

Directorate of Airspace Policy



Air Traffic Services Outside Controlled Airspace – Phase 2 Report

AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE REVIEW – END OF PHASE TWO REPORT

1. Introduction

- 1.1 Air Traffic Services Outside Controlled Airspace (ATSOCAS) are provided by civil and military Air Navigation Service Providers. Policy for ATSOCAS rests with the Civil Aviation Authority (CAA) and with regulatory authority remaining with CAA Safety Regulation Group (SRG) and the Ministry of Defence (MOD), through either the Manual of Air Traffic Services Part 1¹ (MATS Pt 1) for civil service providers and the Joint Services Publication 552² for military service providers. Additional guidance is provided in the UK and military Aeronautical Information Publication (AIP).

2. Background

2.1 The ATSOCAS Review was initiated following concerns raised in AAIB and Airprox incident reports and CAA Safety Evening presentations, which frequently indicated either errors in application or lack of understanding by both controllers and pilots. The CAA launched the review of ATSOCAS with the aim of providing airspace users with an agreed and unambiguous Air Traffic Services (ATS) when operating outside controlled airspace, regardless of meteorological conditions or flight rules. The Directorate of Airspace Policy (DAP), Off-Route Airspace (ORA), is conducting the Review under the auspices of the CAA Outside Controlled Airspace Steering Group (COCASG), the CAA-wide Group responsible for the oversight and coordination of all Class G airspace initiatives. The ATSOCAS Review Programme comprises five phases of work:

- a. Phase One - Establish current situation and devise work plan/schedule.
- b. Phase Two - Consult with airspace users to establish ATS requirement(s). Consult ATS providers to establish mechanisms/draft procedures.
- c. Phase Three - Devise and test new procedures. Draft new regulations.
- d. Phase Four - Formal National Air Traffic Management Advisory Committee (NATMAC) consultation, production of Civil Aviation Publication (CAP) document and implementation.
- e. Phase Five - Review.

3. Aim

- 3.1 The aim of this report is to summarise the work completed under Phase Two of the ATSOCAS Review, specifically, the results of the consultation exercise, which was undertaken in two parts: consultation with the aviation community (User Consultation) to establish the Statement of User Requirement (SUR) and, consultation with the Air Navigation Service Providers (ANSP) to obtain their response to the SUR in order to assist in formulating the procedures and mechanisms required to deliver a standardised ATSOCAS that meets the SUR.

4. ATSOCAS Review Phase One – Summary

- 4.1 Phase one of the Review analysed all military and civil high-level documents pertaining to ATSOCAS and discovered that service provision had evolved over time, such that there

¹ Executive editorial control of the MATS Pt 1 is the responsibility of the CAA (SRG).

² Executive editorial control of the JSP 552 is delegated to Air Command ATC by MARG

were now many differences in application between various providers. The Phase 1 Report quantified the disparities between policy, documentation and service provision and emphasised that any changes to ATSOCCAS should be based on the actual requirements of airspace users. Nevertheless, the Report recognised the need to accommodate any limitations in ATS provision when developing the requirement and assessed that the active involvement of service providers in the development of the new scheme was crucial. To prevent any future divergence between policy documents, the Phase 1 Report recommended that ATSOCCAS should be governed by a single policy document that would provide the regulations, conditions, phraseology, pilot and controller responsibilities, and guidance on service provision techniques. Both the SRG of the CAA and the MOD, as regulators of ATS provision, have agreed that the key aspiration is uniform regulation to the same standards.

5. ATSOCCAS Review Phase Two

- 5.1 User Consultation. In order to achieve a common policy and to ensure the Review's success, it was deemed vital that the Customers' view on what was actually required from ATSOCCAS first needed to be established in the form of a SUR. Therefore a period of User consultation was undertaken, which would be followed by consultation with the service providers.
- 5.2 User Consultation Paper. Consultation to establish the User Requirement was launched in May 2005, when the Phase 1 Report was circulated, together with a consultation paper and a questionnaire. A copy of the Consultation Paper and questionnaire is at Annex A. The aim of the consultation was for airspace users to have their say regarding what they required from ATSOCCAS. The consultation paper was supported by an extensive publicity campaign: it was publicised at NATMAC meetings, notified to the wider audience through a number of press releases and advertisements in aviation magazines, published on the CAA website, and individual consultation papers and posters were distributed to over 185 organisations, flying clubs, airlines and MOD flying establishments. Moreover, further publicity was actively pursued at the 'Popular Flying Association (PFA) Fly In' at Kemble in July 2005, through presentations at General Aviation (GA) Safety Evenings and via the MOD Flight Safety system.
- 5.3 Consultation Paper Responses. A total of 324 responses were received: 144 from GA, 138 from Military, 26 from Commercial Air Transport (CAT) and 16 other. The responses received were proportionate to the size of each user group and included responses from organisational bodies, such as British Airline Pilots Association (BALPA), Aircraft Owners and Pilots Association (AOPA), PFA, some airlines, and individual pilots. Overall, the User Consultation Paper produced a disappointing number of responses, despite being given the widest distribution possible. However, on a positive note, organisations such as AOPA, BALPA, PFA and General Aviation Safety Council (GASCo) who were requested to distribute this paper amongst their members did so and provided DAP with a comprehensive and coordinated response. A number of interesting opinions and views were expressed, with some clearly more prominent than others. Overall, the three main user categories were positive about the Review and welcomed the fact that it was taking place. All three voiced concerns regarding levels of understanding by both pilots and controllers and stated that they would like the service to be provided to a common standard by all ATSOCCAS providers. However, whilst each category had their own individual priorities, initial analysis suggested few major surprises. In December 2005, the CAA gave service providers initial feedback on the user consultation responses, which included a summary of the main issues raised; a copy of the letter is at Annex B.
- 5.4 User Workshops. In March 2006, part two of the user consultation process began with a series of User Workshops involving representatives from the three user categories - Military, GA and CAT. A comprehensive list of representatives and observers who attended the workshops is at Annex C. All three individual workshops were conducted in

the same format with representatives being asked to forget current services and to start with a fresh approach and an open mind. This proved difficult initially but, after a little prompting, productive and participative discussion subsequently took place. ANSPs and associated organisations (National Air Traffic Services (NATS), MOD, Aerodrome Operators Association (AOA), Guild of Air Traffic Control Officers (GATCO) and Prospect) were invited to attend the Workshops and observe proceedings. The observers provided a valuable and professional contribution towards discussions and helped to ensure the quality of the output. The workshops refined the responses from the wider consultation process and produced individual User Requirements for each category, which were universally agreed by all representatives and can be found at Annexes D, E & F. At all three workshops the suggestions, ideas and proposals made by the representatives were captured on PowerPoint notes, which were reviewed at the end of the day's proceedings, and agreed upon by all representatives. These notes provided the information from which the three individual category SURs were created. DAP staff subsequently coordinated the production of the SURs, via email, with the relevant user groups and these were endorsed by all representatives. The three individual user requirements (Military, GA and CAT) were subsequently amalgamated to create a single combined User Requirement, resulting in the production of the endorsed SUR, which was endorsed by all the representatives of the three user groups in September 2006. The SUR can be found at Annex G.

