

All NATMAC Representatives

18 August 2014

CAA DECISION LETTER

*Dear Stakeholders,*

**BRISTOL INTERNATIONAL AIRPORT (BIA) RNAV STARS**

**1. INTRODUCTION**

1.1 During January 2014, the Civil Aviation Authority's Safety and Airspace Regulation Group (SARG) received a formal proposal from Bristol Airport Limited (BAL), through NATS, to introduce RNAV STARS at BIA. Upon receipt of the proposal, my staff undertook a detailed analysis of the operational requirements, the environmental assessments and the consultation process. The purpose of this letter is to provide you with an overview of the proposal and my related decision.

**2. PROPOSAL OVERVIEW**

2.1 As part of a phased introduction of PBN procedures at the Airport, the ACP relates to the introduction of two RNAV STARS (available H24/365days) which would principally replicate the current concentrations of BIA inbound aircraft tracks from the south / southwest (via EXMOR) to runways 09 and 27. Currently, aircraft arriving from the south and south-west depart the en-route structure at EXMOR, from where they route towards BIA via an existing STAR which, in theory, takes aircraft to the overhead. In practice, adherence to the STAR is rare; almost without exception aircraft are vectored tactically towards base leg/finals (RWY09) or downwind/base leg/finals (RWY27).

2.2 The proposed RNAV STARS, whilst constituting new procedures, will fundamentally replicate the current concentrations of traffic arriving from the south and southwest, but additionally take the opportunity to route a portion of the RWY09 procedure further over the Severn Estuary than is currently typical. The RNAV procedures will enable improved track keeping, reduce reliance of ground infrastructure and facilitate a wider transition to PBN/RNAV environment. The improved track-keeping ability of RNAV should result in less lateral dispersal of flights either side of the inbound routes, thus overall fewer people would experience overflight. The proposal would however lead to some areas being more routinely overflown than is the case pre-introduction of RNAV STARS. This concentration versus dispersal of environmental burden is in line with Government policy<sup>1</sup>. However, the new procedures would not preclude ATC from directing aircraft tactically, routing directly to final approach where necessary to ensure a safe and efficient flow of traffic is maintained.

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<sup>1</sup> Guidance to the Civil Aviation Authority on Environmental Objectives Relating to the Exercise of its Air Navigation Functions, paragraphs 7.2 to 7.7 refer.

- 2.3 Procedure designs for the BIA RNAV STARs, identified as ADVED 1A and BAXUN 1A, are at Enclosures 1 and have been appropriately reviewed by CAA IFP staff. The procedures, which are ICAO compliant, have been successfully subjected to simulator trials. The associated ATS safety case has been considered and accepted by my Bristol Airport ATS inspector; it is worth noting that appropriate procedures are in place that will ensure that descent profiles and allocated levels take into account any notified EGD119 activation. There is no related CAS requirement or any proposed change in airspace classification associated with this ACP. All proposed procedures would be contained with existing CAS.
- 2.4 This is the first ACP to reach this stage of maturity that aims to introduce RNAV arrival procedures with the prime intent of replicating existing concentrations of traffic flying non-PBN procedures.

### **3. STATUTORY DUTIES**

- 3.1 My 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.

#### **3.2 Safety**

- 3.2.1 My 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.<sup>2</sup> In this respect, the RNAV procedures would be wholly contained within existing CAS and would fundamentally replicate a flow of traffic that already exists without any associated safety concerns. As indicated the associated ATM safety case has been considered and accepted.
- 3.2.2 To mitigate a technical non-compliance with SARG Policy Statement – Controlled Airspace Containment Policy (an element of the RWY27 procedure would route within 3 NM of the boundary of CAS), SARG has deemed that radar monitoring of the RWY27 procedure is essential. I assess that balancing the lack of requirement for additional CAS against the need for radar monitoring of the RWY27 procedure reflects a sensible risk based assessment of requirements.
- 3.2.3 I am consequently content that the proposed BIA RNAV STARs can be safely introduced without the need for additional airspace or service provision mitigation.

