

UK Airspace Management Policy

CAP 740



Published by the Civil Aviation Authority, 2025

Civil Aviation Authority Aviation House Beehive Ring Road Crawley West Sussex RH6 0YR

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First issue 20 June 2003
Second issue 24 September 2007
Third issue 1 March 2012
Fourth issue March 2013
Fifth issue June 2014
Sixth issue May 2017
Seventh issue December 2018
Seventh issue, Amendment 1, November 2019
Seventh issue, Amendment 2, January 2021
Eight issue March 2023
Ninth issue May 2024
Tenth issue November 2025

Enquiries regarding the content of this publication should be addressed to:
Airspace Regulation, Safety and Airspace Regulation Group, Civil Aviation Authority
Aviation House, Beehive Ring Road, Crawley, West Sussex, RH6 0YR

The latest version of this document is available in electronic format at www.caa.co.uk/CAP740

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Revision history (Revised text is underlined in red.)

Issue 8: March 2023

This amendment to the seventh issue of CAP 740 is a complete re-issue.

The CAP has been updated to reflect extant UK Regulation and policies following the UK's withdrawal from the EU. The changes include new UK Flexible Use of Airspace (FUA) reporting and looks to set a framework to later incorporate new entrants such as Space and Uncrewed Aircraft System into Airspace Management.

Issue 9: May 2024

This amendment updates the document to align with the CAA's policy for the Establishment and Operation of Special Use Airspace (SUA).

The applicability of Level 2 and Level 3 ASM has been expanded to include non-AMC managed SUA to progress towards the strategic objectives of the Airspace Modernisation Strategy.

The FUA oversight requirements for SUA Authorities have been amended to more closely align with UK Reg (EC) No 2150/2005 (The UK FUA Regulation) and moved from the Military Appendix C to Chapter 9 due to the diversification of operations within Special Use Airspace.

Issue 10: October 2025

This amendment to the ninth issue of CAP 740 is a complete re-issue.

The UK Flexible Use of Airspace Strategy has been updated and incorporates strategic objectives. The responsibilities of the CAM and the MAM have been updated to include accountabilities. The obligations under the Joint & Integrated (J&I) Concept to airspace policy, planning and management have been updated to ensure that the interests of all airspace users, including New Entrant Operators and commercial entities, are dealt with impartially in accordance with the definition of the UK J&I concept.

CAP 740 Foreword

Foreword

General

- 1. CAP 740 provides applicable guidance and clarification relating to United Kingdom (UK) Airspace Management and is to be read in conjunction with the regulatory material referenced below. Non-inclusion of source regulatory material within this CAP does not preclude the end user from either the need to be aware of, or the need to comply with, the requirements contained within the source regulatory materials unless otherwise exempted from those requirements.
- 2. It is the policy of the UK government that, unless a Difference (from an ICAO requirement) or Acceptable Means of Compliance has been established, compliance with relevant international (i.e. ICAO and applicable equivalents such as International Telecommunications Union) and UK regulatory material is required to the extent mandated in law. Additionally, compliance with national requirements that are not addressed by international or UK regulations is also required.
- 3. The words 'must', 'shall' and 'will' indicate that compliance with applicable regulatory requirements is necessary. In the case of Acceptable Means of Compliance, the word 'should' indicates that compliance is required, unless complying with an approved Acceptable Means of Compliance.

Regulatory references

- 4. CAP 740 UK Airspace Management Policy sets out the regulatory framework and governance of UK Airspace Management (ASM) practice and the application of the Flexible Use of Airspace (FUA) concept. In doing so it provides a structure within which related guidance, processes and protocols can be shaped, providing detail of procedures and requirements for the implementation and application of the FUA concept at the strategic, pre-tactical and tactical levels of operation.
- 5. CAP 740 serves as a means of compliance to the essential requirements of both Assimilated Regulation (EC) No. 2150/2005 (Flexible Use of Airspace Regulation) and Assimilated Regulation (EU) 2017/373 CAP 740 also ensures alignment with supporting EUROCONTROL guidance.
- 6. This document should also be read in conjunction with:
 - a) ICAO:

ICAO Doc 10088 Manual on Civil-Military Cooperation in Air Traffic Management First Edition, 2021

b) EU:

EUROCONTROL Specification for the Application of the Flexible Use of Airspace

European Route Network Improvement Plan (ERNIP) - Part 3 Airspace Management Handbook

c) UK:

Transport Act 2000

The Civil Aviation Authority (Air Navigation) Directions 2023 Assimilated Regulation (EU) 2017/373 Air Traffic Management/Air Navigation Services Common Requirements

Assimilated Regulation (EC) No 2150/2005 (Flexible Use of Airspace Regulation)

Assimilated Regulation (EU) 2004/551 the airspace regulation Flow Management Position (FMP) Manual of Air Traffic Services (MATS) Part 2

UK Air Traffic Management Vocabulary (CAP 1430)
Swanwick Air Traffic Control Centre (Military): 78 Sqn Swanwick Military
Order Book–MAMC

- 7. In order to assist the reader, links to related documents have been included where possible; however, the Civil Aviation Authority (CAA) is not responsible for ensuring the integrity of such links to documentation external to the CAA.
- 8. Enquiries regarding the content of this publication should be addressed to:

ATS Enquiries
Future Safety
Civil Aviation Authority
Safety and Airspace Regulation Group
Beehive Ring Road
Crawley
West Sussex
RH6 0YR

E-mail: ats.enquiries@caa.co.uk

Abbreviations and Definitions

Abbreviations

See CAP1430 UK Air Traffic Management Vocabulary

Definitions

A common European explanation of ASM terms is detailed in The European Route Network Improvement Plan (ERNIP) – Part 3, Airspace management Handbook.

See also CAP1430 UK Air Traffic Management Vocabulary.

Airspace Management Background

Introduction

- 1.1 The principal objective of ASM is to achieve the most efficient use of the airspace through dynamic time-sharing and, at times, the segregation of airspace amongst various categories of airspace users on the basis of short-term needs.
- 1.2 The basis for the FUA concept is that airspace should not be designated purely as civil or military but rather a continuum in which all user requirements are accommodated to the greatest extent possible. Consequently, where possible any necessary airspace segregation should be temporary in nature whilst optimising the integration of all airspace users and network performance. The application of FUA principles aims to ensure that through the daily allocation of flexible airspace structures, any necessary segregation of airspace is based on real usage within a specific time period and defined airspace volume. The UK FUA Strategy is detailed in Appendix A.

Airspace Management Cell (AMC) UK

- 1.3 It is incumbent on all airspace users to practically apply the FUA concept.

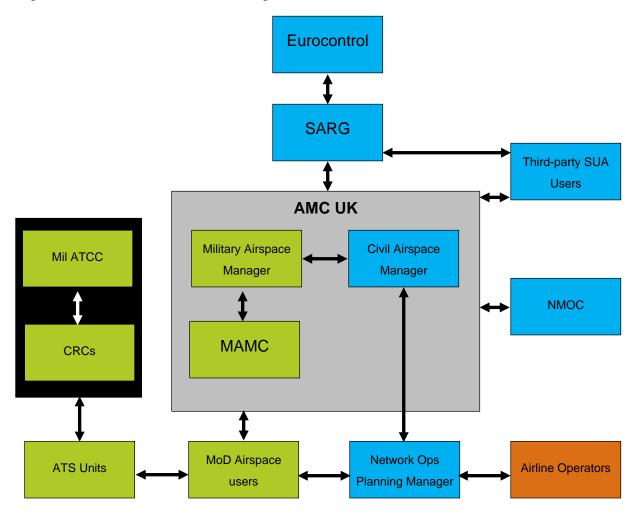
 However, where SUA interacts with the Air Traffic Management (ATM) Network it is vital that the application of FUA is coordinated through the AMC.
- 1.4 The AMC is an integrated operation, consisting of a Civil Airspace Manager (CAM), a Military Airspace Manager (MAM) and support staff. The AMC provides a State service, and although the CAM and MAM roles are funded by NATS (En Route) Plc (NERL) and the Ministry of Defence (MoD) respectively, its primary objective is to ensure the most equitable use of airspace is provided for all airspace users in an impartial manner. The accountabilities and responsibilities of the CAM and MAM are described in Appendix B.
- 1.5 Incorporated into the AMC is the Military Airspace Management Cell (MAMC).

