Directorate of Airspace Policy

All NATMAC Representatives

1 June 2009

NATMAC CONSULTATIVE LETTER

Dear Colleagues

AREAS of INTENSE AIR ACTIVITY

As you are aware from the letter of 8th April 2008[1], the Directorate of Airspace Policy (DAP) Off-Route Airspace Section has been conducting a Review of Areas of Intense Air Activity (AIAA), Aerial Tactics Areas (ATA) and the Advisory Radio Area (ARA) with the objective of securing the most efficient and safe use of UK airspace, as well as spreading best practice.

The Directorate has your responses to the report on first phase of this Review, initiated with the letter of 14th April 2008[2], and that is now complete.

It is important that the dimensions of the areas should continue to truly reflect the disposition of activity in the delineated airspace by balancing the needs of broad awareness and accurate information whilst providing airspace users with valuable information to assist with flight planning and safety assessment. The second report, considering airspace users, service providers and the user requirements, concluding the final package of work (phase 2) is attached. I welcome your comments, but particularly invite your consideration of the recommendations.

Phase 2 of the Review consists of the following:

a) Review of the remaining AIAAs.

b) Consideration of the advice to ac transiting AIAAs.

c) Consideration of chart symbology to aid clarity and understanding.

[1] NATMAC Informative, 8 April 2008.

[2] NATMAC Consultative, 14 November 2008.

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Our Review work is now complete and once we have collated all of your views, I shall inform you of the changes. I would be grateful for your replies, by the end of August, and any questions in the interim should be directed to Richard Hinchcliffe, Off-Route Airspace Section (020 7453 6543, richard.hinchcliffe@caa.co.uk) here at CAA House.

Original signed

M SWAN
Director

Attachment:

1. Phase 2 Report on Areas of Intense Air Activity (AIAAs)

Directorate of Airspace Policy
Off Route Airspace 3

DAP/ORA/ORA3/Review of AIAAsATAsARA 22nd May 2009

NATMAC

PHASE 2 REPORT on AREAS of INTENSE AIR ACTIVITY (AIAAs), LOSSIEMOUTH, SPADEADAM, VALLEY, SHAWBURY, WASH, YEOVILTON AND CULDROSE

References:

A. NATS 8AP/06/02/06, 8 August 1990.
B. DAP, Initial Discussion Paper On The AIAAs, ATAs and ARA), 26 Jul 07 – AIAA Review.
C. UK Flight Safety Committee Response, 10 January 2008.
D. NATMAC Informative Letter, 31 March 08.
E. DAP, Review Paper on the Areas of Intense Air Activity (AIAAs), Aerial Tactics Areas (ATAs) and the Advisory Radio Area (ARA), 5 October 07.
F. AIP ENR 5-2-8/11.
G. LARS Annual Summary 2007/2008, 12 June 2008.
H. AIP ENR 5.5

1. Introduction

1.1 The last full review of Areas of Intense Air Activity (AIAAs[1]) and the Advisory Radio Area (ARA[1]) within the London and Scottish FIRs took place in 1988; thereafter, HQ MATO (Airspace Policy) questioned their validity in 1990. Responses to the latter survey indicated that there was value in the retention of AIAAs and the ARA (Reference A). The Vale of York and Lincolnshire AIAAs were further adjusted in 1997 to reflect the reorganisation and establishment of the Royal Navy, Royal Air Force and Army Air Corps Flying Training Schools (FTS). The Yeovilton AIAA was adjusted, in 2006, to accommodate changes to airspace arrangements at Bristol and Cardiff airports.