#### **3.3 Airspace Efficiency**

- 3.3.1 I am required to secure the most efficient use of the airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic.<sup>3</sup> Without involving any change in airspace structure or classification, the ACP is fundamentally prompted by the current and future need for the efficient use of existing airspace as reflected within the CAA Future Airspace Strategy (FAS) for the United Kingdom 2011 to 2030. In approving the proposal, the CAA would allow BIA to take advantage of the opportunities offered by the FAS.
- 3.3.2 The ACP recognises the need for efficient use of the airspace by all airspace users and is cognisant of the restrictions imposed by any increase in CAS. The proposal appropriately facilitates the development and implementation of PBN in UK airspace and the UK's reduced reliance on ground based navigation aids.

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<sup>2</sup> Transport Act 2000, Section 70(1).

<sup>3</sup> Transport Act 2000, Section 70(2)(a).

3.3.3 I am satisfied that introduction of the BIA RNAV STARs fits well with the UK's airspace efficiency aspirations.

### **3.4 Airspace Users**

3.4.1 I am required to satisfy the requirements of operators and owners of all classes of aircraft.<sup>4</sup> The Sponsor conducted extensive consultation with all affected stakeholder aviation groups as part of the ACP process and the impact of the RNAV STARs upon other airspace users has been appropriately considered. NATMAC members have been informed by SARG at each stage of the ACP process.

3.4.2 The proposed introduction of the RNAV STARs will have a clear benefit to inbound IFR air traffic, a benefit that will grow as more operators are able to fly PBN/RNAV procedures. There is no requirement for additional CAS or any enhanced access arrangements for non BIA-related traffic; the consultation process generated no operational stakeholder objection. With particular reference to EG D119 (Bridgewater Bay) and the Yeovilton AIAA, DAATM reports that from a military perspective there are no related airspace concerns.

3.4.3 I am content that the RNAV STARs will satisfy the requirements of the growing number of operators able to fly PBN RNAV procedures and I am satisfied that the introduction of these procedures will not be detrimental to other airspace users.

### **3.5 Interests of Other Parties**

3.5.1 I am 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.<sup>5</sup> The Sponsor has carried out adequate consultation with the local community representatives. The 3 objections to the proposal concerned potential environmental impact; each one appropriately considered by the sponsor. Subject to utilisation of the RNAV STAR procedures, which is expected to increase over time, the resultant concentration rather than dispersal of the environmental burden is in line with Government Policy.<sup>6</sup>

### **3.6 Environmental Objectives**

3.6.1 In performing my statutory duties, I am obliged to take account of the Guidance provided by the Secretary of State<sup>7</sup>. My detailed considerations of the environmental aspects of this proposal are covered later in this letter.

### **3.7 Integrated Operation of ATS**

3.7.1 I am required to facilitate the integrated operation of air traffic services provided by or on behalf of the armed forces of the Crown and other air traffic services.<sup>8</sup> As the proposed procedures aim to formalise existing flows of traffic, involve no new airspace arrangements and do not directly intend to generate an increase in traffic, there are no additional ATS integration issues.

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<sup>4</sup> Transport Act 2000, Section 70(2)(b).

<sup>5</sup> Transport Act 2000, Section 70(2)(c).

<sup>6</sup> Guidance to the CAA on Environmental Objectives Relating to the Exercise of its Air Navigation Functions paragraphs 7.4 – 7.8 refers

<sup>7</sup> Transport Act 2000, Section 70(2)(d)

<sup>8</sup> Transport Act 2000, Section 70(2)(e).

### **3.8 National Security**

- 3.8.1 I am required to take into account the impact any airspace change may have upon matters of national security.<sup>9</sup> There are no national security issues identified; I am therefore satisfied that national security requirements will not be jeopardised by implementation of the change.

### **3.9 International Obligations**

- 3.9.1 I am required to take into account any international obligations entered into by the UK and notified by the Secretary of State.<sup>10</sup> No new international obligations arise as a result of the airspace change proposal.

