

FASI(N) IoM/Antrim Systemisation Airspace Change Decision

CAP 1584



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Chapter 1

Executive summary

Objective of the Proposal

1. The objective of this proposal is to increase the Monitor Value¹ (MV) for the Isle of Man sector by 10%, from 43 to 47. This would enable the introduction of fewer air traffic flow restrictions being applied to aircraft through the sector, thereby reducing delays.

Summary of the decision made

2. Subject to the conditions set out in Chapter 3 the CAA has decided to approve the following changes to the structure of UK airspace over the Irish Sea:
 - a. Changes to existing ATS routes
 - b. Introduction of new RNAV1 ATS routes
 - c. Introduction of RNAV1 link routes
 - d. Minor modifications above 20,000 feet to standard arrival routes (STARs) for Manchester, Liverpool, London City, London Luton, London Stansted and Southend
 - e. Introduction of a small volume of additional Class C controlled airspace (CAS) over the Irish Sea, above 7500 feet.

Next steps

3. 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. In due course, the sponsor will be advised of the specific data sets and analysis required, and the dates by when this information must be

¹ Monitor Value (MV) is a guide value to the ATC supervisor. The greater the MV, the greater the hourly throughput of the sector under normal conditions before the supervisor considers taking measures to regulate the anticipated air traffic flow.

provided. 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 Process²) and will consider whether *“the anticipated impacts and benefits, set out in the Airspace Change Proposal, have actually been delivered”*.

² www.caa.co.uk/CAP725

Chapter 2

Decision Process and Analysis

Aims and Objectives of the Proposed Change

4. This is a proposal to introduce systemised RNAV1 ATS routes and RNAV1 link routes in the Prestwick Centre IoM and Antrim sectors to provide increased ATC capacity and reduce air traffic delay.
5. This is Deployment 2 of the FASI(N)³ (previously known as PLAS) airspace change project, which is part of a phased delivery of a wider programme agreed between NATS and its customers under the NATS Long Term Investment Plan. Deployment 2 has taken advantage of modern navigation performance (RNAV1), to introduce routes that are more closely spaced than the legacy route structure which is based on the extant ground infrastructure. The new route structure will allow enhanced systemisation of air traffic control and thereby enable more efficient use of the IoM and Antrim sectors' airspace.
6. To achieve significant operational benefits through the systemisation of the Air Traffic Management (ATM) operation, the proposal intends to capitalise on these benefits by delivering increased predictability and improved flight profiles, thereby reducing delay.
7. The aim is to segregate flows of traffic by establishing RNAV1 ATS routes which are spaced according to CAA route spacing guidelines for RNAV1 routes published in CAP1385.
8. The CAA endorse the aims and objectives of this proposal.

³ Future Airspace Strategy North and Prestwick Lower Airspace Systemisation

Chronology of Proposal Process

Framework Briefing

9. A FASI(N) Framework Briefing was held on 11 November 2015 during which the sponsor (NATS) briefed the CAA on the scope of the proposal. The sponsor outlined all the planned Modules (now Deployments) associated with the strategic changes in the Scottish and Manchester airspace sectors. A Goal Plan was then devised which identified the timelines for en-route Network and aerodrome instrument flight procedures changes and the anticipated deliverables for each Module (Deployment).

Consultation

10. As there was no requirement for additional CAS other than a small volume wholly contained over the sea and not below 7500 feet, the CAA agreed that an 8-week consultation period would satisfy the airspace change process requirements. NATS completed the Consultation on 30th August 2016

Submission of Airspace Change Proposal

11. The change proposal was submitted to the CAA on 29th March 2017. Following a completeness check, which included an additional 18 referenced documents that supported the ACP material, the sponsor was informed that the material was sufficient for the CAA to commence its regulatory assessment.

CAA Analysis of the Material provided

12. As a record of our analysis of this material the CAA has produced:
 - a. An Operational Assessment of the proposal
 - b. A Consultation Assessment of the engagement with aviation stakeholders.
 - c. An Environmental Assessment of the emissions analysis and environmental benefits.
13. These assessments will be published on the CAA's website to accompany this decision document.

CAA assessment and decision in respect of Consultation

14. NATS provided records of its engagement with aviation stakeholders which was targeted at the MoD, Irish Aviation Authority (IAA), BAe Warton, the airlines and the airports affected by the revised route structure. On initial assessment, it was considered that the mitigation of certain objections from some aviation industry stakeholders was not sufficiently articulated. Consequently, the sponsor was asked to revisit those issues and undertook further engagement with the stakeholders concerned. Subsequently, the sponsor provided evidence that the objections had either been withdrawn or adequately mitigated.
15. The sponsor provided acceptable evidence to show that the consultation/engagement activity met CAA regulatory requirements.