- 5.5 Phase Two – ANSP Consultation. An ANSP consultation paper together with the SUR was distributed to NATS, MOD, AOA, GATCO and Prospect on 6 October 2006, a copy of which is at Annex H. The consultation period was initially set at eight weeks, ending on 1 December 2006. The aim of the consultation paper was to seek the views and suggestions of the ANSPs regarding any concepts, best practices or other proposals they had in relationship to meeting the SUR.
- 5.6 Consultation Paper Responses. In response to a request from the AOA, the consultation period was extended by four weeks with a revised end date of 31 December 2007. Consultation Paper responses were received from NATS, MOD (Royal Air Force (RAF) Air Command, formally Headquarters Strike Command (HQ STC)) ATC and Royal Navy (RN) Fleet ATC, AOA, GATCO and a number of other individual units; all of whom were fully supportive of the Review and appreciated the opportunity to respond and comment on the SUR. Responders agreed that it was entirely reasonable that *'any changes to ATSOCAS were based on the actual requirements of the airspace users and are not primarily driven by service providers'*; however, it should be recognised and accepted that the user does not have sufficient knowledge of airspace management to agree a solution without the advice and guidance of ANSPs. It was unanimously acknowledged that any revisions made to ATSOCAS would need to be easily understood, achievable and to best meet the requirements of the UK Aviation Community as a whole. A table containing ANSP responses is at Annex I; however, brief summaries of the salient points raised are included below.
- 5.6.1 All organisations agreed that standardisation and commonality of regulations and procedures, coupled together with sound communication between all stakeholders would be critical to the Review's success.
- 5.6.2 ANSPs believed that the provision of real time weather data was not practical as weather was not available on processed radar displays. Additionally the availability of weather information at planned destination and/or diversion aerodromes being available on request was a major additional demand.
- 5.6.3 Consensus of opinion was that although ATC advisory instructions should always be safe, the responsibility for Terrain and Obstacle Clearance outside CAS should be the responsibility of the pilot.

- 5.6.4 The proposed 'Planned Deconfliction Distances' (paragraph 3.b of the SUR) promoted significant comment and some confusion which will require further debate by all stakeholders.
- 5.6.5 Concerns were expressed, that against the backdrop of the UK trying to standardise its procedures with those of International Civil Aviation Organisation (ICAO), a solution to ATSOCAS in line with ICAO standards and practices should be investigated.
- 5.6.6 The RAF and RN ATC considered the provision of ATSOCAS to Unmanned Aerial Vehicles (UAV) as an important issue for the future and suggested that the Review might wish to bear this in mind.
- 5.6.7 The RN currently provide a Terminal Control (TC) ATS to RN, other UK military and MoD contracted aircraft, but not normally to civil aircraft. TC provides a higher level of ATC authority than that available in Class G airspace under RAS or RIS. Fleet are concerned that none of the proposed new Service Types will afford this higher authority within Class G airspace and as it is their duty to ensure that where ATSOCAS does not meet the RN's specific needs, enhancements will be provided. Therefore, the RN has indicated its desire to retain TC.
- 5.6.8 Finally, all ANSPs recognised that this consultation period was the first stage of a longer process and expressed their commitment to working with the CAA and all other stakeholders to formulate a cohesive and joined up approach.

6. AIRSPACE & SAFETY INITIATIVE

- 6.1 Under the Airspace & Safety Initiative (ASI), the ATSOCAS Review has been given increased impetus and responsibility for oversight of the work has been transferred to the Air Traffic Management (ATM) Standards Working Group, which is co-chaired by Head Air Traffic Standards Department (ATSD), SRG, and Group Captain ATC, Air Command. The outcome of the ATSOCAS Review will have a significant impact on other work strands being developed under ASI.
- 6.2 Originally, it was envisaged that Phase Two would culminate in the drafting of revised procedures to meet the SUR. However, due to the increased importance of this work and the associated implications for other work being conducted under ASI, the timetable for the remainder of the Review has been hastened. This together with the transfer of responsibility for the oversight of the ATSOCAS work to the ATM Standards WG has resulted in this report drawing a line under the end of Phase Two work at the SUR and associated responses from ANSPs. The drafting of the revised procedures will now form part of the Phase Three work and will be undertaken by the ATSOCAS Procedures WG, which comprises representatives from CAA (SRG and DAP), NATS, MOD and AOA.

7. SUMMARY

- 7.1 In May 2005 Phase Two of the ATSOCAS Review commenced with a period of User consultation. User consultation was undertaken in two stages; firstly a consultation paper and a questionnaire directed at all UK aviators was distributed and supported by an extensive publicity campaign. This was followed by a series of User workshops attended by representatives from the three user categories: Military, GA and CAT. The aim of the user consultation was to allow airspace users to have their say regarding what they required from ATSOCAS and develop a SUR. The endorsed SUR was completed in September 2006 and subsequently published on the CAA Website.
- 7.2 In October 2006 the ANSP consultation commenced with a consultation paper seeking the views of ANSPs regarding proposals to meet the SUR. Responses to the consultation paper were received from NATS, MOD (RN & RAF), AOA, GATCO and a number of other

individual units that were fully supportive of the Review. The ANSPs acknowledged unanimously that any revisions made to ATSOCAS would need to be easily understood, achievable and best meet the requirements of the UK Aviation Community as a whole. Moreover, it was thought that standardisation and commonality of regulations and procedures, coupled together with better communication between all stakeholders was critical to the Review's success. All ANSPs expressed their commitment to working with the CAA and all other stakeholders to formulate a cohesive and joined up approach.

7.3 Under the ASI, the ATSOCAS Review has been given increased impetus and responsibility for oversight of the work has been transferred to the ATM Standards Working Group. The timetable for the Review has been hastened and the drafting of the revised procedures will now form part of the Phase Three work to be undertaken by the ATSOCAS Procedures WG.

8. RECOMMENDATIONS

8.1 It is recommended that:

- a. The COCASG accept this report.
- b. The COCASG acknowledges the transfer of responsibility for the future phases of the Review to the ATSOCAS ATM Standards WG (as defined in the ATSOCAS Review Work Programme endorsed by the Airspace Policy Committee (APC)).
- c. This Report and its associated Annexes is made available to the public through publication on the CAA website.



P L BRAHAM
Wing Commander
Head ORA
DAP

Annexes:

- A. User Consultation Paper and Questionnaire.
- B. Letter to ANSPs Providing Initial Feedback on the User Consultation Responses.
- C. List of Representatives and Observers that Attended the User Workshops.
- D. CAT SUR.
- E. GA SUR.
- F. Military SUR.
- G. Endorsed SUR.
- H. ANSP Consultation Paper.
- I. Table of ANSP Responses.

AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE – CONSULTATION PAPER

1 INTRODUCTION

This paper and associated documents are being sent to you as part of an ongoing review undertaken by the CAA into the provision of Air Traffic Services Outside Controlled Airspace (ATSOCAS); the unique set of services developed progressively to suit the comparatively large volumes of Class G airspace available in the UK. Over time, ATSOCAS has evolved and there is now a perception that it has become increasingly complicated in its application and may have diverged from its initial aims. Furthermore, in some cases, ATSOCAS providers are offering subtly different interpretations of types of service leading to potential confusion over where responsibilities fall between ATS providers and airspace users.

2 AIM

The aim of this paper is to initiate formal development of a Statement of User Requirement, which we can then progress into forming the foundation for any further refinement and development of ATSOCAS. The overall goal that we hope to achieve with the entire ATSOCAS Review process is to provide airspace users with an agreed and unambiguous ATS when operating in uncontrolled airspace whether under VFR or IFR.