1.2 In order to promote a universally safer Class G environment the Directorate of Airspace Policy (DAP) is addressing the extent and pertinence of individually promulgated AIAAs and the ARA within the London and Scottish FIRs. This latest phase of study is not seen as an exercise to quantify activity levels in Class G airspace, although intensity of UK military fast jet and fixed-wing training activity in the London and Scottish FIRs has diminished (para 2.2), but is seen as integral to the Airspace & Safety Initiative (ASI[2]) by identifying an associated hazard and developing a mitigation strategy while meeting the

[1] UK AIP ENR 1.1.5 – Airspace Restrictions, Danger Areas and Hazards to Flight
[2] The Airspace & Safety Initiative (ASI) is a joint CAA, NATS, Airport Operator's Association, General Aviation and Ministry of Defence effort to investigate and tackle the major safety risks in UK airspace

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needs of all airspace users. This identification and mitigation strategy should reflect the changing capabilities of all types of aircraft and the geographic shift in military activity. This should be set against a background of the increasing complexity of UK airspace and the continued growth in recreational and commercial traffic. Increased uptake, and improved operation, of SSR Transponders will significantly advance interoperability between aircraft in Class G airspace rather than increased segregation, thereby best serving the interests of all airspace users[3]. The MoD has expressed the view that signposting of one portion of Class G airspace being more congested than another has justification. This signposting should be pertinent, reflecting aircraft activity, performance and location, reinforced by local and national publicity, or risk the loss in significance. Education, awareness and consideration for others' activities are key. These signposts may be viewed as a 'permanent NOTAM' with an added advantage of the charting element; historically the UK Airprox Board (UKAB) and the UK Flight Safety Committee (UK FSC), at Reference C, support this view. Indeed, MoD, in the past, has been encouraged to communicate details of exceptional military aerial activity within Class G airspace. HQ Air Command (ATC) views the promulgation of AIAAs, the ARA or ATAs as consistent with this remit and that value remains in selected promulgation.

1.4 The accuracy and pertinence of these sign-posted areas is essential where civilian operators are to be encouraged to take heed of the promulgated activities and adjust their actions accordingly. In this latest phase of the study (References B, D and E) DAP staff reviewed Lossiemouth, Spadeadam, Shawbury, Valley, Wash, Yeovilton and Culdrose AIAAs to ascertain position and density of activity in and around the existing signposted areas. Officers Commanding Operations (or their equivalent), Chief Flying Instructors (or their equivalent) and Senior Air Traffic Control Officers (or their equivalent) at the majority of aerodromes lying in the vicinity of these four areas were consulted to ascertain a qualitative, as well as a quantitative (where possible), analysis of the position, level, density, vulnerabilities and interaction of aerial activity as well as the air traffic resource available within the area. This latter aspect should not be overlooked as the Lower Airspace Radar Service (LARS[4]) Scheme, in particular, provides pilots with the primary source of traffic information in these areas (Reference F). In sum the following questions were considered:

1.4.1 Are individual AIAAs still justified by the aerial activities now being carried out in the area?

1.4.2 Are the lateral and vertical limits still appropriate or should any promulgated area's be amended?

2. Current Promulgation and Airspace Activity

2.1 The AIAAs at Reference F situated in Class G airspace below FL195 (and Class C airspace FL195-FL245) have been denoted in the UK military and civilian AIPs for some considerable time and act as a signpost on aeronautical charts (Annex A). These areas are Class G/C airspace with no formal 'reserved' status and afford the aircraft 'operating' within the published limits of the area no additional protection. These areas are listed as airspace within which the intensity, type of activity and potential interaction of civil and/or military flying is exceptionally high or where aircraft, either singly or in combination with others, regularly participate in unusual manoeuvres. Presently, GA and commercial helicopter operators well understand that Class G airspace below 2000ft agl, comprising the UK low flying system (UK LFS), is busy and populated by military aircraft engaged in high energy/unusual manoeuvres. Guidance and systems are in place to obviate the

[3] Full RIA (Version 2.1) for a Proposal for Phase 1 of an Incremental Expansion of the Use of SSR Mode S Technology for Flight in UK Airspace

[4] LARS' primary objective is to aid the flow of air traffic arriving at, and departing from, airfields not protected by controlled airspace by encouraging aircraft transiting the area to receive an air traffic service (ATS)

perceived, enhanced risk in this particular slice of airspace. Therefore, the UK Flight Safety Committee view the promulgation of AIAAs and direction provided in the AIP (Reference F) for pilots of non-participating aircraft in the vicinity of, or who are unable to avoid the annotated areas, as a valid extension to pro-active flight safety guidance.