 Divided into two elements, MAMC (Managed Airspace) coordinate and are responsible for the majority of military managed airspace bookings; whilst MAMC (Low Flying) are responsible for all military bookings in the UK Low Flying System (UKLFS).
- The AMC UK is responsible for the administration of AMC managed areas, as defined in UK Aeronautical Information Publication (AIP) <u>ENR 2</u> and ENR 5. It also performs collaborative airspace planning with Ireland and other neighbouring States. AMC UK provides the Level 2 ASM service on behalf of Ireland through a Lead AMC arrangement as detailed in the UK/Irish Aviation

Authority (IAA) AMC Letter of Agreement (LoA) and Chapter 4 of this document. This requires AMC UK to publish Irish Danger Area activity and changes to activity in the UK/Ireland Airspace Use Plan (AUP)/Updated Use Plan (UUP).

1.7 A diagram of AMC UK interactions is below.

Figure 1: AMC UK Interactions Diagram



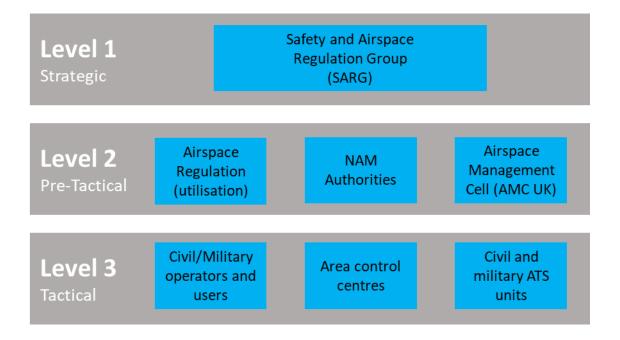
The Airspace Management Function (AMF) UK

1.8 The AMF combines the resources of the AMC, the Network Operations Planning Managers and the Network Operations Delivery Specialists. This ensures <u>ATM network airspace requirements are available to the AMC to enable effective collaborative decision making (CDM)</u>.

The Three Levels of ASM

1.9 The FUA concept is based on three levels of ASM which are shown at Figure 2 and described below. The principles of Level 2 and Level 3 ASM can be applied to all SUA, not just that conducted by CAA Airspace Regulation (Utilisation) (AR(U)) and the AMC. SUA Authorities should apply the Level 2 and Level 3 ASM processes described below to maximise the integration of all airspace users.

Figure 2: The Three Levels of Airspace Management



ASM Level 1 (Strategic)

- 1.10 Strategic ASM consists of a joint civil/military process within a national High-Level Airspace Policy Body (HLAPB). The HLAPB formulates national ASM policy and carries out the necessary strategic planning work, taking into account national and international airspace users and Air Traffic Service (ATS) providers' requirements.
- 1.11 Safety and Airspace Regulation Group (SARG) is the UK's HLAPB and in accordance with the general requirements of the FUA regulation, acts as the joint civil/military body performing a joint function.

ASM Level 2 (Pre-Tactical)

1.12 Pre-tactical ASM consists of the day-to-day management and temporary allocation of airspace. This is achieved through ASM functions conducted by the Airspace Utilisation element of the CAA (AR(U)), the joint AMC and individual SUA authorities of Non-AMC Managed SUA (NAM).

- 1.13 SARG Airspace Regulation (AR) through CAA AR(U) is responsible for providing deconfliction, co-ordination and notification of all known Unusual Aerial Activity (UAA) which takes place within the London FIR/UIR and Scottish FIR/UIR outside of permanently established SUA. Oceanic Notices to Aviation (NOTAMs) are normally the responsibility of the AMC for reservations in Shanwick Oceanic Control Area North Oceanic Transition Area and Shannon Oceanic Transition Area.
- 1.14 The AMC UK with the fully integrated MAMC is empowered with the authority to execute Level 2 ASM for AMC-Managed Areas (AMA) within the framework of the established airspace structures, priority rules and negotiation procedures as laid down by the CAA in this CAP. The CAM and the MAM are accountable to SARG for the pre-tactical application of FUA for AMAs as defined in chapter 5. Temporary airspace structures and those structures requested to be utilised by New Entrant Operators (NEO), or commercial entities should be considered in the Joint and Integrated (J&I) agreement between the CAA, NERL and MoD as detailed in chapter 3. In exceptional circumstances further guidance on the priority for airspace allocation will be provided by SARG as defined in chapter 5.
- 1.15 SUA Authorities of Non-AMC Managed Areas (NAM) deliver FUA at Level 2 by activation of SUA by NOTAM based upon actual needs.

ASM Level 3 (Tactical)

- 1.16 Tactical ASM is the real-time activation, deactivation or reallocation of the airspace allocated at ASM Level 2. Level 3 ASM includes the resolution of specific airspace requirements and traffic situations, as well as real-time coordination. This permits the optimised use of airspace and can reduce the need to segregate airspace.
- 1.17 SUA Authorities are responsible for ensuring robust Level 3 ASM processes and notification procedures are established where practicable.

ASM Policy and Regulatory Framework

Legislation

- 2.1 From 1 January 2021, appropriate EU Regulations have been retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018
 These regulations are available on the <u>CAA web page</u>. Military ASM Policy is at Appendix C to this document.
- 2.2 The FUA Specification serves as the means of compliance to the essential requirements listed in the Regulations. The EUROCONTROL ASM Handbook provides guidance on ASM functions and ATM procedures to apply the FUA concept. Building upon that framework CAP 740 articulates the spectrum of responsibilities and ASM roles for the exploitation of FUA as part of the UK's ASM system.
- 2.3 The Transport Act 2000 sits as the over-arching legislation for air navigation and requires the CAA to exercise its main functions and duties with regard to the provision of air navigation services in the UK. The Secretary of State for Transport has nominated the CAA to perform air navigation functions as the Secretary of State may specify. More specifically, the CAA must secure the most efficient use of airspace consistent with the safe operation of aircraft and the expeditious flow of air traffic whilst taking into consideration the requirements of operators and owners of all classes of aircraft. Environmental implications and national security issues must also be considered.
- 2.4 Under section 66(1) of the Transport Act 2000, the Secretary of State for Transport issued the CAA (Air Navigation) Directions 2023, imposing duties with regard to air navigation. The key elements relating to CAP 740 include:
 - Development and publication of national policy for airspace design including rules, guidelines, technical design criteria and common procedures for the use of UK airspace.
 - b) Ensuring the development of any current or future implementation plans are aligned with the AMS.
 - c) Establishment of institutional arrangements necessary to promote the safe, effective and efficient, integrated operations of air traffic in the UK, in relation to the application of Airspace Management.
 - d) Provision of advice to the Secretary of State as required.

e) Representation of the UK internationally, maintaining close cooperation with international organisations and contributing to the development of international airspace policy.

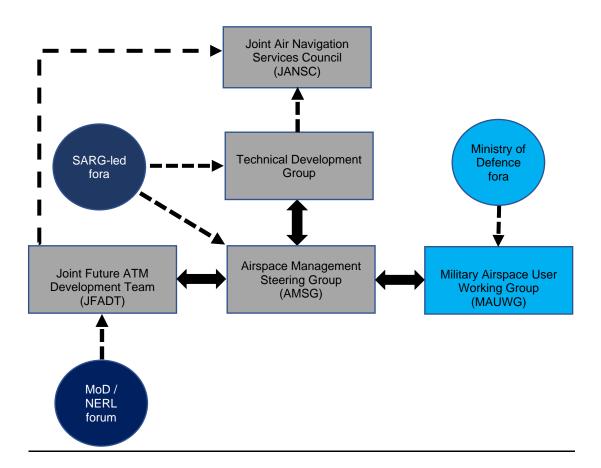
Policy Framework

2.5 At ASM Level 2 a policy framework is established from which local orders and instructions issued by both civil and military units can be derived. This policy is guided by the principles outlined in the EUROCONTROL ASM Handbook, which informs how the AMC should interact with the Network Management Operations Centre (NMOC). The responsibilities for the execution of UK Level 2 ASM have been delegated to the AMC for AMA, NAM authorities and AR(U).

Governance

- SARG formulates the national ASM policy and carries out the necessary strategic planning work, taking into account national and international airspace and space users' requirements. SARG is tasked with the continuous assessment of national airspace, the progressive establishment of new and more flexible airspace structures, and the oversight and regulation of procedures for the allocation of these airspace structures.
- 2.7 The main function of SARG is to ensure safe efficient and seamless use of airspace, based on collaborative airspace planning both within the UK and with neighbouring States.
- 2.8 This is to be achieved through the development, approval and enforcement of common national policies for an effective airspace allocation and review process, taking into account the needs of all stakeholders, including national security and defence needs, environmental issues as well as any particular neighbouring States' requirements.
- 2.9 The CAA exercises oversight through UK Reg (EU) 2017/373
 ATM/ANS.AR.C.010 and establishes stakeholder engagement and ensures consistency at the strategic level (Level 1) through the Airspace Management Steering Group (AMSG see Chapter 4) and associated groups.
- 2.10 The AMSG and its associated groups (figure 3) comprise civil and military membership. This ensures that all parties share a common understanding of airspace requirements and plans. Wider military input is enabled at a tactical level through the Military Airspace User Working Group (MAUWG). For transparency and shared situational awareness, a member of SARG is invited to attend the MAUWG as an observer.