3 SUMMARY OF ATSOCAS REVIEW TO DATE

- 3.1 Phase One of the ATSOCAS review entailed the analysis of all the military and civil high level documents pertaining to ATSOCAS. As is stated in the Phase One report, which can be found at http://www.caa.co.uk/docs/7/DAP_ORA_ATSOCAS_Phase1_Review.pdf this service provision has evolved over time such that it now differs between agencies. The first part of this review was aimed at quantifying the disparity between service providers; this report was most comprehensive and highlighted a number of deficiencies. Indeed, it was circulated to the prime service providers (NATS and MoD) for comment and various aspects have already been addressed. Nevertheless, it was recommended that *“In order to resolve long-established, but somewhat outdated, preconceptions, it may be necessary to develop replacement services for RAS and RIS and dispense with the existing names and acronyms. A new ATSOCAS Scheme, based, primarily, on the users’ requirements, should be developed, simulated and tested under controlled conditions. This would have the advantage of delivering revised ATSOCAS that meet the needs of the aviation community and are within the ability of all service providers to deliver to a common standard”*. Furthermore it was stated that *“in order to prevent future divergence between policy documents, ATSOCAS should be governed by a single CAA-controlled policy document that provides the regulations, conditions, phraseology, pilot and controller responsibilities and guidance on service provision techniques. Deviation from ATSOCAS policy would only be authorized through the issue of a formal dispensation. Finally, the CAA will need to ensure that service providers do not modify the replacement services or provide them selectively due to commercial imperatives. There are existing mechanisms that could be utilized to achieve this provided an effective CAA-MOD regulatory regime was established”*. Working on the premise that there remains a requirement to provide ATS in uncontrolled airspace, there is a need to ensure a common, safe, efficient and deliverable ATSOCAS that aspires to meet user requirements.
- 3.2 It is worth emphasising that there is no set agenda in this review and any proposed changes to the current system will be considered. The review of a system that has evolved over many years is a significant task and it will obviously take some time to complete. Moreover, it is inevitable that various users will have differing requirements and it is only by following a full and open consultation process that we can assure the best possible level of satisfaction for all interested parties.

4 CONSULTATION PROCESS

- 4.1 At http://www.caa.co.uk/docs/7/DAP_ORA_ATSOCAS_Phase1_Review.pdf you will find a comprehensive document detailing the work completed so far under Phase One. This document aims to highlight the specific discrepancies and to stimulate further debate. For example, it is apparent that differences of application of ATSOCAS between civil and military ATS providers exist and some units have a local, questionable, policy of not providing a RAS to traffic routing in uncontrolled airspace. It is essential that, at very least, an agreed, common policy for ATSOCAS provision be developed, allowing for military and civil agencies to provide a consistency of application to all airspace users.
- 4.2 However, in order to achieve this common policy we first need to produce a Statement of User Requirement. It is important that any changes to ATSOCAS are based on the actual requirements of the airspace users and not driven primarily by the service providers. Nevertheless, it is obvious that there will be a need to recognise any ATS provision limitations when developing ATSOCAS requirements and service providers will continue to be actively involved in this review.
- 4.3 We are now seeking your views on the format and provision of the future ATSOCAS. We may find that users are content with the current system; conversely, overwhelming opinion may wish a fresh start. At Annex A, is a poster and brief questionnaire, which is aimed a stimulating thought on the subject; however, we would encourage you comment on all aspects of ATSOCAS and not just those listed. This consultation paper is being given the widest possible distribution in order to allow for all airspace users to voice their opinions and we would encourage organisations to consult widely with their members. Inevitably, due to the wide distribution we are aiming for, some organisations may receive duplicate copies of this document. In such circumstances, we would ask that any responses submitted indicate the route through which you are wishing to make your representation. Organisations such as AOPA, BALPA, PFA, etc are requested to distribute this paper amongst their members, coordinate a joint response, where possible, and indicate if they are willing to take part in future consultative working groups. Clearly, we would also welcome responses from individuals. The Review's work-to-date and this consultation paper are published on the CAA website at: <http://www.caa.co.uk/default.aspx?categoryid=7&pagetype=68> then enter ATSOCAS Review. The consultation process will be coordinated by Manager Off-Route Airspace (ORA), Wing Commander Lou Braham, Directorate of Airspace Policy, at CAA House on 0207 453 6540 and Off-Route Airspace 2 (ORA2), Squadron Leader AI Dunbar at CAA House on 0207 453 6542. However, in order to manage the large number of responses expected and to enable us to correlate the information accurately, we prefer that you send your comments via e-mail to the following address atsocas@dap.caa.co.uk. Postal responses should be addressed to 'ATSOCAS Review', ORA, DAP, CAA House, 45-59 Kingsway, London WC2B 6TE. The closing date for responses to this consultation paper is 11 November 2005. Because of the sheer volume of work that we anticipate will be generated by this consultation, please do not expect a reply from the Directorate to your responses.

<<Original Signed>>

Lou Braham
Wg Cdr
DAP (Mgr ORA)

Annex:

- A. ATSOCAS Consultation Poster & Questionnaire.

AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE (ATSOCAS) REVIEW QUESTIONNAIRE

This is not an exhaustive list of questions but merely designed to stimulate thought on the subject; however, we would encourage you comment on all aspects of ATSOCCAS and not just those listed.

QUESTION	YOUR VIEW
What area of the aviation community do you represent (ie GA, Commercial, Police, Military, Service Provider etc)?	
What elements of the current ATSOCCAS do you value?	
What elements of the current ATSOCCAS do you feel are inappropriate, confusing or unnecessary?	
What information/guidance would you like from ATC if operating under VFR? Would this depend on other factors such as airspace, traffic or weather conditions?	
What information/guidance would you like from ATC if IMC/IFR?	
Do you perceive there to be a minimum safe miss distance from other aircraft (both VFR and IFR) outside of controlled airspace?	
Where would you wish to see responsibility for terrain clearance to lie?	
How effective/consistent is provision of RAS/RIS/FIS across the UK?	
Do you notice a difference in service provision between individual agencies and/or military/civil units? Please qualify.	
How would you see technological developments such as Mode S contributing towards or complimenting ATSOCCAS?	
Have you experienced similar services in other countries and, if so, what was your impression?	
General thoughts not covered above?	

Replies (by 11 November 2005) to:

**ATSOCAS Review
CAA House K6 G3
45-59 Kingsway
LONDON
WC2B 6TE**

or

atsocas@dap.caa.co.uk

Directorate of Airspace Policy

8AP/51/08/01/02

22 December 2005

See Distribution

AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE (ATSOCAS) USER CONSULTATION PAPER – INITIAL SUMMARY

Introduction

As part of the North East Airspace Team (NEAT) Action Plan, we undertook to provide ANSPs with initial feedback from the ATSOCAS Review user requirement consultation, by the end of December 2005. This summary identifies the main issues raised but, as the consultation period only ended on 11 November 2005, a full and in-depth analysis has yet to be completed. Responses will be further analysed in early 2006 and refined through a series of workshops comprising the 3 main user groups – Military users, GA and CAT, to develop a mature user requirement. Therefore, this initial feedback should be read with that caveat in mind.

Phase 2 of the ATSOCAS Review is being conducted in 2 parts: firstly, consultation with the aviation community to establish the User Requirement and secondly, consultation with the service providers to determine procedures and mechanisms to meet the established requirement. Consultation to establish the User Requirement was launched in May 2005 and to this end, the Phase 1 Report was circulated, together with a consultation paper and a questionnaire. The aim of the consultation was for airspace users to have their say regarding what they required from the ATS available outside controlled airspace. As of 17 November, 313 responses had been received (137 from General Aviation (GA), 135 from Military, 25 from Commercial Air Transport (CAT) and 16 other), which included responses from several organisational bodies (BALPA, GAPAN, AOPA, PFA, GASCo and BGA), some airlines, and from individual pilots.