2.2 The expansion of CAS is compressing overland Class G aerial activity[5] at levels below FL100. The AIAAs, the ARA and ATAs signpost military or civil activity and imply a high density of dynamic and high-energy use relative to the surrounding airspace. There is no mechanism in place to examine the veracity for the existence of AIAAs, the ARA and ATAs within Class G airspace. The intensity of UK military fast jet and fixed-wing training activity in the London and Scottish FIRs has diminished by approx 65 000hrs (a drop of 35%[6]) since the early 1990s; however recent increases in military training activity have been compressed in areas such as the Vale of York by recent expansion of terminal airspace below FL100. HQ Air Command (ATC) state that increased rotary wing training activity (approx 15% in the same period[7]) has experienced similar limitations in and around the airfields of RNAS Culdrose, RNAS Yeovilton, RAF Dishforth and RAF Shawbury. Hence, in Phase 1 of this Review the level and type of activity in the Vale of York AIAA was considered the 'benchmark' measure for intensity when signposting a particular fixed wing area and it would be wise to consider the comparative level and type of activity in the Yeovilton AIAA as the 'benchmark' measure for intensity when signposting a particular rotary wing area.

3. Findings

3.1 Lossiemouth AIAA. RAF Lossiemouth and RAF Kinloss lie within the Lossiemouth AIAA. Inverness Airport lies on the western periphery of the area (Inverness Airport and NATS have submitted an airspace change proposal) and Easterton glider site lays 2nm south of the Lossiemouth MATZ. Operational flying training activity remains high from the four Tornado GR4 squadrons based at RAF Lossiemouth. An indeterminate, but minority, numbers of these sorties remain within the AIAA including visual combat and threat defensive 3-D manoeuvring. However, the low frequency of this type of fast jet training should not in isolation justify permanent warning, indeed, EG D809S (the centre of which is 40nm from RAF Lossiemouth) could be utilised for concentrated air combat training (ACT). Indeed, RAF Marham does not have a similarly attached AIAA; statistics do not exist for RAF Marham based aircraft use of the Wash ATA. The large majority of RAF Lossiemouth fast jet traffic comprises transitory departure to and recovery from; medium level airspace to the south, the adjacent UK LFS (para2.1) below 2000ft agl and EG D703 (Tain Range) across the Moray Firth with an allied air traffic service. The two 202 Squadron D Flight Sea King Search and Rescue (SAR) helicopters conduct training below 2000ft agl in the area, predominantly along the coast-line. RAF Lossiemouth plan to receive the Joint Strike Fighter (JSF) circa 2014 and consequent Tornado GR4 overspill positioned at RAF Kinloss creating a potential increase in military fast jet movements within the area for period 2012-2017. Qualitative assessment reveals little GA traffic within the area and around its periphery; however, this finding in its self may legitimise the existence of the AIAA as it signposts a density of traffic not encountered above 2000ft agl in the surrounding environment. ATS provision is good within the AIAA as LARS provision is available from RAF Lossiemouth during the aerodrome operating hours and considerable use is made of this service (Reference G). RAF Lossiemouth provides air traffic services outside controlled airspace (ATSOCAS) to Helicopter CAT in transit (below 5000ft amsl) on HMR X-ray and an LoA exists between RAF Lossiemouth ATC and Inverness ATC with regard to Inverness departure and arrival traffic. Predominantly military/GA/CAT interaction occurs below 6000ft. The level of flying activity has reduced at RAF Kinloss during the past decade as the Nimrod fleet size has

[5] CAS had increased by less than 2% in the last 5 yrs (Transport Select Committee 2008)
[6] Statistics provided by DASA
[7] Statistics provided by DASA

reduced combined with an increase in airframe operational deployments; the large majority of RAF Kinloss Nimrod traffic comprises transitory departure to and recovery from medium level airspace at the beginning or end of long-range flights. Local sorties remain predominantly within the Lossiemouth/Kinloss CMATZ or transit with an ATS to/from EG D807, the sonar-buoy training area. Light aircraft flying from RAF Kinloss predominantly takes place below FL100 to the west of the airfield. RAF Kinloss hosts a number of NATO exercises regularly throughout the year (Tactical Leadership Training, Joint Warrior, SkyLance and the Combined Weapons Instructor courses) requiring the basing of a large fleet of mixed aircraft types for 2-3 weeks (generally not including weekend nor public holiday flying). These exercises are widely publicised (through timely Air Coordination Notification [ACN] and NOTAM) and though increasing departures and recoveries to RAF Kinloss and RAF Lossiemouth occurs in the notified period, the exercise activity takes place well away from the Lossiemouth AIAA; hence, this activity in its self does not justify the permanent Lossiemouth AIAA warning.