Figure 3: Ensuring Military / Civil Coherence



Management and Provision of ATS

Chapter 3

Concept and Governance of the Joint and Integrated (J&I) approach to Airspace Policy, Planning, Management and Provision of ATS

Introduction

3.1 The UK operates a J&I approach to airspace policy, planning and management, and the provision of ATS. Close cooperation is required between the CAA and the MoD in order that the UK's airspace is managed in a safe, orderly and efficient manner. J&I also requires close collaboration with the holder of the Government's en-route air traffic service provider 'Licence' NERL, economically regulated by the CAA, and NEO or commercial entities whose activities or utilisation of SUA could impact other airspace users.

Development of J&I

- In 1996, the UK's main Air Navigation Service Provider (ANSP), NATS, and its regulator, the CAA, were functionally separated. NATS ceased to be a joint civilian/military organisation and began operating as a commercial entity, albeit continuing to be part of the CAA with the CAA being a statutory body and not formally part of the Government. SARG, previously part of NATS, along with its mixed civilian and military staff, continued to report to the Chair of the CAA and the Chief of the Air Staff. In July 2001, following the enactment of the Transport Act 2000, NATS was part privatised, thus further changing the status of J&I arrangements.
- 3.3 As part of establishing the privatisation framework, the Future Military Area Radar Service (FMARS) contract between NERL and MoD was signed, defining the relationship more clearly by identifying specific services and associated performance standards.

Definition of UK J&I Concept

- 3.4 The J&I concept is a collaborative approach between the CAA, MoD and NERL with regards to airspace policy, planning and management, and the provision of ATS in UK airspace. The guiding principles of J&I are:
 - a) Airspace is a shared resource.
 - b) With the exception of airspace segregated for safety reasons, expeditious access to all airspace should be available to all users.

Chapter 3: Concept and Governance of the Joint and Integrated (J&I) approach to Airspace Policy, Planning,

Management and Provision of ATS

c) Subject to operational prioritisation, and unless agreed otherwise, ATS will be available upon request, from both MoD and NERL units.

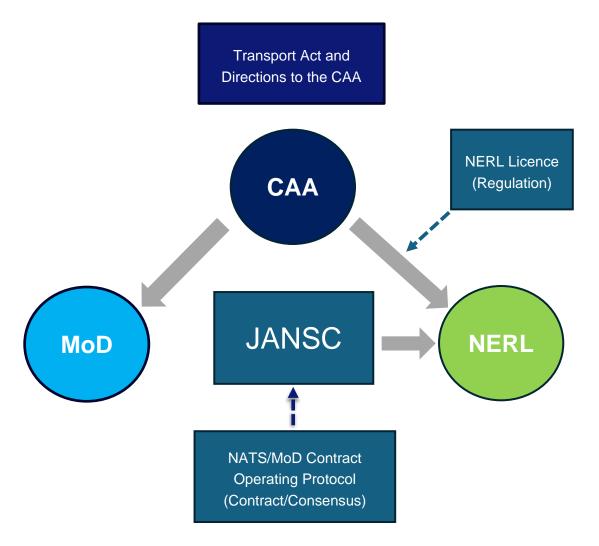
Obligations under the J&I Concept

- 3.5 CAA. Shall establish and operate such institutional arrangements with regards to air navigation as it sees necessary to promote safe, effective, efficient and integrated operation of air traffic service providers under Part I of the Transport Act 2000 and as detailed in the Directions Para 13(1).
- 3.6 MoD. When not required for operational reasons or training requirements, the MoD will accommodate NERL requirements on all aspects of airspace planning, design and management.
- 3.7 NERL. Will seek to accommodate MoD requirements on all aspects of airspace planning, design and management that impacts MoD Operations and Training.
- 3.8 The CAA, MoD and NERL shall ensure that the interests of all airspace users including NEO and commercial entities are dealt with impartially in accordance with the definition of the UK J&I concept.

Governance of the J&I Concept

- The Transport Act 2000 sits as the over-arching primary legislation for air navigation. Under section 66(1) of the Act, the Secretary of State for Transport issued the CAA (Air Navigation) Directions 2023. The Transport Act 70(2)(e) requires CAA to exercise its air navigation functions in the manner best calculated to facilitate J&I.
- 3.10 The Directions require the CAA to make arrangements it considers appropriate for the role of the MoD in the joint and integrated provision of ATS and that those arrangements are documented in a MoU. Through the establishment of a Safety & Airspace Regulation Group, the CAA will make arrangements to second an appropriate number of MoD personnel as the MoD contribution to the functioning of the Group.
- 3.11 The Directions Para 14(5) outline, without prejudice to section 67 of the Transport Act 2000, the CAA's obligations to consult and gain approvals of the Secretary of State for Defence regarding the need to increase the volume or alter the classification of controlled airspace, where either the CAA or MoD think this could have an adverse impact on the MoD's ability to maintain its operational capability.
- The Directions require the CAA to ensure the continuation of the body known as the Joint Air Navigation Services Council (JANSC).

Figure 4: UK Joint and Integrated Approach to ATS Provision



JANSC

- 3.13 The JANSC is the principal mechanism for maintaining high-level oversight of arrangements between the CAA, NERL and the MoD, for the continued provision of J&I ATS.
- 3.14 The Group Director, SARG is the Chairman of the JANSC. The other members are Head Defence Airspace and Air Traffic Management (DAATM) and the NATS Chief Executive. Additional attendees and presenters attend at the JANSC's request.

CAA/ MoD MOU

3.15 The CAA/MoD MoU, dated 1 Apr 2021 between the Secretary of State for Defence and the CAA, details the MoD's contribution to the J&I provision of ATS within the UK, some of which are the responsibility of NERL under the Licence. It

acknowledges that the MoD and CAA recognise the benefits to all airspace users, and with a view to the future continuation of the J&I provision of ATS, are minded that the MoD should continue to provide those services. This MoU will continue in force until 31st March 2031, or in the event of termination of the FMARS Contract (end date of 31st March 2030), or either party giving 12 months' notice to the other of its intention to cancel the MoU.

Operating Protocol

- 3.16 The operational relationship between NERL and the MoD ANSP is captured in an Operating Protocol. The Operating Protocol document is a high-level mechanism to draw together a listing of the subordinate operational agreements that exist.
- 3.17 The need for an Operating Protocol is a condition of the License granted to NERL. Condition 14(1)(b) of the Licence states that NERL shall at all times employ all reasonable efforts to consult and cooperate, in particular with the MoD, with the objective of developing, implementing and sustaining a joint and integrated approach to the provision of ATS to users by both NERL and the MoD.
- 3.18 Under Condition 14(3) of the Licence, NERL shall, in consultation with the MoD, draw up, implement and comply with an Operating Protocol approved by the CAA. The Protocol sets out the role of each of them in their capacity as ATS providers in relation to the achievement of the objectives set out under the aforementioned Condition.

Benefits of the J&I Concept

- 3.19 The main beneficiaries of the UK's J&I ATS are the airspace users. They gain a more flexible, cost efficient and environmentally friendly service than would otherwise be available.
- 3.20 The J&I concept facilitates the optimisation of UK airspace usage by sharing rather than segregating, allowing all parties to enhance operational effectiveness through FUA. The strength of the relationship enhances the UK's ability to speak with a single voice, this being vital in the evolving environment created by the deployment of the Single European Sky (SES).
- 3.21 The willingness of the military ANSP to provide a service to off-route Commercial Air Transport (CAT) ensures that the benefits of a surveillance service are available even to aircraft following low density routes that do not warrant the creation of controlled airspace.
- 3.22 The arrangement capitalises on the off-route skills of military controllers whilst allowing NERL controllers to concentrate upon en-route service provision. The co-location of civil and military staff at Swanwick Centre gives the MoD the

benefit of ease of access by Operational Air Traffic (OAT) to all airspace, including the busy General Air Traffic (GAT) ATS routes and Free Route Airspace.

Summary

- 3.23 The UK's J&I approach brings quantifiable benefits to the nation. The relationship between the 2 ANSPs and the CAA is defined in the NERL Licence, the CAA/MoD MoU and the NERL/MoD Operating Protocol. The CAA Directions charge the Group Director, SARG with oversight of J&I arrangements but confer no particular powers of enforcement. Any enforcement action, shall, where necessary, be conducted in accordance with the CAA's Regulatory Enforcement Policy.
- The CAA, NERL and the MoD agree that a breakdown of J&I would significantly degrade the efficiency of service provision and airspace planning/management and would lessen the UK's impact in international fora. It therefore remains vital that all agencies remain committed to the J&I concept, addressing issues at a suitable level in order to ensure resolution to the satisfaction of all parties. The UK ASM Process is so heavily integrated between Civil and Military participants that it is considered inconceivable that a unilateral breakdown in the process can occur. For this reason, the UK does not have the specified temporary suspension process as described in UK Reg (EC) No. 551/2004 article 8, "Temporary Suspension".