Overall, the User Consultation Paper produced a disappointing number of responses, despite being given the widest distribution possible. The consultation was raised at the recent NATMAC meetings, was notified to the wider audience through a number of press releases and advertisement in aviation magazines, publication on the CAA website and individual consultation papers distributed to over 185 organisations and flying clubs. Moreover, further publicity was obtained through DAP's attendance at the 'PFA Fly In' at Kemble in July, presentations at GA Safety Evenings and through the MOD Flight Safety system. On a positive note, organisations such as AOPA, BALPA, PFA who were requested to distribute this paper amongst their members did so and provided DAP with a comprehensive and coordinated response.

Summary of General Comments

All organisations and individual pilots who responded welcomed the Review and thought it to be timely. The range of views and opinions varied, as might have been expected, between the 3 main user categories of ATSOCAS, that is Military, GA and CAT; however, certain views reoccurred regularly and they form the basis of this initial summary. Additionally, a number of views were expressed with regard to the airspace requirements and these have been included to provide additional background information. As mentioned earlier, the responses received will form the basis of discussions to be held with the 3 main user groups to refine those responses and to produce an agreed, common, User Requirement.

Civil Aviation Authority

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CAT

The following points and examples occurred frequently and provide an initial reflection of the opinions of the CAT community:

- a. CAS. All CAT operations should take place within CAS; however, it was recognised that this is not a realistic option.

Example: *'would prefer that all CAT operations be conducted within CAS'*.

- b. Known Traffic Environment. All CAT movements should take place within a known traffic environment, which could be achieved through the mandated carriage of transponders with height information.

Example: *'The Guild believes that there is a need to move as soon as possible towards a total transponder environment with the introduction of cheap light weight transponders'*.

- c. Appropriate ATS. An appropriate level of ATS, that is Radar Advisory Service (RAS), should always be available outside CAS, instead of the current position where it is impossible to predict whether a RAS will be available.

Examples:

(i) *'Inability to accurately predict whether RAS will be available at a certain time on a route'*.

(ii) *'Improve RAS capability/coverage'*.

(iii) *'we require a RAS to be available at all times outside CAS'*.

- d. Uniform ATS. A common delivery of a uniform ATS, harmonising the provision of ATSOCAS, and a common understanding of the rules by pilots.

Examples:

(i) *'Where such a service is provided by an ATS unit it should be uniform'*.

(ii) *'The Guild believes that the level and varying provision of ATSOCAS has generated some confusion and needs to be changed to provide a uniform understandable level of service. Different units apply RAS and RIS in different ways, thus pilots receive varying forms of service'*.

(iii) *'depends on the individual shift rather than the agency/unit.'*

(iv) *'The current structure of RC, RAS, RIS and FIS is a good system, but this must be consistent for CAS, IFR, VFR, civil and military, which it is not at present'*.

- e. Provision of CAS. Provision of CAS (CTR/CTAs) around regional airfields such as Inverness, Doncaster and Coventry and the possibility of the introduction of a 'Fast Track' system to introduce temporary CAS around such airfields until CAS is formally established.

- f. ATS Provision. The provision of ATS outside CAS is overly complex.

Example: *'We believe there are too many ATS providers in Class G airspace and we believe closer co-operation with the military is the way forward as their operating ethos is more suited to providing a service in this dynamic unpredictable environment'*.

GA

The following points and examples are those that have been raised frequently and provide an initial reflection of the opinions of the GA community:

- a. FIS. FIS is the main service used by the GA ATSOCAS users and on the whole is adequate; however, there are concerns that it is used as a flight following service and the RT used can be excessive or long-winded. That said, a common view was that the Flight Following service available in the USA was excellent and would be advantageous to the UK. Finally, it is felt that ATS units try to over control FIS tracks, thereby trying to afford their own aircraft more protection – military are perceived as the worst offenders.
- (i) *'Frequency congestion on FIR FIS frequencies prevents many from using it and they see the continuous background noise on busy frequencies as a significant distraction'. 'Flight following in the USA is widely viewed as an excellent model for the UK'. 'Initial call is too long'*.
- (ii) *'Initial call requesting FIS is too long. Flight following in the USA and Ireland is good'*.
- b. RIS & RAS. These services have generated a variety of responses. The general view is that most pilots are unsure of the difference between the services and that their provision is not consistent.

Examples:

- (i) *'RAS/RIS/FIS not consistent, when available it is effective but it is patchy and not guaranteed. Some units refuse service or are hostile and Service units seem happier to provide a service than some civil'. 'RAS/FIS should be available all the time regardless of the flight conditions'. 'RIS/RAS split is confusing and our survey has shown that these services are widely misunderstood'*.
- (ii) *'Many private pilots still lack an understanding of what RIS, RAS and FIS mean'*.
- (iii) *'It is highly likely some PPLs still do not appreciate the difference between RAS, RIS and FIS so any simplification would benefit all concerned'*.
- (iv) *'RAS generally not available unless CA48 filed'*.
- c. LARS. This is perceived as a valued element of ATSOCAS, however, its coverage and availability is regarded as a serious issue.

Examples:

- (i) *'The UK LARS does not provide a 24/7 country-wide service and given that the UK currently permits flight in IMC outside of managed airspace means LARS should be available on a more regular basis. The funding of LARS is an issue, particularly under future SES charging regulation. For this reason the GA community is interested in why a TIS service, which can be provided across Mode S is not being given consideration'.*
 - (ii) *'Service units tend to close when their own aircraft are not flying, as their sole purpose is the safeguarding of their own traffic. The needs of the aircraft requesting the service are not considered'.*
 - (iii) *'There are a number of holes and areas with no coverage from LARS'.*
 - (iv) *'Lacking at weekend or after 5pm and apart from a lack of unit's giving a FIS outside of military hours'.*
- d. Mode S. Unsurprisingly, Mode S is a hot topic and a widespread GA view is that it is unnecessary and expensive, whose sole purpose is to provide a method of charging airspace users.
- (i) *'Most members are suspicious of Mode S, believing it will bring little benefit but will be expensive and only provide a means to charge for airspace use. Mode S elementary will identify aircraft but otherwise will do no more than mode C. Members could not see how its introduction would improve safety and believe that implementation of Mode S across the FIR will result in a traffic overload for ATC units'.*
 - (ii) *'Mode S will not survive any realistic cost/benefit analysis for GA recreational flyers'*
- e. Non-Radio Operations. It is important to the GA community that non-radio operations are maintained.

Examples:

- (i) *'We see the need to maintain non-radio ops and the see and avoid principle and VFR is what it says and does not require ATS other than at night and when flying IMC'.*
- (ii) *'The very nature of our sport does not require or need any ATS outside CAS and therefore I cannot see what service could be helpful to a cross country pilot. Talking to ATC can be a serious distraction when it is more important to spend one's time looking out of the cockpit'.*

Military

The general consensus of opinion from military users was that the ATS system is acceptable as it currently stands and they do not see a need to change the rules to compensate for the 'lowest common denominator'. However, the following points and examples have been raised and provide an initial reflection of the opinions of the military community.