3.2 Spadeadam AIAA. The Spadeadam Electronic Warfare and Tactics Range (EWTR), EG D510A/B, provides segregated protection to military aircraft close to the origin of threat simulation/stimulation. The enhanced capability of present threat systems has resulted in an increase of defensive stand-off range (outside the confines of EG D510) over which military aircraft may be encountered whilst conducting high energy defensive 3-D manoeuvres, particularly at lower levels of airspace. Military aircraft are therefore manoeuvring to defeat threat sensors across the whole expanse of the Spadeadam AIAA. The border of the AIAA has a logical alignment with the UK LFS boundaries where the majority of the range users will be encountered, however, its ceiling does not align with the permanent ceiling of the EWTR and thus appears to have an inconsistency in the signpost in that military aircraft will be entering and exiting the EWTR at altitudes up to its promulgated ceiling. Defensive manoeuvring remains an essential skill for military aircrew as military aircraft continue repeated deployment to potential trouble spots around the world with little or no warning, leaving little time for "work-up" training and are only able to do this through specialist training gained through regular, repeated use of Spadeadam, EG D510 and the associated AIAA. Spadeadam is unique in the UK, and one of only two facilities within Europe, in providing this threat simulation capability that receives an increasingly high demand due to the present operational tempo and the introduction of the Typhoon. Despite a paucity of GA or CAT flights, predominantly transits below 5000ft to/from Carlisle along the Tyne Valley, within the area, it is important to maintain the current entry within the aeronautical publications, as the warning remains valid. The expanding CAS structure to the southwest and southeast has impacted upon local airspace usage by squeezing military traffic and GA into a smaller area. Practically all the low flying training in Low Flying Area 13 (LFA 13, the geographic extent of which can be viewed at the MoD About Defence website[8]) is associated with the Range at Spadeadam and the area experiences more fixed than rotary wing flights. ATS service provision in the vicinity of the Spadeadam AIAA, below FL195, is good. Below FL100, Newcastle (providing a LARS, there is considerable use made of this service (Reference G);) is very proactive with both Spadeadam ATC and ScATCC in harmonization of aerial activity in and around the AIAA.

3.3 Valley AIAA. There are two military aerodromes within the Valley AIAA; RAF Valley (No4 FTS), and the satellite aerodrome RAF Mona. The task has remained broadly consistent for the past 10 years. RAF Valley and RAF Mona combined Hawk T1A sortie rate is approximately 70[9] per day, with up to 70% of those sorties (approximately 40hrs) remaining within the AIAA and in the ATA above. The daily sortie rate within the AIAA is expected to increase towards the end of this decade with the basing of the Sea King SAR operational conversion unit (OCU) at RAF Valley in 2008. The possible arrival of the navigation-training unit (NTU) and Royal Saudi Air Force (RSAF) Hawk fixed-wing training may combine to further increase RAF Valley sortie rates within the AIAA and

[8] www.mod.uk/DefenceInternet/AboutDefence/WhatWeDo/AirSafetyandAviation/LowFlying/
[9] Statistics provided by No4 FTS

ATA. No4 FTS anticipation of an increase in aircraft synthetic local training sorties on the introduction of the Hawk 128, which will require use of the Welsh south coast ranges (EG D117 and EG D118), combined with the Welsh Assembly Government wish to reopen Llanbedr Airfield (making related facilities available to No4 FTS Hawks) will further increase sortie density within the AIAA and ATA. There is not a particularly high density of GA transit traffic south of the Menai Strait and it has been difficult to put actual figures on the level of activity; however, it would not appear to be at the same levels as the Vale of York and Lincolnshire AIAAs. ATS service provision in the vicinity of the Valley AIAA, below FL100, is good. LARS provision is available from RAF Valley, RAF Shawbury and BAe Warton; there is considerable use made of this service (Reference G) and co-operation, in terms of air traffic service provision, between RAF Valley, RAF Shawbury and BAe Warton is good.