Application of UK Level 1 ASM (Strategic)

Introduction

- 4.1 Strategic ASM at Level 1 sees SARG (as UK HLAPB) formulating national ASM policy and strategic planning work to ensure consistency with underpinning legislation, the Airspace Modernisation Strategy (AMS) and EUROCONTROL guidelines. This determines the working structures, implementation and application of the FUA concept for ASM Levels 2 and 3.
- 4.2 UK ASM policy establishes extensive co-operation and consultation processes between civil and military authorities and stakeholders. Day-to-day assurance of UK compliance with underpinning legislation and guidance is exercised through the Airspace Management Steering Group (AMSG).

Airspace Management Steering Group (AMSG)

- 4.3 The AMSG acts as the ASM oversight body and affects Level 1 ASM in the UK. A joint and integrated body, it determines the UK's approach to the implementation of airspace management requirements emanating from ICAO and UK policy in order to meet the needs of UK airspace users and ATS providers. The AMSG oversees the application of the FUA concept to monitor compliance with this policy and the FUA strategy at Appendix A. This is covered in further detail in chapter 9.
- The regular assessment of airspace use is an important way of increasing confidence between civil and military service providers, and airspace users, that UK airspace is managed and controlled in an efficient and proportionate manner. This is an essential tool for improving airspace design and management. Progress of this plan along with updates on other FUA developments or significant activity performance indicators is covered by the FUA component of the AMS Report, which is a key output of the AMSG. This is compiled in order to demonstrate the efficacy of FUA initiatives so that any inhibitors to FUA progress can be identified and managed appropriately. FUA reporting is detailed in Chapter 8.
- 4.5 In the conduct of its activity the AMSG must take into account:
 - a) safety
 - b) airspace structures
 - c) airspace capacity

- d) airspace regulations and procedures
- e) efficient and flexible use of airspace
- f) the requirements of all airspace users
- g) environmental obligations
- h) equipment enhancements/future technology
- i) cost efficiency
- j) the UK's AMS
- 4.6 Initiatives regarding future developments and Advanced FUA solutions may fall outside of the scope of the AMSG. Where this is deemed to be the case, the Chair AMSG will remain independent from proposed developments in order to maintain independent regulatory oversight of any outcomes. Once agreed, such initiatives are subsumed into standard AMSG oversight.
- 4.7 AMSG takes account of other European ATM developments including the work of the Network Manager (NM), develops regulatory policy in support of UK interests and directs and monitors the policy for, and implementation of, ASM in the UK.
- 4.8 Members of the AMSG including the AMC represent the UK at European level to ensure alignment with other European states, and to present the UK view to the NM. Attendance is required at, but not limited to, the Airspace Management Sub-Group (ASMSG), Route Network Development Sub-Group (RNDSG) and Network Operations meetings (NETOPS).

Lead AMC and Cross-Border Arrangements

- 4.9 AMCs agree to provide the EUROCONTROL Central Airspace Data Function (CADF) with a single point of contact, by establishing responsibility for the coordination of the harmonised availability of SUA to a Lead AMC. The UK AMC is the Lead AMC as detailed in the CAA, IAA, UK AMC and Shannon and Dublin Area Control Centre (ACC) LoA.
- 4.10 In the case of cross-border arrangements, AMCs agree to harmonise airspace availability by co-ordinating SUA status.
- 4.11 All cross-border arrangements and Lead AMC agreements are to be detailed in a formal LoA. The guidelines for the development of LoAs can be found in the European Route Network Improvement Plan (ERNIP) Part 3. All LoAs are to be signed by SARG as the UK National Supervisory Authority (NSA) on behalf of the CAA and the MoD. In addition, the agreements should be signed by the CAM and the MAM.

National Priorities

- 4.12 The priority for the allocation of AMAs shall be determined by the CAM/MAM.

 National protocols for determining priorities for the allocation of SSUA should be in accordance with the following principles:
 - a) The military is normally afforded priority for activities requiring the temporary segregation of SUA.
 - b) Civil requests for use of areas affected by segregated airspace may be put forward for consideration by the CAM/MAM.
 - c) The following will determine the allocation of airspace:
 - i) Location of the core Oceanic Traffic Flows.
 - ii) Demand for North-South traffic flows.
 - iii) Nature of the proposed activity.
 - iv) Cumulative impact of multiple SUA activation requests.
 - d) Requests for SUA by stakeholders outside of the J&I decision making process will be assessed on a case-by-case basis.
- 4.13 Where required ASM protocols may be used to apply differences to the national ASM priorities or to apply specific limitations on the use of SUA. ASM protocols shall be agreed at ASM Level 1. They are defined in LoAs between impacted parties and should be annotated in the AIP.
- In circumstances where significant weather events have been forecast, the following criteria may be used by the AMC as a guide for instigating a civil request for the use of SUA. If these values are expected to be met or exceeded over the sea area below the AMAs, the CAM may enter collaborative decision making with the MAM and request the variation, limitation or suppression of segregated military activity taking place over the sea.

a) Surface wind: 45kts mean speed

b) Gusts: > 50kts

c) Sea State: 7

Flight Plan Buffer Zone (FBZ)

4.15 In the UK an FBZ should be used where there is a requirement to apply a lateral, vertical or temporal flight planning buffer to SUA. FBZs define the lateral and vertical limits for the purpose of submitting a valid IFR Flight Plan (FPL) to safely route around such areas when they are active or planned to be active.

- 4.16 FBZ may also be used as a pre-tactical flow management mechanism associated with the status of specified SUA to improve efficiency in the ATM network.
- 4.17 The FBZ will be published in the UK AIP. Application of FBZ data is managed by the AMC and applied (where appropriate) through the UK AUP or UUP.

Application of UK Level 2 ASM (Pre-tactical)

Introduction

5.1 Pre-tactical ASM at Level 2 consists of the day-to-day management and temporary allocation of airspace. The definition of SUA as either a NAM or an AMA determines the application of AMC Level 2 processes and procedures. Where SUA affects IFR flight planning or where CDM or ASM protocols may apply, it should be designated as an AMA and managed by the AMC in coordination with the NMOC. SUA that doesn't affect IFR flight planning, or if there is no requirement to apply CDM or ASM protocols, should be designated as a NAM.

AMA Procedures

- The AMC operates within the working structures established at Level 1 ASM and applies the priority rules, protocols and negotiation procedures for the implementation and application of FUA laid down by the HLAPB. The AMC collects available information and requests for airspace use, with civil requirements informed via the Flow Management Position (FMP), planning managers and NERL customer affairs interface. Military requirements are provided directly via the MAM and MAMC. After a collaborative decision-making process, the airspace allocation is promulgated as an AUP and published daily on the Network Operations Portal (NOP) to provide information to Aircraft Operators for flight planning purposes. Any changes to this are notified on the NOP via an UUP.
- In compiling the AUP, the AMC will consider input from airspace planners and users with responsibility for Level 2 pre- tactical ASM such as:
 - a) NERL Pre-Tactical Planning Section: the conduit for civil airspace requests from UK ACCs and for co-ordination of an optimised civil ATM plan.
 - b) Requests made to the AMC for Oceanic airspace reservations.
 - c) Airspace managers of other SUA who have a responsibility to promulgate their activities.
- The AMC methods of operation are detailed in NERL and MoD internal documentation maintained by the CAM and MAM respectively. The <u>CAM and the MAM</u> are, in accordance with procedures and priorities agreed by the AMSG, accountable for the following:

- a) Approving temporary segregated use of nominated UK airspace.
- b) The application of ASM protocols defined at ASM Level 1.
- c) Resolving conflicting airspace requirements, using national priorities to ensure the most efficient allocation of airspace while taking due account of the interests of all users.
- d) Issuing AUP/UUPs.
- e) When agreed with the SUA Authority, draft and submit NOTAM proposals for SUA activation.
- f) Liaison with the Military Liaison Officer (MILO) and Aircraft Operator Liaison Officer (AOLO) at NMOC as appropriate for more immediate pre-tactical planning.
- 5.5 AMC UK will manage significant events, including large scale military exercises within the London FIR/UIR, Scottish FIR/UIR and/or Shanwick Oceanic FIR unless an alternative lead AMC agreement has been established. Where these events cross FIR/UIR boundaries a lead AMC will be agreed. The event sponsor shall share all relevant information with interested parties including the AMC, CAA AR(U), DAATM and EUROCONTROL NM. For a regional perspective, the EUROCONTROL NOP provides a comprehensive view of Network events.
- 5.6 Notwithstanding the timeframes set out in ICAO PANS AIM Doc 10066, sponsors of significant events should follow the planning process set out in ERNIP Part 3 Annex 12.
- 5.7 Level 2 pre-tactical ASM in the UK is conducted by Airspace Regulation and the AMC as detailed below.
- 5.8 The AMC manages Level 2 ASM for AMAs via three procedures:

Procedure 1

5.9 Procedure 1 (P1) is the publication of the national consolidated civil/military AUP on D-(minus)1 at 1500 UTC (1400 UTC in summer).