- a. ATS. There is a common view that the services available under ATSOCAS are not well understood by all users. However, the overall view is that military

aviators are happy with the services currently available, especially the flexibility to manoeuvre that they offer.

- (i) *'Most confusion arises from the difference between RAS and RIS and what this means to the pilot and long transmission from the ATC unit with legal caveats'.*
- (ii) value *'RAS & RIS and the flexibility it (the service) offers'.*
- (iii) value *'Flexibility, freedom to manoeuvre'* that the current ATSOCAS provides.
- (iv) *'I believe 2 services should be offered: a FIS and a single radar service with the possibility of vectors if absolutely necessary, essentially to remove confusion between RAS and RIS'.*
- (v) *'The distinctions between FIS and RIS need to be clearly defined and ownership of rest remains with the aircraft captain. Lines between FIS/RIS/RAS tend to get blurred.'*

- b. Terrain Clearance. Approximately 60% of military aircrew believe certain elements of responsibility of terrain clearance should rest with ATC. In the main their thoughts were that when an aircraft was under Radar Control, RAS, receiving radar vectors, or on radar approach, the controller should be responsible for terrain clearance.

Examples:

- (i) *'Examiners believe that there is a strong case for making the controller responsible for terrain clearance whilst an aircraft is following due procedure. This would alleviate some of the workload on a pilot flying IMC'.*
- (ii) *'RAS – ATC. RIS – Pilot but warnings from ATC. FIS – Pilot'.*
- (iii) *'It clearly has to lie with ATC, Scenario – Nav aids failure'.*
- (iv) *'With ATC when under a RAS service'.*
- (v) *'VMC – Aircrew. IMC – Controller unless aircrew formally accept it'.*

- c. CAT Outside CAS. There are concerns with the increasing number of CAT movements that are perceived to be 'cutting the corner' and therefore routing outside CAS.

- (i) *'If an airliner captain wishes to leave the sanctity of CAS (short cut across Class G to save fuel) he/she should be fully aware of how military Class G users operate and understand that he has the same responsibility as the other Class G airspace users to take the necessary measures to preserve safe separation. Thus there should be no case for an airliner captain who chooses not to follow RAS avoidance action on a military operator to file an Airprox simply because, in his view, the military aircraft flew close enough to trigger a TCAS warning – unless of course, the military aircraft did something that constituted a near collision'.*

- (ii) *'The elements of ATSOCAS that are inappropriate, confusing or unnecessary are avoidance action from civil airliners operating in Class G airspace in order to gain direct routing and save money'.*

Summary

Despite a relatively poor response to the consultation there have been a number of interesting opinions and views have been expressed, with some that are clearly more prominent. Overall, the 3 main user categories are positive about the Review and welcome the fact it is taking place. All 3 have voiced concerns regarding levels of understanding by both pilots and controllers and would like the service to be provided to a common standard by all ATSOCAS providers. However, whilst each category has their own individual priorities, which we will need to address as we develop the common User Requirement, our initial analysis suggests few major surprises.

In preparing this initial feedback, we have paid particular attention to the consolidated views of recognised organisations such as BALPA, AOPA, PFA, BGA, GASCo, and from the MoD. When we have developed a mature common User Requirement, we will commence consultation with the ATSOCAS providers to assist in developing a service that best meets the needs of the airspace users.

S G WRAGG
Group Captain
ADAP2

Distribution:

MoD, HQ 3 Group – Group Captain John Clark
NATS – Mr David Hilton
AOA – Mr Tom Needham

ATSOCAS WORKSHOP ATTENDANCE

Military (14 March 2006)		
Organisation	Representative	

PTC	Sqn Ldr Anthony Little	✓
HQ 1 GP	Wg Cdr Boyle Flt Lt B O'Neill	✓
HQ 3 GP	Sqn Ldr Pip Wolfendale	
CFS	Sqn Ldr Mike Setterfield	✓
100 th Air Refuelling	Lt Col Michael Hady	✓
48 th Fighter Wing	Maj Chris Russell Lt Bob Phillips	✓ ✓
DASC	Sqn Ldr Dave Rae Sqn Ldr Rob Brennan	✓ ✓
FLEET	Lt Cdr Jason Flinton Lt Cdr Alistair Castle	✓ ✓
JHC	Cdr Rick Fox	✓
DAavn	Lt Col Peter Terrett Captain Neil Bishop	✓ ✓

Observers

BALPA	TBC	✓
GATCO	Stuart Little	
Prospect	Tony King	✓
NATS	Steve Mackay	✓
HQSTC ATC	Sqn Ldr Dean Miller	✓

CAT (21 March 2006)		
Organisation	Representative	

BALPA	Capt Tim Williamson Capt Steve King	✓ ✓
My Travel	Mr Tim Cheal	✓
GAPAN	Mr Terry Gill	✓
NATMAC – (Light Airlines)	Mat Wood	
Eastern Airways	Mathew Herzberg Mat Wood	✓ ✓
Logan Air	Gordon Young	✓
Flybe	John Alsford	✓
SRG	Graham Gray	✓

Observers

AOPA	Martin Robinson	✓
GATCO	Terry Clark	✓
Prospect	Ron McNab	✓
NATS	Mark Asquith	✓
HQSTC ATC	Wg Cdr Steve Hyett	✓

GA (20 March 2006)		
Organisation	Representative	

AOPA	Martin Robinson	✓
BBGA	John Batty	✓
PFA	David Corbett	✓
GASCo	Gerald Hackemer Mike Jackson	✓ ✓
BHAB	Peter Norton	✓
Independent	Mr I Lee	✓

Observers

DASC	Sqn Ldr Dave Rae	✓
BALPA	Mr Chapman	✓
GATCO	Tim Mackay	✓
NATS	Steve Mackay	✓
HQ 3 GP ATC	Sqn Ldr M Coleman	✓

8AP/51/08/04

26 June 2006

COMMERCIAL AIR TRANSPORT (CAT) – AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE (ATSOCAS) STATEMENT OF REQUIREMENT

1. CAT require a single uncompromising IFR service, irrespective of weather conditions, that allows safe operation within unregulated airspace and Temporary Reserved Areas (TRAs)¹ above FL195 while adhering to the rules of the air. Separation from and avoidance of other airspace users is of paramount importance. Whilst CAT have no requirement for other services, they accept that the other user groups (Military and General Aviation) will require additional services to be made available; as other services would potentially be available a range of factors were identified that may dictate service selection. Such factors are detailed below:

- a. Separation from Other Traffic. It is a fundamental CAT consideration to be separated from other airspace users. However, by virtue of the fact that Class F & G airspace is unregulated, all ATC instructions passed are advisory in nature and will therefore only assist the captain of an aircraft to achieve separation from other airspace users.
- b. Choice of Service. The type of ATSOCAS required remains the choice of the aircraft captain.
- c. Full use of Technology. ANSPs are to facilitate the best use of technology available.
- d. Flexible Routings. To enable as direct a safe track as possible from departure to destination.
- e. Better ATS Technology. Provide ATC with improved ATS & ATM tools utilising available technology to provide an enhanced air picture.
- f. Weather. Weather Information along an aircraft's route, including destination and/or diversion airfields is required. Avoidance of weather may require route deviation.
- g. Terrain & Ground Obstacle Clearance. While Terrain & Ground Obstacle Clearance is the responsibility of the pilot, under certain circumstances shared responsibility between pilot & controller might be appropriate (e.g. radar & instrument approach procedures) when the aircraft is operating IFR. All control instructions passed by ATC are to be safe.
- h. Same Rules for All Users. All pilots & controllers, civilian and military must operate to the same common procedures, eliminating all potential misunderstanding and confusion.
- i. Same Service Provision. All controllers, civilian and military must work to and apply common procedures, eliminating all potential misunderstanding and confusion.
- j. Better Information on Other Airspace Users. Accurate and up to date information, which is readily available on airspace activities such as Military Exercises.

