

Newcastle International Airport Ltd RNAV SIDs Post Implementation Review (PIR)

CAP 1984

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Executive Summary

1. The CAA's airspace change process is a seven-stage mechanism that is set out in detail in CAP 1616. Prior to 1 January 2018, the process followed the guidance of CAP 725. In April 2014, under the CAP 725 airspace change process Newcastle International Airport Ltd (NIAL) submitted a proposal to the CAA to introduce three precision area navigation (P-RNAV) Standard Instrument Departures (SIDs). The final stage of the airspace change process is a Post Implementation Review (PIR) which normally commences one year after implementation of the change, under either CAP 725 or CAP 1616. The CAA commenced the PIR of its decision to approve the three SIDs on 13 December 2019. The review has taken much longer than anticipated due to the time that has elapsed since the implementation of the SIDs, the COVID-19 crisis and the requirement for further clarity regarding some of the data that was initially presented. In order to ensure stakeholders were able to review the updated data, there were three, 28-day feed-back periods. The content and outcome of the review process by the CAA is discussed in detail in this report including its annexes.
2. Whilst the CAA's decision to approve the change was made under the previous process (set out in CAP 725), we have endeavoured, so far as it has been practical to do so, conduct this PIR in accordance with the process requirements of CAP1616. When assessing the expected impacts against the actual impacts the CAA has applied the methodology in place at the time of the original CAA decision.
3. During the review process the CAA considered, safety data, traffic figures, traffic dispersion, traffic density, utilisation and feedback from operational stakeholders and non-aviation stakeholders. This information was requested from NIAL in a letter¹, which is published on the CAA website.

Following our review, the CAA has reached the following conclusions:

4. The CAA is content that the GIRLI 1T, GIRLI 1Y and GIRLI 3X RNAV1 SIDs are meeting the intent of the [ACP](#). The intent was to replicate the way suitably equipped departing aircraft were routed by Air Traffic Control, anticipating that this would lead to the aircraft being concentrated. Following the PIR, the CAA makes one formal recommendation set out below.

Recommendation: NIAL should brief Dash 8 operators, that fly the GIRLI 3X SID, to avoid overflight of Heddon-on-the Wall.

¹ [Letter to NIAL, Post Implementation Requirements, 22 Aug 19](#)

5. This report, and its annexes, provide a summary of the information the CAA has reviewed and considered before reaching these conclusions.
6. All the information which the CAA has reviewed and considered as part of this PIR, has already been published on our website.

Scope and Background of the PIR

What is a Post Implementation Review?

7. The CAA's approach to decision-making in relation to this proposal and to approve the NIAL SIDs is explained in Guidance on the Application of the Airspace Change Process, CAP 725(link). CAP 725 has now been replaced by CAP 1616. The current CAP document now provides guidance on the seventh and last stage of the process which is a review of the implementation of the decision, particularly from an operational perspective, known as a Post Implementation Review.
8. The guidance in CAP 1616² states that *"The CAA reviews how the airspace change has performed, including whether anticipated impacts and benefits in the original proposal and decision have been delivered."*
9. If the impacts are not as predicted, the CAA will require the change sponsor to investigate why and consider possible mitigations or modifications for impacts that vary from those which were anticipated to meet the terms of the original decision. Full details on the possible outcomes can be found in para 286 CAP1616.
10. A PIR is therefore focused on the effects of a particular airspace change proposal. It is not a review of the decision on the airspace change proposal, and neither is it a re-run of the original decision process.

Background to our conclusions in this PIR Decision

11. The NIAL ACP was submitted to the CAA, for a decision, on the 18 April 2014. Given the lack of any quantifiable details regarding the potential impacts of implementing the SIDs within the ACP, this PIR has focused on the primary purpose of the implementation of the SIDs.

² Stage 7 Post Implementation Review summary, CAP1616 page 81.

12. The ACP set out that the proposed SIDs must replicate the departure profiles of what was being flown by suitably equipped aircraft at Newcastle, at the time of the submission: *‘...that these proposed SIDs replicate our existing departure routes.’* (page 4 ACP). The ACP also made it clear that there would be *‘...a tighter spread and more accurate flying...’* (page 4 ACP).
- ‘To cause minimum noise disruption Newcastle International Airport set a requirement that the SIDs must replicate the tracks that departing aircraft fly now. Particular attention was paid to route between the noise sensitive areas of Heddon on the Wall and Throckley for aircraft departing Runway 25.’* (ACP Document p26 and the Consultation Document)
13. The SIDs were designed to be precision area navigation compliant which means that suitably equipped aircraft should fly along the SIDs accurately (RNAV1, +/- 1 nautical mile of the nominal track of the SID for 95% of the time); the following is the statement from the proposal:
- ‘Because P-RNAV is so accurate, it will mean that the spread of aircraft on departure will be reduced. The increased accuracy will result in known environments for aircraft movements and therefore provide communities with a greater understanding of where aircraft should operate. As previously stated, aircraft will not be operating in any new areas.’* (Para 1.5.1 Consultation Leaflet).
14. At the end of 2014 the CAA approved two of the proposed SIDs, submitted in the ACP; the GIRLI 1Y³ (to the west, avoiding Currock Hill Glider Site) and the GIRLI 1T⁴ (to the east). These two SIDs were implemented on the 8th January 2015. Due to a number of issues with different iterations, the proposed GIRLI 1X (to the west) was not immediately approved. It was amended and initially implemented as the GIRLI 1X on 29th January 2016. It was then subsequently withdrawn and replaced by another redesigned SID, which was approved for use as the GIRLI 3X⁵ in Apr 2017.
15. The reason the first iteration of the GIRLI 1X was not accepted by the CAA was because, *‘Although it was acknowledged that traffic on this proposed SID would continue to be tactically positioned where it flies today, this was inconsistent with Consultation material and therefore, could not be supported by the CAA’* (CAA decision letter). It was considered vital that the design should reflect what had been stated in the consultation and that the SID should not just be used for flight planning purposes. At this time the CAA’s own Instrument Flight Procedure (IFP) designers could be contracted to design procedures, such as SIDs, for airports. The CAA did ensure that these designers were not involved with the approval

³ [GIRLI 1Y](#)

⁴ [GIRLI 1T](#)

⁵ [GIRLI 3X](#)