Procedure 2

5.10 Procedure 2 (P2) is the publication of an update that reflects a reduction or cancellation of a volume of segregated airspace to an associated AUP in the form of a UUP.

Procedure 3

5.11 Procedure 3 (P3) is used for short notice military <u>Airspace Reservation (ARES)</u> requests and enables airspace to be booked no later than H-4 as part of a rolling UUP. P3 enhances FUA by responding to <u>short notice military airspace</u>

- <u>requirements</u> whilst minimising the impact on the network and maximising the accuracy of associated flight planning data.
- 5.12 P3 can only be applied to SUA as detailed in individual LoA. Each application is agreed on a case-by-case basis taking into account the limitations and conditions necessary for the successful application of the procedure.
- 5.13 The AMC is responsible for the day-to-day operational application of P3. The requirement to issue a UUP for unplanned activations or to treat such activations tactically (subject to local conditions, limitations, internal and international agreements, and operational needs) is vested in the AMC.

NAM Procedures

- 5.14 SUA Authorities for NAM should ensure procedures are in place to coordinate booking requests and activate SUA only when required for actual planned activity.
- FUA procedures for NAM SUA should be developed through the Safety Management System and approved as part of the process to establish or amend SUA structures. These procedures should be detailed in unit level documentation and LoA if appropriate and are within the scope of the SUA Authority oversight items in Chapter 9.

CAA Airspace Regulation (Utilisation) (AR(U))

- 5.16 CAA AR(U) is responsible for the processing of all requests for airspace in respect of activities, which because of their nature, cannot comply with ATC regulations and require exemption from the Air Navigation Order or need other special airspace arrangements. Consequently, airspace requirements processed through CAA AR(U), usually in the form of an Airspace Co-ordination Notice (ACN), are normally given priority over airspace requests where suitable justification is offered by a given sponsor.
- 5.17 CAA AR(U) is responsible for providing deconfliction, co-ordination and notification, through the promulgation of ACNs, Aeronautical Information Circulars, AIP Supplements and NOTAMs, of all known civil and military UAA which take place within the London FIR/UIR, Scottish FIR/UIR and specified Oceanic airspace. In particular there is a responsibility for the notification of additional airspace volumes for military exercises and, notification where High Seas¹ firing takes place outside an established area designed for that activity. Where large exercises are proposed outside of existing SUA which will impact

The term 'High Seas' means all parts of the sea that are not included in the territorial sea or in the internal waters of a State (UN Convention on the High Seas 1958). Broadly, it is taken to mean those parts of the sea that are beyond the 12 NM territorial limit of a State. The United Nations (UN) Convention on the Law of the Sea (CLOS) establishes the freedom of overflight of high seas airspace.

oceanic traffic flows or impact traffic flows of neighbouring States, additional factors and engagement requirements will need to be considered. Sponsors of large-scale military exercises should contact CAA AR(U) at least 18 months before the planned exercise start date and request civil/ military coordination guidance material.

- 5.18 CAA AR(U) is also responsible for:
 - a) The establishment of CAS(T) for Royal Flight.
 - b) Co-ordination and notify Royal Low-level Corridor for Royal Helicopter Flights.
 - c) The allocation of Cat D Status for VIP flights and State Visits.
 - d) The allocation of Cat E Status for certain UAA.
 - e) The establishment of Restrictions of Flying Regulations.
 - f) The issuing of Permissions or Exemptions for captive Balloon or Kite flying activities and Winch Launching against relevant articles of the Air Navigation Order.
 - g) The authorisation of, and co-ordination of, non-Deviating Status flights.
 - h) The management of the Open Skies ATC and Airspace Co-ordination Team (OSAACT).

Resolution of Problems and Disputes

- In exceptional circumstances, the CAM, MAM <u>and/or their support staff</u> may require further guidance on the priority for airspace allocation. In such circumstances guidance will be provided by SARG.
- 5.20 Prior to providing guidance, SARG may discuss the issue with appropriate representatives from MoD and NERL, maintaining a record of any advice sought. Any resolutions are to be brought to the attention of AMSG.

Application of UK Level 3 ASM (Tactical)

Introduction

- 6.1 Tactical ASM at Level 3 consists of the real time activation, deactivation or reallocation of airspace allocated at Level 2, and the resolution of specific airspace challenges between civil and military units.
- Adequate real-time access to coordination and notification capabilities are required to ensure common situational awareness is available to all airspace users in order to realise the full benefits of Level 3 ASM. It is recognised that the development of new system supported tools and/or the enhancement of the present technical facilities is required to achieve this across all environments. However, SUA Authorities should apply the Level 3 ASM concepts to SUA where practicable.
- 6.3 If booked airspace is no longer required, it should be 'handed back' to the appropriate Level 3 Manager who will then take action to 'reallocate' or 'release' the airspace.
- For AMA, the AMC may choose to amend the AUP by producing a UUP if there is sufficient time to deliver benefit at ASM Level 2.

Tactical Airspace Activations

Notwithstanding the application of P3 for AMA, certain SUA may be activated by tactical negotiation between those parties who have been authorised in local orders, instructions, procedures and standing agreements. When airspace is activated tactically, it is accepted that a re-route to remain clear of the affected airspace volume may be required by non-participating aircraft.

Tactical Deactivation of SUA

- 6.6 Tactical deactivation of SUA by the airspace controlling authority can enable access by other airspace users when the SUA is not currently being used.
- 6.7 If airspace is no longer required, it should be 'handed back' to the appropriate Level 3 manager who will then take action to 'reallocate' or 'release' the airspace. The nominated Level 3 airspace managers for the SUA will ensure that no other operators require use of the SUA. For AMA, changes in SUA status on D-0 must be notified to the 78 Sqn Level 3 Management cell.

The appropriate manager (Level 3 airspace manager, Range Authority etc) shall take the appropriate NOTAM action to deactivate the SUA, inform the relevant ACCs, ANSPs and Mil ATCC regarding the SUA status.

Management of Real Time Access to SUA

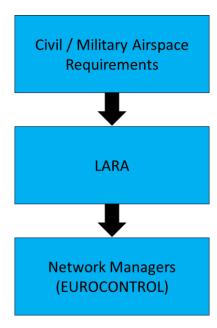
Real time access to an active SUA structure may be provided using an SUA Crossing Service, as described in the SUA Policy Statement and UK AIP ENR 1.1. Provision of an SUA Crossing Service can act as suitable mitigation for SUA which is not able to fully comply with the requirement to fully utilise Level 2 and 3 ASM procedures.

ASM Tools

Introduction

- 7.1 UK Reg (EC) No. 2150/2005, Article 5 requires adequate supporting systems to be put in place to enable the AMC to manage airspace allocation and to communicate in good time the airspace availability to all affected users, ANSPs and relevant organisations².
- ASM tools support the activation, deactivation, short-term cancellation of, and amendments to, reservations and reallocation of airspace structures. ASM tools can provide data that could be exploited and used across ATM platforms to provide airspace status information.
- 7.3 Supporting tools ease the transfer of data, assist planning, automate the booking of airspace and enable the assessment of the likely impact of decisions. Adequate system support is essential to ensure the accuracy of the data used by the partners in ASM, and data consistency. A basic flow diagram of the use of current ASM tools in the AMC is in figure 5 below.

Figure 5: AMC Use of ASM Tools



² UK Reg (EC) No. 2150/2005 Article 5.