¹ As a result of the introduction of Class C airspace above FL 195 (planned March 2007), Temporary Reserved Areas (TRAs) will be introduced (EUROCONTROL definition). The existing terminology *Temporary Restricted Areas* (TRA) will be replaced with a new definition to reflect the restrictions of flying that are put in place with Article 96 of the ANO

- k. Service Availability to be consistent with Communication Navigation Surveillance (CNS) Coverage. In areas of suitable CNS Coverage, correctly provided ATSOCAS should be consistently available.
 - l. Currency & Update of Information. ATC to provide real time updates when required and feasible.
 - m. CAT Operations within Class 'G'. Where possible CAT operations should take place within CAS. Routings outside of CAS will make use of ATSOCAS.
2. Additional Service Requirement. Although CAT primarily requires a single category of ATSOCAS, there is a requirement for a procedural service in specific circumstances. Therefore, CAT also requires a procedural service where surveillance coverage is marginal, limited or not available:
3. Types of ATSOCAS Required by CAT Users. The title of the services should reflect the type of service provided. Services required by CAT Users:
- a. Separation and Avoidance Service. An advisory service, provided with the use of ATC radar. The service should provide advice to facilitate separation from other airspace users. The service should be available under any flight conditions. Terrain & Ground Obstacle Clearance would be the shared responsibility of the pilot & controller.
 - b. Procedural Service. A non-radar separation service provided between participating aircraft with set separation standards. The service should be available under any flight conditions.
4. The choice of ATS in Class G for CAT users would always be a Separation and Avoidance Service.
5. Traffic Information and Collision Avoidance Criteria. The controller should pass traffic Information (TI) or advisory information for collision avoidance and deconfliction from other traffic to the pilot based on the following criteria:
- a. TI. CAT pilots consider that TI should be passed when conflicting traffic is liable to penetrate a bubble of 5nm/3000ft (i.e. traffic on a conflicting flight path that would infringe this perceived 'bubble'). This information is to be passed prior to the conflicting traffic entering the 5nm/3000ft bubble.
 - b. Planned Deconfliction Distance. A controller will aim to provide the aircraft captain with advisory information, which will enable the captain to manoeuvre his aircraft to achieve a miss-distance of a least 5nm and/or 3000ft (for non-participating traffic) or 1000ft (for participating traffic) between his aircraft and other airspace users. Additionally, CAT pilots considered it important that whenever possible an element of both lateral & vertical deconfliction is maintained to prevent inappropriate RAs from TCAS.
 - c. The above deconfliction distances were derived on the basis of the 'bubble' that would trigger TCAS.

8AP/51/08/04

26 June 2006

**GENERAL AVIATION - AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE
(ATSOCAS) STATEMENT OF REQUIREMENT**

1. GA require a range of ATSOCAS that will allow flights to operate with relative freedom in unregulated airspace and Temporary Reserved Areas (TRAs)¹ above FL195 while adhering to the rules of the air; GA aviators should not be mandated to receive an ATS. Invariably a combination of factors will dictate the type of ATSOCAS required by a GA pilot, such factors, in no particular order, are detailed below:
 - a. Traffic Avoidance. Different flight profiles require differing levels of service from the controller.
 - b. Sortie Type. Dependant on sortie type and complexity (i.e. instructional, aerobatics or manoeuvring) and whether operating IFR or VFR.
 - c. Aircraft Type & Performance. Handling characteristics, such as aircraft weight, manoeuvrability and speed will affect the type of ATSOCAS requested. The physical design of an aircraft's cockpit/canopy design, will affect aircrew's ability to apply 'see and avoid' principals.
 - d. Pre-Flight Sortie Planning. Availability of ATS along the flight-planned route, which could provide navigational assistance to help circumnavigate potential obstructions encountered.
 - e. Route to be Flown. Close to or through airspace of higher classifications and restrictions (e.g. Class D/E airspace or Danger Areas).
 - f. Weather. Available in both IMC and VMC.
 - g. Universal Understanding of Services Available. All pilots & controllers, civilian and military must operate to the same common procedures, eliminating all potential misunderstanding and confusion.
 - h. Universal Application of Services Available. All controllers, civilian and military must work to and apply common procedures, eliminating all potential misunderstanding and confusion.
 - i. Service Availability/Coverage. The ability to obtain an ATSOCAS will affect a pilot's request. The unavailability of the Lower Airspace Radar Service at weekends and evenings (in the main due to closure of military airfields) dictates that ATSOCAS is not always available (it is recognised that military airfields are closed there is no military activity). Moreover, a paucity of ANSPs in certain areas of the country means that there is no available ATSOCAS.
 - j. Choice of Service. The type of ATSOCAS required remains the choice of the aircraft captain.
 - k. Cockpit Workload. A high cockpit workload will probably require a higher level of service from the ANSP to help the pilot fulfil his obligations to the rules of the air.

¹ As a result of the introduction of Class C airspace above FL 195 (planned March 2007), Temporary Reserved Areas (TRAs) will be introduced (EUROCONTROL definition). The existing terminology *Temporary Restricted Areas* (TRA) will be replaced with a new definition to reflect the restrictions of flying that are put in place with Article 96 of the ANO.

- i. Information Ahead during Flight Itself. Warnings of unexpected hazards or anomalies such as weather and other airspace user activity, etc.
2. Type of ATSOCAS Required. GA requires a range of ATSOCAS, which would be requested subject to a variable number of factors. The title of the service should reflect the type of service provided. The different types of ATSOCAS required are as follows:
- a. No Service. Self-explanatory. This is important, as it retains the existing flexibility that allows pilots to operate in unregulated airspace without being mandated to receive an ATS.
 - b. Flight Information Service (FIS). An unambiguous and commonly understood service, applied in accordance with the ICAO definition and meaning of FIS should be incorporated without difference within the UK.
 - c. Service Type 3: A service provided with the use of ATC radar, which provides the pilot with an increased situational awareness above FIS but enables the pilot to retain flexibility. The service should include all provisions provided under an ICAO FIS but also include Traffic Information (TI).
 - d. Service Type 4: An advisory separation service, provided with the use of ATC radar. The service should include all provisions provided under an ICAO FIS but also include collision avoidance assistance. Terrain & Ground Obstacle Clearance would be the shared responsibility of the pilot & controller.
3. Traffic Information and Collision Avoidance Criteria. The controller should pass traffic Information (TI) or advisory information for collision avoidance and deconfliction from other traffic to the pilot based on the following criteria:
- a. TI. Conditions such as aircraft type and speed and closure rates will dictate what constitutes relevant TI and will be the perception of the controller. GA aircrew consider that TI from ATC should be passed when conflicting traffic is liable to approach within and by (at the latest) 3nm/1000ft (i.e. traffic on a conflicting flight path that would infringe this perceived 'bubble').
 - b. Planned Deconfliction Distance. A controller will aim to provide the aircraft captain with advisory information, which will enable the captain to manoeuvre his aircraft to achieve a miss distance of at least 3nm and/or 1000ft between his aircraft and other airspace users.