3.4 Shawbury AIAA. The majority of rotary-wing traffic within the Shawbury AIAA operates up to 3000ft agl, and this activity has expanded beyond the present boundary, segregated from military fixed-wing traffic in the UK LFS below 2000ft agl (by means of LFA 9 whose border was expanded in 2007 to reflect the increase in RAF Shawbury based activity, the geographic extent of which can be viewed at the MoD 'About Defence website'[10]). Three military airfields are utilised, RAF Shawbury, RAF Tern Hill and Chetwynd aerodrome, and numerous field sites. Shawbury is the home of the Defence Helicopter Flying School (DHFS) and the Central Flying School (Helicopters) training pilots and helicopter instructors of all 3-Services. Advanced rotary-wing IFR training is also conducted in designated boxes within, and out with, the AIAA up to FL70; this activity predominantly, in the Griffin HT1 and Squirrel HT 1 helicopters, takes place up to FL70, details are encapsulated by the Shawbury AIAA entry Reference H. Civil pilots from local aerodromes (Sleap, and Welshpool), in transit below 5000ft, also make extensive use of the area, along with gliders from Long Mynd. Qualitative analysis suggests that GA activity during summer in the geographic area covered by LFA 9 is similar to levels within the Vale of York AIAA. The peculiarities of military helicopter flying training mean that some sort of warning of flying activities outside the norm in Class G airspace is prudent. LARS provision is available from RAF Shawbury and RAF Valley and considerable use is made of this service (Reference G) in the summer; co-operation between RAF Shawbury and local operators is good.

3.5 Wash AIAA. The Holbeach (EG D207) and Wainfleet (EG D308) ranges lie within the Wash AIAA. The UK, USAFE and other NATO aircraft extensively use both ranges and warning of these associated ranges is provided in the Wash AAA entry at Reference H. Aircraft holding for, on ingress to or egress from EG D207 and D308 operate within the Wash AIAA and Aerial Tactics Area (ATA). Aircraft awaiting ingress to the ranges hold at higher altitudes, generally within the Wash ATA, and time-critical tasks are completed from low level (below 2000ft agl). These two ranges are not permanently active and the peak periods are Mon-Thu 0900-2200Z, Fri 0900-1500Z. ATS service provision in the vicinity of the Wash AIAA and ATA, below FL195, is good. LARS provision is available from RAF Coningsby, RAF Waddington and RAF Marham and the Danger Area Activity Information Service in the area is available through London Information or Wainfleet Range Control.

3.6 Yeovilton AIAA. The majority of rotary-wing traffic within the Yeovilton AIAA operates up to 3000ft agl. Sea Kings, Lynx and Grobs operate within the AIAA on a daily basis in significant numbers utilising two military airfields, RNAS Yeovilton and Merryfield aerodrome and numerous field sites. Advanced rotary-wing IFR training is also conducted in designated boxes within the AIAA up to 6000ft agl. Civil pilots from local aerodromes (Exeter, Bournmouth, Bristol and Compton Abbas), predominantly in transit below 6000ft, also make extensive use of the area. ATS service provision in the vicinity of the Yeovilton AIAA, below FL195, is good. LARS provision is available from RNAS Yeovilton, Plymouth Radar, Exeter, Bristol, MoD DE & S Boscombe Down and

[10] www.mod.uk/DefenceInternet/AboutDefence/WhatWeDo/AirSafetyandAviation/LowFlying/

Bournmouth. HQ Navy consider that the size and dimension of the AIAA is appropriate to current and future operations.