Local and sub-Regional Airspace Management Support System (LARA)

- 7.4 LARA is a EUROCONTROL software package provided to support and enhance the ASM process. It provides mutual visibility on airspace reservations and realtime exchange of ASM data, enabling a more efficient collaborative decisionmaking process and enhanced situational awareness for all stakeholders throughout the ASM process.
- 7.5 LARA's functionality encompasses all phases of ASM from long-term event planning to Level 2 and Level 3 ASM, including real-time co-ordination of airspace activations. A variety of interfaces to other systems, nominated Level 3 airspace managers, and the NM enable greater situational awareness enhancing FUA, booking efficiency and safety. Due to its network-based information sharing, all relevant users are instantly informed of current real-time status and changes to airspace allocations and availability.
- 7.6 LARA provides a user-friendly interface to create and manage airspace reservations. Shared data on bookings allows for early deconfliction of requests. The AMC remains the Level 2 ASM coordinator who finalises requests in accordance with national procedures and priorities.
- 7.7 Once ratified by the AMC, the information from LARA is transferred to the NM as an AUP/UUP.

FUA Reporting

UK FUA Annual Report

- 8.1 The AMSG shall contribute to the production of the annual AMS Progress Report, which fulfils the requirement to report on the application of the flexible use of airspace detailed in Article 7 of UK Reg (EC) No 551/2004. In accordance with UK Reg (EC) No. 2150/2005, the following specific elements are to be incorporated into the report:
 - a) General description of the national organisation and responsibilities at Level 1, Level 2 and Level 3 of the FUA concept.
 - b) Evaluation of the functioning of agreements, procedures and supporting systems established at the strategic, pre-tactical and tactical levels of airspace management. This evaluation of FUA shall be conducted with regard to safety, airspace capacity, efficiency and flexibility of aircraft operations of all users.
 - c) Problems encountered in the implementation of this Regulation, actions taken and need for changes.
 - d) Outcome of national inspections, surveys and safety audits.
 - e) Cooperation between the UK and EU Member States on airspace management and especially on the creation and management of cross-border areas and cross-border activities.
- In addition to the legislated requirements, the report should also contain relevant supporting statistics with trend analysis and a narrative and may include any FUA developments, significant activity, causes for delay in FUA improvements, significant stakeholder engagement during the period and plans for the next period.
- 8.3 In addition to the AMS Progress Report, ASM statistics and activity will be presented and discussed at each AMSG. This will assist in the production of the AMS Progress Report.

FUA Oversight

Introduction

- 9.1 UK Reg (EC) No 551/2004 (The UK Airspace Regulation) requires the CAA to ensure the uniform application of the FUA concept within the UK Air Traffic Management System. UK Reg (EC) No 2150/2005 (The UK FUA Regulation) requires the CAA to monitor compliance with the Regulation which includes the FUA Principles listed in Article 3 and the application of Pre-Tactical and Tactical ASM. As such, the CAA is required to conduct oversight activities on organisations concerned with these matters; this includes the AMC and operators of SUA as overseen by the SUA Authority. UK ASM Policy serves as the acceptable means of compliance to the essential requirements of the FUA Regulation and provides the framework for oversight activities.
- 9.2 To ensure consistency and transparency, the results of any audits will be shared via the AMSG, and an overview of audit activity will be included in the UK AMS Annual Report.

Oversight Process

9.3 The CAA will engage with the nominated organisation to arrange audits which may include site visits and the provision of documents to enable effective oversight. The visit team will provide sufficient notice of the audit which will take place at least biennially. On completion of each visit a comprehensive report will be provided, including any audit findings or observations.

SUA Authority FUA Oversight

- 9.4 SARG retains the overall regulatory responsibility for SUA structures and is required to conduct periodic audits of the SUA Authority. The purpose of the audit is part of the CAA's obligation to ensure efficient use of the airspace as required by the FUA Regulation and implemented through the acceptable means of compliance and guidance material contained in CAP 740 and the SUA Policy.
- 9.5 It is expected that all activities undertaken within SUA are carried out safely and efficiently in accordance with relevant civil and/or military regulations and approved through the processes to establish the SUA. The SUA Authority shall ensure that competent personnel are nominated to provide SUA FUA oversight to ensure FUA principles continue to be safely applied.
- 9.6 FUA Oversight is limited to the maintenance of safety and the continued application of the FUA principles. It does not aim to repeat the analysis

- conducted during the process which resulted in the establishment of the SUA. Unless otherwise agreed with the CAA, SUA Authority oversight of FUA should include the following as a minimum.
- 9.7 Safety. SUA activities are conducted safely within a robust safety management framework. As a minimum the following apply:
 - a) Safety occurrences, in particular reports of incursion or excursion, should be regularly reviewed to ensure the SUA remains suitable for its purpose.
 - b) Procedures should be in place to validate and approve all new SUA activity, including those conducted by a third-party operator.
- 9.8 Efficiency. Efficiency is a key benefit of FUA and SUA structures should adhere to the design principles listed in the SUA Policy. As a minimum the following apply:
 - a) Airspace structure (e.g. modules) and dimensions (lateral and vertical) should be regularly reviewed to ensure they are the minimum needed to safely achieve the requirements for the establishment of the SUA.
 - b) Promulgated hours of operation should be the minimum required to carry out the task for which it has been established. These hours should be regularly reviewed and measured against actual usage statistics gathered by the SUA Authority.
 - c) Where relevant, SUA activation should be limited to periods where activity is taking place.
 - d) If it becomes apparent that the SUA is no longer required, consideration must be given to disestablishing the SUA.
- 9.9 Notification. The correct notification of SUA is essential to ensure that all airspace users can operate safely and efficiently within and in proximity to the SUA. As a minimum the following apply:
 - a) The information contained in the UK AIP should be regularly reviewed to ensure it is accurate, correctly formatted and changes are promulgated in a timely manner.
 - b) Processes to provide notification by NOTAM to activate, deactivate, extend the activation times or dimensions of SUA should be in place.
- 9.10 ASM Procedures. ASM procedures are key to delivering the FUA concept and must be documented to ensure consistent application, particularly where agreements have been made between organisations. As a minimum the following apply:
 - a) Unit level manuals and orders should contain details of ASM processes in place for the SUA, including any interaction with other organisations.

- b) Where needed, Letters of Agreement are established and regularly reviewed to make best use of SUA for the benefit of all.
- 9.11 SUA Crossing Service/SUA Activity Information Service. Where either of these services is provided, it is done so in accordance with the relevant civil or military regulations and that an appropriate assurance process is in place. Any equipment used to provide this service, including surveillance equipment used to monitor activity or detect incursions, is designed, installed, operated and maintained in accordance with the appropriate civil or military regulations.
- 9.12 The CAA will provide Third Party audit (referred to as Third Party assurance by the MOD) of SUA FUA oversight. The aim of the Third-Party audit is to ensure the SUA Authority is complying with the requirements detailed above. Where an audit is being conducted on a MOD SUA Authority, the MOD will be invited to assist in the preparation and to witness the audit to provide regulatory oversight from the Joint and Integrated perspective.

UK AMC Oversight

- 9.13 The CAA will periodically audit the AMC, including the Level 2 ASM functions performed by the MAMC, against the requirements of UK Reg (EU) No. 2017/373, UK Reg (EC) No. 2150/2005 and CAP 740.
- 9.14 The CAA will invite the MOD to assist in the preparation of audits and to witness the audit to provide regulatory oversight from the Joint and Integrated perspective.
- 9.15 The compliance matrix will be provided to the AMC prior to an audit.

APPENDIX A

UK Flexible Use of Airspace Strategy

Introduction

- A1 FUA is a form of ASM. By utilising enhanced concepts and structures to support the dynamic configuration of airspace, and mission trajectory management, will contribute to the efficiency of all airspace user requirements whilst improving network performance.
- A2 This strategy aligns extant ASM policy, which is the primary method of applying FUA, to the implementation of the Advanced Flexible Use of Airspace (AFUA) concept being developed through the AMS (CAP1711).

Application of FUA

A3 Routinely FUA is applied through the 3 levels of ASM as defined in CAP 740. The CAA is responsible for strategic ASM, pre-tactical ASM³ is conducted by the AMC, CAA AR(U) and individual SUA authorities and Level 3 Airspace Managers administer the tactical phase of the ASM process. Post operational analysis is achieved by monitoring how efficiently SSUA is used, and the flight planning and uptake rates of airspace made available for flight planning. The UK ASM process is depicted at Figure 6.

³ This strategy only considers the application of FUA in established airspace structures, therefore the temporary application of ASM level 2 provided by AR(U) is not considered.





In the UK strategic ASM (Level 1) is divided into 2 functions: strategic planning and strategic governance. The former considers significant events that impact the routine operation of UK airspace, for example large military exercises, or the impact of large sporting events. The governance element monitors compliance of FUA application against regulation, specifically UK Reg (EC) No. 2150/2005 and CAP 740.

Strategic Priorities

- A5 The composition of UK airspace is complex, and it would be impracticable to assess and introduce FUA improvement measures to all airspace volumes simultaneously. Therefore, it is necessary to prioritise those airspace structures that will deliver the most effective benefit in terms of FUA⁴.
- A6 The primary consideration when taking into account FUA improvement initiatives will always be safety. Due to environmental, financial and operational benefits to both civil and military airspace users, priority will be given to improvement initiatives where SUA impacts on GAT operations.