CAA Consideration of Factors material to our decision whether to approve the change

Explanation of statutory duties

16. In exercising its air navigation function, the CAA must assess all airspace changes in accordance with its statutory duties set out in Section 70 of the transport Act.

Conclusions in respect of safety

17. The CAA's primary duty is to maintain a high standard of safety in the provision of air traffic services and this takes priority over all other duties.⁴
18. In this respect, with due regard to safety in the provision of air traffic services, the CAA is satisfied that the proposals maintain a high standard of safety for the following reasons:
 - a. The NATS Route design Analysis report demonstrates compliance with CAP1385 and includes a total design risk calculation

⁴ Transport Act 2000, Section 70(1).

- b. A reduction in manual ATC vectoring as a result of a less complex ATS route structure
- c. Fast-time simulations identified that potential aircraft conflicts reduced by 53% for the IoM Sector and 35% for the Antrim Sector, based on forecast 2019 traffic levels.

Conclusions in respect of securing the most efficient use of airspace

- 19. 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.⁵
- 20. The CAA considers that the most efficient use of airspace is defined as 'secures the greatest number of movements of aircraft through a specific volume of airspace over a period of time so that the best use is made of the limited resource of UK airspace'.
- 21. The CAA considers the expeditious flow of air traffic to involve each aircraft taking the shortest amount of time for its flight. It is concerned with individual flights.
- 22. In this respect although the northerly westbound RNAV1 ATS route is 1.7nm longer than the extant RNAV5 ATS route, the introduction of systemisation will deliver more expeditious flows and should provide better descent profiles and reduce STAMs⁶.

Conclusions in respect of taking into account the Secretary of State's guidance to the CAA on environmental objectives

- 23. In performing the statutory duties, the CAA is obliged to take account of the extant guidance provided by the Secretary of State,⁷ namely the 2014 Guidance to the CAA on Environmental Objectives.

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

⁶ Short Term ATFCM (air traffic flow and capacity management) Measures

⁷ Transport Act 2000, Section 70(2)(d)

24. In this respect the CAA is satisfied that the environmental impact of this proposal is negative but not significant, and therefore it is reasonable to conclude that approval from the Secretary of State is not required.

Conclusions in respect of aircraft operators and owners

25. The CAA is required to satisfy the requirements of operators and owners of all classes of aircraft.⁸
26. In this respect, the CAA is satisfied that owners and operators would benefit from ATS route modifications. NATS however needs to maintain a constructive dialogue with the Dublin based airlines to help further mitigate their concerns.

Conclusions in respect of the interests of any other person

27. 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.
28. In this respect, the CAA is satisfied there are no additional issues to consider.

Integrated operation of ATS

29. The CAA is 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.⁹
30. In this respect, the CAA is satisfied that the introduction of the new route structure has been adequately coordinated with the Ministry of Defence.

Interests of national security

31. The CAA is required to take into account the impact any airspace change may have upon matters of national security.¹⁰
32. In this respect, the CAA is satisfied that there are no impacts for national security.

⁸ Transport Act 2000, Section 70(2)(b).

⁹ Transport Act 2000, Section 70(2)(e).

¹⁰ Transport Act 2000, Section 70(2)(f).

International obligations

33. The CAA is required to take into account any international obligations entered into by the UK and notified by the Secretary of State.
34. In this respect, the CAA is satisfied that an ICAO ATS Route Network Changes over the High Seas letter was sent to ICAO on 11th August 2017 for promulgation by ICAO to inform ECAC States in accordance with the provisions in Annex 11, paragraph 2.1.2 and the established procedure for amendment of the European Air Navigation Plan.

Chapter 3

CAA's Regulatory Decision

35. Noting the anticipated impacts on the material factors we are bound to take into account, we have decided to approve the NATS IoM/Antrim Sectors' systemisation airspace change proposal because the increased efficiencies will be delivered by an anticipated increase in capacity and a reduction in delays.

Conditions

36. A condition of this approval is that NATS Customer Affairs continue to maintain constructive dialogue with the Dublin based airlines that have raised concerns over the additional westbound flight-plan mileage of 1.7nm per flight when returning to Dublin.

Implementation

37. The revised airspace will become effective on 9th November 2017. Any queries are to be directed to the SARG Project Leader, mac.mackay@caa.co.uk 020 7453 6552.

Post Implementation Review

38. In accordance with the CAA 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.

Civil Aviation Authority

21st August 2017

Appendix A