3.7 Culdrose AIAA. Military aircraft activity within the Culdrose AIAA is significant; rotary-wing aircraft routinely operate in the AIAA, rotary-wing IFR training is conducted in designated boxes within the AIAA up to 5000ft agl. A considerable number of fixed-wing aircraft operations are conducted within this AIAA by Hawks and Jetstreams holding for, on ingress to or egress from, EG D003-009. Civil pilots in transit below 6000ft into and out of the Lands End Transit Corridor, along with commercial helicopter air traffic from Lands End aerodrome, also make extensive use of the area. ATS service provision in the vicinity of the Culdrose AIAA, below FL195, is good. LARS provision is available from RNAS Culdrose, Plymouth Radar and Newquay.

3.8 Charting. A number of options have been considered for the depiction and symbology used in the charting of the AIAAs on the CAA VFR Chart Series. Options considered invariably compromised the clarity and the significance of other chart objects, either of a topographical or airspace nature.

4. Recommendations

4.1 Lossiemouth AIAA. It is recommended that:

4.1.1 Notwithstanding the relative uniqueness of the area within the Scottish FIR, future basing of F35 JSF and regular exercise deployments to RAF Kinloss (that receive unique and broad publicity), the present Lossiemouth AIAA should be removed.

4.1.2 HQ Air Command and RAF HQ 22(Trg) Gp should review the requirement for a Lossiemouth AIAA as part of the JSF training needs analysis.

4.2 Spadeadam AIAA. It is recommended that:

4.2.1 The ceiling of the AIAA is raised to 5500ft ALT from 4500ft aligning with the permanent ceiling of EG D510.

4.3 Valley AIAA. Iit is recommended that:

4.3.1 The dimensions of the AIAA remain extant.

4.3.2 HQ Air Command and RAF HQ 22(Trg) Gp should consider reviewing the requirement and dimension of the AIAA as part of the Hawk 128 training needs analysis.

4.4 Shawbury AIAA. Operations Wing believe that there remains value in the promulgation of the Shawbury AIAA and are re-invigorating local notification of the area to local civilian operators. It is recommended that:

4.4.1 The geographical dimension of the AIAA is aligned with the boundary of LFA 9.

4.5 Wash AIAA. It is recommended that:

4.5.1 The ceiling of the AIAA is lowered to 3500ft from FL50 to align with EG PMR225.

4.5.2 Notified hours of peak activity amended to 0900 – 1700 Mon to Thu, Fri 0900 – 1500 in Winter (Summer 1hr earlier) in order to more closely align with daytime EG D207 and EG D308 range activity.

4.6 Yeovilton AIAA. HQ Navy Command and HQ Air Command (ATC) believe that there remains value in the promulgation of the Yeovilton AIAA. There are no further recommendations.

4.7 Culdrose AIAA. HQ Navy Command believe that there remains value in the promulgation of the Culdrose AIAA and have agreed to re-invigorate local notification of the area to local civilian operators. It is recommended that:

4.7.1 The ceiling of the AIAA is raised from 5800ft to 6000ft ALT in order to remain consistent with the Yeovilton AIAA.

4.7.2 The south-eastern boundary of the AIAA is aligned with the boundary of EG D006.

4.8 Charting. It is recommended that:

4.8.1 Depiction and symbology of the AIAAs on the CAA VFR Chart Series remains unchanged. A number of options have been considered, however, the clarity and/or significance of the depiction of the AIAAs on the CAA VFR Chart would be detrimentally influenced.

4.9 Advice to Transiting Aircraft. It is recommended that:

4.9.1 HQ Air Command and MoD continue to enhance the GA community awareness, through the ASI Communication and Education Programme (ACEP[11]) where appropriate. This may be achieved through visits to local GA Clubs within the vicinity of AIAAs, local 'ShAirspace' events and Station Websites.

4.9.2 Advice provided in the AIP (Reference 5) remains extant.

4.10 Operational Aeronautical Information Circular. Changes to the AIAAs and ARA will be detailed in an Operational Aeronautical Information Circular (Yellow AIC).

[*Original Signed*]

R A HINCHCLIFFE
ORA3

Annex:

A. Map of AIAAs, the ARA and ATAs.

[11] Part of the Airspace & Safety Initiative (ASI)

AREAS OF INTENSE AIR ACTIVITY, ADVISORY RADIO AREA AND AERIAL TACTICS AREAS