Strategic Aims

A7 The following strategic aims have been established to guide decisions taken at ASM Level 1 and to ensure that technical, process and operational developments evolve in line with extant policy and the AFUA concept.

The prioritisation of airspace structures to improve FUA does not detract from the SUA booking priorities specified in CAP 740.

Developing and implementing change to deliver the strategic aims are the collective responsibility of the CAA, MoD and NERL under the auspices of the J&I concept. The AMSG is responsible for coordination and maintenance of the FUA strategy.

- A8 Optimisation of Airspace Management processes to achieve greater flexibility and enable the introduction of efficiency measures as follows:
 - a) Pursue methods to optimise the interface between pre-tactical and tactical ASM. The aim of which is to afford users of SUA optimum time when booking segregated airspace and update the IFPS to reduce tactical ATC intervention⁵. Key considerations are:
 - Optimise the interface between the Level 2 and Level 3 ASM phases.
 This is required to ensure that the flight plan system has time to safely react to the AUP/UUP while affording maximum flexibility when booking SUA.
 - ii. Support initiatives to increase the uptake rate of SUA hand backs and enable IFR flight plans to be updated prior to getting airborne and whilst aircraft are airborne.
 - b) Minimise airspace segregation by activating airspace volumes based on need rather than routine activation through set times defined in the AIP⁶. The routine activation of SUA should be by NOTAM to facilitate strategic ASM.
 - c) <u>Minimise airspace segregation by establishing processes exploiting the</u> <u>airspace in a dynamic manner as close as practical to the time of operations</u> to better accommodate users' requirements.
 - d) Minimise airspace segregation by incorporating variable profile areas⁷ and other SUA structures which provide maximum flexibility whilst maintaining safety to enhance network efficiency.
 - e) Optimise airspace booking procedures to permit the most efficient AUP/UUP.
- A9 Identify opportunities to strengthen cross border activities and relationships to achieve more practical and equitable airspace solutions across the Network.

 Where appropriate, establish Lead AMC agreements with neighbouring states to improve consistency of airspace availability for all cross-border flows.
- ⁵ This is a key consideration within a systemised ATM environment.
- It is acknowledged that some DAs are active for routine activation periods and that a phase of transition is required for more widespread application of the FUA principles to DAs.
- EUROCONTROL Advanced Flexible Use of Airspace Concept

- A10 Utilise interoperable ASM tools and systems that facilitate:
 - a) A National Use Plan (NUP) as the single repository for airspace reservations for any airspace structure where the notified status needs to be promulgated to enable the safe and efficient provision of ATS.
 - b) Strategic ASM planning.
 - c) Pre-AUP assessment of the impact of various airspace configurations on the UK network including the configurations of neighbouring States.
 - d) Access to ARES data to relevant stakeholders and the ability for airspace users to directly input their SUA requirements.
 - e) The AMC to pre-tactically manage all SUA within the UK, create the AUP/UUP and transmit the data directly to the NM to achieve the most flexible and efficient ASM process at both ASM Level 1 and 2.
 - f) Provision of the real-time airspace picture to provide a single source of truth for the actual configuration of UK airspace at any given time. This information should be available to all aviation stakeholders.
 - q) Provision of real time coordination for the activation and use of SUA.
 - h) CDM.
 - i) Cross Border activities.
 - j) Establish a tool which better enables the CAA to assess the ASM process and protocols for each airspace volume, and the cumulative impact of multiple segregations, against the FUA regulation and UK policy.
- A11 Continually review and formalise the ASM post operations analysis capability to ensure that the statistical data used to monitor FUA performance is accurate and complete. In addition to meeting the FUA regulatory requirement for performance reporting, this data will inform decisions taken at ASM Level 1, enabling the CAA to prioritise changes that enhance FUA.

Strategic Objectives

- A12 The NUP should become the focal point for all airspace reservations. This will require processes and procedures to be developed in conjunction with upgrades and subsequent reconfiguration of LARA and its database.
- A13 The NUP function in LARA should contain all airspace reservations for specified airspace structures to establish an airspace status database.
- A14 The NUP should be available to all relevant aviation stakeholders to ensure consistent understanding of the status of specified airspace structures.

- All approved users of SUA should be able to make airspace reservation requests directly into the NUP, allowing the functionality of ASM and CDM to be conducted.
- A16 Once ratified, the NUP should automatically generate NOTAM proposals for all airspace reservations input.
- A17 Where users of airspace volumes which are notified by NOTAM, but the users are unable or not required to input the airspace reservation into the NUP, then the NOTAM should automatically generate an airspace reservation within the NUP. This ensures that the NUP always has the entire status of all airspace reservations as notified by NOTAM, allowing all stakeholders access to the same up to date information.
- A18 The UK's AUP/UUP are generated from the NUP.
- Under the authority of the AMC, a joint and integrated Level 3 Management (L3M) function should be established. This function will be responsible for managing the real-time status of airspace structures, including coordinating tactical updates to SUA with relevant ATM stakeholders. It will ensure the provision of a real-time airspace database managed in LARA, which should be accessible to all airspace users. Responsibilities should include cancelling or amending ARES, issuing UUPs and proposing NOTAMs where appropriate.
- A20 <u>Utilise the EUROCONTROL post ops FUA analysis tool PRISMIL/CURA to continually review SUA usage and performance. This data should be reviewed by the AMSG to inform ASM Level 1 decisions and enable changes which enhance FUA to be prioritised and any issues to be investigated further.</u>

APPENDIX B

Accountabilities and Responsibilities of the CAM and MAM

- B1 The priority for the allocation of airspace shall be determined jointly by the CAM and MAM. The CAM and the MAM should uphold impartiality in determining the most equitable use of airspace. To eliminate potential bias, the CAM and MAM roles should not be influenced by their parent organisation's performance.

 National protocols for determining priorities for the allocation of SUA should be in accordance with the principles detailed in chapter 4.
- B2 All LoAs which contain Level 2 ASM protocols shall be signed by the CAM and the MAM unless a suitable alternative has been identified and approved by SARG.
- B3 SUA should only be activated for airspace activity that requires segregation from other operations. Planning should be conducted for the 24-hour period between 0600 UTC the next day (D) to 0600 UTC the day after (D+1). Planning may also take place in advance of the following 24-hour period, to take into consideration weekends, public holidays and/or other periods of AMC closure. In these cases, the AUP for the period of closure should be published during the day before the closure commences. Such closures shall be notified to all interested parties.
- Airspace should be allocated in line with area specific protocols. The AMC will ensure that airspace allocation is optimised, which may require deviation from the agreed protocols in order to accommodate unusual or exceptional circumstances. The CAM/MAM have been delegated the authority to make decisions in respect of pre- tactical allocation of flexible airspace structures.
- The MAM is vested with the executive authority to temporarily segregate AMC managed SUA. The routine management of military activity areas is delegated to OC MAMC and their staff for the prioritisation, deconfliction and allocation of bids and the notification of activity in other airspace volumes.
- ATS route requests from civil approved agencies may be submitted to the UK strategic and pre-tactical NMs for onward dissemination to civil and military AMC staff. The CAM, MAM and/or their deputies shall consider such requests, together with supporting data and the impact upon other airspace users in order to achieve a collaborative decision.
- B7 The AMC shall liaise with adjacent AMCs and ACCs with whom the UK has cross-border arrangements and assess the impact on cross-border flow prior to issuing the UK AUP and any subsequent updates to NMOC.

- When SUA is no longer required during ASM Level 2, MAMC shall advise (release) the previously segregated airspace as available. AMC (in conjunction with UK FMP) shall determine whether a UUP should be issued.
- B9 The CAM is responsible for drafting and submitting NOTAM proposals for the activation of controlled airspace volumes designated as AMAs.
- As detailed in Chapter 8, for the UK FUA Annual Report the MAM will provide the following usage data for AMAs. The total number of hours allocated at D-1 based on the AUP, the number of hours still allocated at H-3 and the total number of initially allocated hours used. Additionally, if applying Procedure 3, ad-hoc hours allocated and used are to be provided. The CAM is to provide en-route airspace efficiency data as requested by the CAA.
- B11 The CAM function can be performed by those civil staff working within the AMC authorised and approved to do so.

APPENDIX C

Military ASM Policy

Introduction

The strategic aim for Defence ASM is to enable all arms of Defence to 'train as they would fight' by safeguarding long term access to appropriately sized and sited airspace, which can be reserved for hazardous activities, while minimising the impact on other airspace users. This aim is underpinned by the UK J&I approach to ASM and the MoD's adherence to national ASM Policy set out in this document. Within this policy, the application of FUA is a key aim of military ASM Policy, to ensure that through the daily allocation of flexible airspace structures any segregation of airspace for military activities is based on a 'need-to-operate' basis within a specific time period and airspace volume.