8AP/51/08/04

26 June 2006

MILITARY - AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE (ATSOCAS)
STATEMENT OF REQUIREMENT

1. The military require a range of ATSOCAS (including no service at all) that will allow their aircrew to operate with tactical freedom in unregulated airspace and Temporary Reserved Areas (TRAs)¹ above FL195 whilst adhering to the rules of the air. Safety is of paramount importance and overrides all other factors affecting the selection of the ATSOCAS required. Invariably a combination of factors dictate the type of ATSOCAS required by a Military pilot, such factors, in no particular order are detailed below:

- a. Flight Profile. Different flight profiles require differing levels of service from the controller.
- b. Cockpit Workload. A high cockpit workload is likely to require a higher level of service from the ANSP to assist the pilot complete his sortie/mission.
- c. Weather Conditions. Service not reliant on weather conditions and should be available in IMC or VMC.
- d. Aircraft Characteristics. Handling characteristics, such as aircraft weight, manoeuvrability and speed will affect the type of ATSOCAS requested. The physical design of an aircraft's cockpit/canopy design, will affect aircrews ability to apply see and avoid principals.
- e. Aircraft Serviceability. Aircraft with technical or mechanical failures or aircraft in emergency may require a higher-level service.
- f. Traffic Density. An aircraft operating within an area of known or notified intense aerial activity may require a higher level of service to that normally requested.
- g. Terrain & Ground Obstacle Clearance. While Terrain & Ground Obstacle Clearance is the responsibility of the pilot; however certain circumstances may dictate a shared responsibility between pilot & controller (e.g. Radar & instrument approach procedures) when the aircraft is operating IFR. All control instructions passed by ATC are to be safe.
- h. Common Procedures. All pilots & controllers, civilian and military must operate to the same common procedures, eliminating all potential misunderstanding and confusion.
- i. Application of Procedures. All controllers, civilian and military must work to and apply common procedures, eliminating all potential misunderstanding and confusion.
- j. Choice of Service. The type of ATSOCAS required remains the choice of the aircraft captain.

2. Type of ATSOCAS Required. The military require a range of ATSOCAS, which would be requested by the pilot subject to a variable number of factors. The title of the service should reflect

¹ As a result of the introduction of Class C airspace above FL 195 (planned March 2007), Temporary Reserved Areas (TRAs) will be introduced (EUROCONTROL definition). The existing terminology *Temporary Restricted Areas* (TRA) will be replaced with a new definition to reflect the restrictions of flying that are put in place with Article 96 of the ANO

the type of service provided. The different types of ATSOCAS required by the military are as follows:

- a. No Service. Self-explanatory. This is important, as it allows crews to operate in unregulated airspace and Temporary Reserved Areas (TRAs)¹ above FL195 without being mandated to receive an ATS.
- b. Flight Information Service (FIS). An unambiguous and commonly understood service, applied in accordance with the ICAO definition. The meaning of FIS should be incorporated without difference within the UK.
- c. Service Type 3: A service, provided with the use of ATC radar, which provides the pilot with an increased situational awareness above FIS but enables the pilot to retain flexibility. The service should include all provisions provided under an ICAO FIS but also include Traffic Information (TI); however, responsibility for traffic avoidance should remain within the cockpit. The pilot would be responsible for advising the controller of route or level change.
- d. Service Type 4: An advisory service, provided with the use of ATC radar. The service should include all provisions provided under an ICAO FIS but also include Traffic Information (TI) and traffic deconfliction. Terrain and Ground Obstacle Clearance would be the joint responsibility of the pilot & controller.

3. Traffic Information and Collision Avoidance Criteria. The controller should pass traffic Information (TI) or advisory information for collision avoidance and deconfliction from other traffic to the pilot based on the following criteria:

- a. TI. Conditions such as aircraft type and speed and closure rates will dictate what constitutes relevant TI and will be the perception of the controller. Military aircrew consider that TI from ATC should be passed when conflicting traffic is liable to approach within and by (at the latest) 3nm/3000ft (i.e. traffic on a conflicting flight path that would infringe this perceived 'bubble').
- b. Planned Deconfliction Distance. A controller will aim to provide the aircraft captain with advisory information, which will enable the captain to manoeuvre his aircraft to achieve a miss distance of at least 3nm and/or 3000ft between his aircraft and other airspace users.

DAP/51/08/04

30 September 2006

ENDORSED AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE (ATSOCAS) STATEMENT OF USER REQUIREMENT

1. The three user categories (Commercial Air Transport (CAT), Military (Mil) and General Aviation (GA)) require a range of ATSOCAS that will allow their pilots and aircrew to operate **SAFELY**. The ATSOCAS must be suitable for use by pilots operating within Class F & G airspace below FL195, and Temporary Reserved Areas (TRAs)¹ above FL195 whilst allowing them to achieve the flight/mission/sortie objective and adhere to the rules of the air (recognising that this may also involve operations with no Air Traffic service at all). Safety and Deconfliction from other airspace users is of paramount importance and overrides all other factors affecting the selection of the type of ATSOCAS required. However, invariably a combination of factors will dictate the type of ATSOCAS required by a pilot; Safety and Deconfliction will be of primary importance along with the remaining factors detailed below:
 - a. **Safety.** *Safety is of paramount importance and therefore the factor considered first and foremost.*
 - b. **Deconfliction from Other Traffic.** *A fundamental safety consideration for all pilots is to deconflict themselves from other airspace users. As all ATC instructions outside of CAS are advisory in nature, they will only assist the captain of an aircraft to fulfil his/her responsibility to achieve deconfliction from other airspace users.*
 - c. **Application of Universal Rules & Procedures.** All aircrew and controllers, civilian and military, must operate to the same rules and procedures, to ensure that there is no potential for misunderstanding and confusion.
 - d. **Service Availability/ Communication Navigation Surveillance (CNS) Coverage.** ATSOCAS should be available in areas where suitable CNS coverage is provided. It is, however, recognised not only that there are areas where CNS does not extend but also areas where ATSOCAS is provided by Lower Airspace Radar Service (LARS) providers whose availability is limited to specific aerodrome operating hours.
 - e. **Full use of Technology.** ANSPs should facilitate the best use of appropriate Air Traffic Service (ATS) & Air Traffic Management (ATM) tools and technology to provide the optimum service.
 - f. **Weather.**
 - (i) ATSOCAS should be available to aircraft operating in both Visual Meteorological Conditions (VMC) and Instrument Meteorological Conditions (IMC).
 - (ii) Provision of real-time weather information along an aircraft's route, which may result in weather avoidance and possible route deviation, may be required. Weather information at planned destination and/or diversion aerodrome should be available from ATSOCAS providers on request.

¹ As a result of the introduction of Class C airspace above FL 195 (planned March 2007), Temporary Reserved Areas (TRAs) will be introduced (EUROCONTROL definition). The existing terminology *Temporary Restricted Areas* (TRA) will be replaced with a new definition to reflect the restrictions of flying that are put in place under Article 96 of the ANO.