## **4. ENVIRONMENTAL CONSIDERATIONS**

- 4.1 The proposal aims principally to replicate existing concentrations of traffic. Accordingly, beyond the more routine overflight of areas of land that are already overflown, there is no anticipated negative effect on the level or distribution of noise or emissions. As discussed, concentration rather than dispersal of environmental burden is in line with Government Policy.
- 4.2 The fundamental replication of existing concentrations of traffic will mean that there will be no direct impact upon flights taking place over the Mendip AONB; such flights already occur and the ACP is not directly linked to traffic growth.
- 4.3 The ERCD report on the environmental impact highlights that whilst the slight re-routeing of RWY09 traffic to offshore airspace would accrue some noise benefit; to date the sponsor has not been able to demonstrate the ACP expectation that the RNAV STARs would facilitate wider employment of CDAs, which would have an environmental benefit. To that end I will require BIA to facilitate CDAs to the maximum possible extent.
- 4.4 Additionally, whilst the ACP failed to produce Sound Exposure Level (SEL) footprints relating to night arrivals, ERCD staff undertook an assessment of the associated material contained within the proposal submission. Having taken account of the noisiest aircraft type (i.e. at least one flight per night) at Bristol and the profile of the arriving traffic, ERCD is satisfied that this proposal will have no effect on the 80 dBA SEL footprints.
- 4.5 Noise aside, the ERCD report concluded that:
- 4.5.1 There was insufficient evidence or assessment to support an ACP claim of a CO<sub>2</sub> reduction, notably through increased use of CDAs. Whilst there is unlikely to be any worsening, no robust benefit has been demonstrated.
- 4.5.2 It was unlikely that there would be any associated Local Air Quality impact as there would be no related changes to traffic volumes or flight patterns below 3,000 ft.
- 4.5.3 Given that the ACP was not directly intended to facilitate any increase in traffic and noting that flights over the Mendip AONB already occur, there would be no impact on tranquillity or visual intrusion.

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<sup>9</sup> Transport Act 2000, Section 70(2)(f).

<sup>10</sup> Transport Act 2000, Section 70(2)(g).

4.6 It is not considered that there is any requirement to obtain further approval from the Secretary of State for Transport in respect of the environmental impact of this proposal<sup>11</sup>.

## **5. CONSULTATION**

- 5.1 The Sponsor undertook a public consultation between 1 August and 31 October 2013 in accordance with the requirements of CAPs 724 and 725 and in accordance with the Cabinet Office Code of Practice for Consultation. The consultation document was distributed widely to aeronautical stakeholders (including the National Air Traffic Management Advisory Committee and 15 local aircraft operators), the Bristol Airport Consultative Committee, 6 District Councils and the Mendip Hills AONB. In addition, a notice was placed in a regional newspaper notifying members of the public of the consultation and providing a link on BIA's website for the consultation document. Face-to-face meetings were also arranged with a number of local government officers.
- 5.2 THE SARG Regulatory Co-ordination and Operations Planning's assessment of the consultation undertaken by BIA noted that:
- 5.2.1 The consultation was conducted in accordance with the CAA's regulatory requirements
- 5.2.2 The proposal that garnered a higher level of support than is the norm. Whilst only one member of the public participated in the consultation, this appeared to be more the result of the benign nature of the change rather than a failure to engage on the part of the sponsor.
- 5.2.3 There were no objections to the proposal from aviation stakeholders.
- 5.2.4 Three objections were received from non-aviation stakeholders. These were principally associated with the concentration versus dispersal of environmental burden and the potential displacement of noise to other communities. Each objection was appropriately considered by the sponsor.
- 5.3 The Consultation Assessment records that notwithstanding some administrative weaknesses, the consultation report and associated material met SARG requirements.

## **6. REGULATORY DECISIONS**

- 6.1 I am content that the proposed introduction of RNAV STARs catering for BIA arrivals departing the en-route environment at EXMOR is safe, which satisfies my primary statutory duty. Thereafter, when considering the competing demands of my remaining duties, together with the Directions and Guidance, I am satisfied that the introduction of the subject procedures is appropriate.
- 6.2 The STARs, to be identified as ADVED 1A and BAXUN 1A, will be formally established on 21 August 2014 at AIRAC 09/2014.

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<sup>11</sup> Guidance to the CAA on Environmental Objectives Relating to the Exercise of its Air Navigation Functions paragraph 6.6 refers.

6.3 In accordance with the requirement and guidance set out at CAP 724 and 725, my staff will review the effectiveness of the arrangements approximately 12 months after implementation (Q3/4 2015).

*Yours sincerely,*

*Mak Swan*

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M Swan  
Group Director

Enclosures:

1. Map of Proposed Airspace.

**Enclosure:1. BIA RNAV STAR Chart - ADBOB 1A and - BAXUN 1A**