Aim

The military aim is to ensure that airspace is safely and efficiently utilised and that due consideration is given to other airspace users. Every portion of airspace that the military utilise has an impact on its availability to other airspace users. In order to minimise the impact of airspace segregation, the application of FUA principles is therefore a fundamental requirement, noting the need to maintain Operational Capability.

Airspace Policy

- The CAA is responsible for developing, promulgating, monitoring and enforcing a policy for the sustainable use of UK airspace. In support of that, under the UK's Joint and Integrated approach to airspace management, and in response to the overarching policy set by the CAA the DAATM is responsible for developing and addressing all MoD airspace requirements. DAATM is the MoD focal point for all Defence Airspace policy, including airspace related to the UKLFS.
- In order to coordinate airspace change proposals put forward by Defence organisations, DAATM is to be advised of all proposals for airspace change within the UK generated by military stakeholders, prior to engagement with the CAA.
- DAATM is responsible for developing and coordinating a common Defence position in response to airspace change proposals within the UK, acting on behalf of the Aviation Duty Holders (ADH) to ensure that the impact on operations and training is kept to a minimum.

While DAATM is not a risk owner, as an ADH facing organisation it has a responsibility to the ADHs for ensuring that the impact of any airspace policy and airspace change proposals are fully assessed by the appropriate Duty Holder (DH) organisation and that the levels of operating risk are assessed and ruled upon accordingly. To manage this process, engagement and consultation is undertaken by DAATM, through the ADH representatives on the MAUWG, on all policy and airspace change proposals. This allows the ADH organisation to put forward an objection, suggest a change or to take suitable action to mitigate any associated hazards that are identified.

Military SUA Management

- C7 Military SUA Management Policy is focused on the activities required to comply with CAA Airspace Policy Directives.
- It is essential that all activities undertaken within SUA are carried out safely in accordance with relevant civil legislation and military regulations⁸, many of which are outside the scope of this CAA ASM policy. This appendix details Defence' structures and oversight processes established to ensure compliance with the ASM requirements at Chapter 9.
- MoD is the controlling authority for a significant volume of SUA structures across London FIR/UIR and Scottish FIR/UIR. As the lead for all Defence Airspace matters, DAATM is the central point of contact for all Front Line Commands' (FLCs) engagement with CAA and will coordinate Defence activity to ensure compliance with UK ASM policy. This is achieved through Head of DAATM's role as the Defence SUA Authority.
- C10 Daily management and oversight of the MoD SUA estate is the responsibility of FLCs, who will establish, maintain and resource an appropriate management structure to oversee all aspects of SUA use, led by a SUA Manager.
- SUA Managers' direct lines of responsibility lie within their Command Chains but regular engagement with DAATM is essential to ensure a coherent approach to ASM across Defence. The SUA Authority's oversight is enabled through both informal, routine engagement with SUA Managers and, more formally, through the 6 monthly SUA Steering Group (SUA SG). Chaired by DAATM Airspace SO1 on behalf of Head of DAATM, this SUA SG oversees Defence compliance with the requirements at Chapter 9 and will direct activity to meet UK ASM policy.
- C12 Safety. The CAP 1616 process to establish SUA ensures that the airspace design and procedures meet CAA safety requirements. Management processes must be established to ensure this is maintained after airspace implementation. SUA Managers will ensure all SUA activities are conducted within a robust safety

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management framework. All airspace related Defence Air Safety Occurrence Reports (DASORs) will be forwarded to DAATM Airspace SO1 and safety related issues discussed at the SUA SG. SUA Managers will implement procedures to:

- a. Cease SUA operations should an airspace infringement threaten the maintenance of Flight Safety.
- b. Notify CAA Safety Data Department (SDD) of any airspace infringements via Air Safety Information Management System (ASIMS).
- c. Notify DAATM Airspace SO1 of any SUA infringement (or excursion) that compromised flight safety via ASIMS.
- d. Safeguard the airspace within and in the vicinity of the SUA, whilst also ensuring that activities can be wholly contained within the SUA.
- e. Validate and approve all SUA activities.
- C13 Efficiency. In cooperation with SUA Managers, DAATM will conduct regular review of SUA activity to ensure that established structures continue to meet Defence requirements in response to changing tactics, techniques and procedures and evolving platform capabilities. A mechanism for gathering, analysing and archiving detailed statistical SUA usage data will support this review, with statistics measured against promulgated hours of operation. When requested, these will be made available for CAA scrutiny.
 - a. The promulgated hours of operation for a SUA are to be the minimum required to carry out the task for which the SUA has been established.
 - b. Airspace dimensions and activation times are subject to regular audit. SUA Managers will review airspace requirements on behalf of their unit / FLC / organisation and engage with DAATM regarding any proposed changes to existing airspace or creation of new structures. The airspace change sponsor will be determined by the nature of the requirement, but this will ordinarily sit with the organisation / unit / FLC / programme which requires the amendment. DAATM will coordinate the change, where necessary through the MAUWG.
- Notification. SUA Managers will ensure that a process is in place to provide notification, by NOTAM or AIP entry, of all SUA activation. They will regularly review the information detailed within AIPs to ensure continued accuracy and initiate / promulgate changes in a timely manner.
- ASM Procedures. SUA Managers will ensure documentation is in place outlining the roles, responsibilities and procedures for the full range of activities taking place within the SUA and that changes are promulgated in a timely manner.

- a. SUA Managers are to ensure that effective liaison takes place with all local airspace users and ATS providers and, where needed, establish LoAs to make best use of SUA for the benefit of all.
- SUA Crossing Service / SUA Activity Information Service. FLCs are to ensure that, where a SUA Crossing or Activity Information Service is provided, it is done in accordance with defined civil or military regulations and that appropriate assurance processes are in place. SUA Managers will forward assurance reports to the SUA Authority and brief any trends or significant findings at the SUA SG. Any surveillance equipment used to monitor activity, provide a crossing service or detect incursions, must be designed, installed, operated and maintained in accordance with civil and/or military regulations.

ASM Procedures and Booking Process

- C17 Bids to segregate airspace are to be based on the minimum volume of airspace required to accommodate the sortie profile for the duration of the activity.

 Consideration should be given to "level sensitive bookings" to allow over or under flight of the portion of segregated airspace.
- The MAM, via MAMC has executive authority for allocating airspace in accordance with the ASM priorities listed in chapter 4.
- The military is normally afforded priority for activities requiring the temporary segregation of SUA (Chapter 4, Section 4.12); however, airspace reservations may be denied in the event that CAA SARG has directed that another activity takes priority, regardless of whether that other activity is segregated or not.
- For Exercises and other events that require segregated airspace outside the confines of current SUA constructs, sponsors are to notify the MAM, DAATM and MAMC and expect to follow the CAP 1616 process unless otherwise advised. The notification procedure and planning timetable for a large-scale activity and/or military exercise/activity is detailed in ERNIP Pt.3 Annex 12.
- C21 Post-Flight Closedown. MAMC is required to conduct a daily post-flight review of airspace use, comparing actual use against the associated Mil Plan to account for military use of MAMC managed SUA.

CAA Buffer Policy

The user is responsible for containing any segregated activity within the vertical and lateral boundaries of the allocated SUA to ensure the safety of other users in adjacent areas. The CAA safety buffer policy within the Policy for the Establishment and Operation of Special Use Airspace gives reference.

ASM Tools

- The MoD has a remit to make the most efficient use of airspace and to reduce the impact of military airspace activities on other airspace users, particularly from CAT operating within the ATM Network. To do so there is a requirement to manage the activation and deactivation of segregated airspace in a dynamic manner where practicable, and to disseminate such information on a European-wide basis both to commercial and military operators.
- To effectively manage the airspace booking process and to notify all civil and military airspace operators of current airspace status and future requirements for segregated airspace, the MoD should adopt the use of interoperable ASM tools to coordinate airspace requirements at the pre-tactical and tactical levels.

Low Flying Airspace Policy

- C25 Low Flying Training is part of essential preparation for operational duties. To achieve an appropriate balance between military training requirements while minimising the risk to aviation safety and the potential disturbance to the public, the UKLFS utilises all Class G airspace below 2000' agl within the London FIR and Scottish FIR except for certain specifically designated areas.
- C26 The UK Military Low Flying Handbook (UKMLFH) contains the policy for military low flying. Aircrew are to refer to the UKMLFH when planning Military exercises and sorties in the UKLFS and to adhere to the procedures contained therein.