in Annex B.

Aims and Objectives of the proposed change – CAA decision on objective

18. In developing the redesigned SIDs, the airport outlined four key objectives:
 - Design procedures which are safe, flyable by all aircraft and in line with International Civil Aviation Organisation (ICAO) and CAA standards for flight procedure design when using RNAV-1 criteria
 - Design procedures which match as closely as possible the northbound SIDs as submitted within the original ACP
 - Meet the requirements of the Prestwick Lower Airspace Systemisation (PLAS), now known as Future Airspace Strategy Implementation (FASI) North, which has two specific requirements:
 - o Develop one SID to take all traffic north (Whitegate not being replicable due to it being removed as part of the FASI North project)
 - o Align to a new reporting point to the north of Lichfield named LUVUM (referred to as BIMBA in the consultation documentation). Due to the location of LUVUM the retention of the Whitegate SID would not be feasible.
19. In this part of the record of the CAA's decision, the CAA formally records that these aims and objectives of the change proposed are objectives which it

endorses and, subject to the terms of the regulatory and policy framework set out in Annex B, the CAA will seek to approve changes to the UK airspace structure that meet the aims and objectives of this proposal.

Chronology of Proposal Process

20. For the Chronology of the original ACP including Framework Briefing and Consultation, see CAP 1398.
21. Notwithstanding that the CAA introduced a new airspace change process on 2 January 2018 (known as CAP 1616) this ACP has been developed and is assessed in accordance with the CAA's airspace change process known as CAP 725. This is in accordance with a transition policy developed with the Department for Transport and consulted on in 2016 and confirmed in 2017.
22. The sponsor provided the revised Instrument Flight Procedure design submission on 20 April 2018.
23. The sponsor submitted the evidence required for the CAA to assess against the original ACP on 30 April 2018.
24. Additional diagrammatical information indicating the centreline of the proposed redesign and the original design was provided on 21 December 2018.
25. Additional diagrammatical information indicating the point at which departing traffic reaches 7,000 feet was supplied on 04 January 2019.

Documents considered by the CAA

26. In assessing the proposal and making this decision, the CAA has taken account of:

- a. Redesign of Northbound R-NAV Standard Instrument Departure (SIDs) procedures for Runway 15
- b. Appendix A Dispersion on current northbound turn
- c. Appendix B Track flown by Q400 and B752 aircraft
- d. Appendix C Track flown by B787 aircraft
- e. Appendix D Q400 aircraft using the TNT 6E SID
- f. Appendix E Original HARP form
- g. Appendix F Updated HARP form
- h. Appendix G Simulator tracks of Q400
- i. Appendix H Simulator tracks of B738
- j. Appendix I Minutes of Stakeholder Forum Meetings
- k. Letter of support from BHX ACC
- l. Consulted upon centreline vs redesigned SID centreline
- m. All departures from runway 15 heading north during December 2018
- n. CAP 1398

CAA Analysis of the Material provided

27. As a record of our analysis of this material the CAA has produced:

- An **Operational Assessment** which is designed to brief the decision maker whether the proposal is fit for purpose. This assessment contains:
- The CAA's assessment of the airspace change proposal justification and options considered.
- The CAA's assessment of the proposed airspace design and its associated operational arrangements. An assessment of the design proposal is produced to illustrate whether it meets CAA regulatory requirements regarding international and national airspace and procedure design requirements and whether any mitigations were required to overcome design issues.
- The CAA's assessment of whether adequate resource exists to deliver the change and whether adequate communications, navigation and surveillance infrastructure exists to enable the change to take place.