- g. **Choice of Service.** The type of ATSOCAS required should be the choice of the aircraft captain.
- h. **Flight Profile.** The type of service requested will depend on the complexity of the flight profile and sortie/flight type (e.g. instructional & exam flights, aerobatics or manoeuvring, formations) and whether operating under Instrument Flight Rules (IFR) or Visual Flight Rules (VFR).
- i. **Terrain & Ground Obstacle Clearance.** Terrain & Ground Obstacle Clearance is the responsibility of the pilot; however, it is recognised that during certain circumstances, such as flight within radar & instrument approach patterns or when receiving Service Type 4 (Advisory Deconfliction Service) at para 2d below, ATC instructions are to be safe in terms of Terrain & Ground Obstacle Clearance.
- j. **Pre-Flight Planning.** During pre-flight planning, pilots consider the service provision available within the airspace in which they plan to operate. Examples of such considerations are Danger Area Crossing Service (DACs), Danger Area Activity Information Service (DAAIS) or navigational assistance to help circumnavigate higher classification airspace such as CTRs. ANSPs that offer ATSOCAS may be requested to provide warnings of hazards or anomalies, including other airspace user activity including real time and accurate updates on relevant airspace activities and restrictions (e.g. Military Exercises).
- k. **Traffic Density².** An aircraft operating within an area of known or notified intense aerial activity may require a greater reliance on ATSOCAS; therefore a pilot might require an increased level of service from the ANSP.
- l. **Cockpit Workload³.** A high cockpit workload may require a greater reliance on ATSOCAS; therefore a pilot might require an increased level of service from the ANSP.
- m. **Aircraft Type, Performance and Serviceability.** The type of service requested might be influenced by handling characteristics, such as aircraft weight, manoeuvrability, speed and physical design, technical or mechanical failures, or other factors, which may affect aircrew's ability to effectively apply 'see and avoid' principles.
- n. **Expeditious Routings.** When requested by a pilot, ANSPs should provide as expeditious a track as possible, where circumstances allow, from departure to destination,
- o. **CAT Operations within Class 'G'.** CAT operators would prefer to conduct their operations entirely within CAS. However, they recognise that this is not always possible, therefore when operating outside CAS they have stated their intent to obtain the highest level of service available, an advisory deconfliction service.
2. **Type of ATSOCAS Required.** The title of the service should clearly reflect the nature of the type of service provided. CAT primarily requires a single category of ATSOCAS (Deconfliction Service); however, CAT also has a requirement for a procedural service where surveillance coverage is marginal, limited or not available. In addition to the 'Deconfliction' and 'Procedural' Services, the Military and GA require additional services including the ability to operate in Class G and F airspace without receiving an ATS. As ATSOCAS is provided outside of CAS, all ATC instructions passed are advisory in nature and can only assist the captain of an aircraft to achieve deconfliction from other airspace

² Requirement from the User recognising the additional workload this may incur.

³ Requirement from the User because additional cockpit workload may degrade lookout.

users. The different types of ATSOCAS required by the three user categories are as follows:

- a. **Service Type 1 (No Service).** It is important to retain the existing flexibility that allows pilots to operate in Class F & G airspace without being mandated to receive an ATS. It is understood that CAT has no requirement for this non-service.
- b. **Service Type 2 (Flight Information Service (FIS)).** An unambiguous and commonly understood service, applied in accordance with the ICAO definition and meaning of FIS should be incorporated, without difference, within the UK.
- c. **Service Type 3 (Traffic Information Service):** A service provided, with the use of radar, which provides the pilot with increased situational awareness above FIS but which enables the pilot to retain autonomy. The service should include all provisions of an ICAO FIS, with the addition of Traffic Information (TI).
- d. **Service Type 4 (Advisory Deconfliction Service):** An Advisory Deconfliction Service, provided with the use of radar. The service should include all provisions provided under an ICAO FIS, but also collision avoidance assistance. Terrain & Ground Obstacle Clearance remain the responsibility of the pilot, however, it is a requirement that any ATC instructions provided under this service would be safe in terms of Terrain & Ground Obstacle Clearance.
- e. **Service Type 5 (Procedural Service).** A deconfliction service provided without the use of radar and between participating airspace users only. Deconfliction from non-participating airspace users cannot be provided.

3. **Traffic Information (TI) and Collision Avoidance Criteria.** The controller should pass traffic Information (TI) or advisory information for collision avoidance and deconfliction from other traffic to the pilot based on the following criteria:

- a. **TI.** Based upon being in receipt of Service Type 3 (Traffic Information Service). TI from ATC should be passed when conflicting traffic is liable to approach within 3 nm or 3000 ft and by (at the latest) 5 nm (i.e. traffic on a conflicting flight path that would infringe this perceived 'bubble'). Conditions such as aircraft type, speed and closure rates will dictate what constitutes relevant TI and will be determined on a case-by-case basis using controllers' professional judgement and expertise.
- b. **Planned Deconfliction Distance.** When the aircraft is in receipt of Service Type 4 (Advisory Deconfliction Service), a controller will aim to provide the aircraft captain with advisory information, which will enable the captain to manoeuvre his aircraft to achieve a miss distance⁴ of either:
 - (i) 5 nm horizontally between his aircraft and other airspace users
or
 - (ii) 3000 ft vertically between his aircraft and other airspace users
or
 - (iii) 3nm horizontally and 1000ft vertically between his aircraft and other airspace users

unless ATC have effected coordination between the aircraft in question when lower criteria⁵ could be applied. Conditions such as aircraft type, speed and closure rates

⁴ During the ATSOCAS User-Group Workshops, CAT requested a minimum miss distance of 5 nm horizontal or 3000ft vertical, although they accepted these figures could be reduced if a combination of both vertical and horizontal separation were applied; GA and MOD were content with 3 nm horizontal or 3000ft vertical miss distance.

⁵ Reduced criteria would be 3nm horizontal or 1000ft vertical, which could be reduced to 500ft vertical with the agreement of the pilot.

will dictate what constitutes relevant TI and how soon it should be passed to achieve the criteria specified above. This will be determined on a case-by-case basis using controllers' professional judgement and expertise.



Directorate of Airspace Policy

8AP/051/08/04

06 October 2006

AIR TRAFFIC SERVICES OUTSIDE CONTROLLED AIRSPACE REVIEW – SERVICE PROVIDERS’ CONSULTATION ON STATEMENT OF USER REQUIREMENT

1 Introduction

- 1.1 This paper and associated documents are being sent to you as part of the ongoing review undertaken by the Civil Aviation Authority (CAA) into the provision of Air Traffic Services Outside Controlled Airspace (ATSOCAS). This unique set of Air Traffic Services (ATS) has developed over time and is complementary to the large volumes of Class G airspace in the UK.

2. Background

- 2.1 ATSOCAS has continually evolved and there is now an indication that it has become increasingly complicated in its application and interpretation and may have diverged from its initial aims. Furthermore, in some cases, ATSOCAS providers are offering subtly different interpretations of types of service leading to potential confusion over where responsibilities fall between ATS providers and airspace users. The CAA launched the review of ATSOCAS with the aim of providing airspace users with an agreed and unambiguous ATS when operating outside controlled airspace, whether under VFR or IFR. Directorate of Airspace Policy (DAP), Off-Route Airspace (ORA), is conducting the Review under the auspices of the CAA Outside Controlled Airspace Steering Group (COCASG), the CAA-wide Group responsible for the oversight and coordination of all Class G airspace initiatives. The CAA Airspace Policy Committee (APC) endorsed the ATSOCAS Programme and its associated timetable on 1 February 2006.

3. ATSOCAS Review Progress to Date

- 3.1 Phase 1 of the Review analysed all military and civil high-level documents pertaining to ATSOCAS and discovered that service provision had evolved over time, such that there were now many differences in application between various providers. The Phase 1 Report quantified the disparities between policy, documentation and service provision and emphasised that any changes to ATSOCAS should be based on the actual requirements of airspace users. Nevertheless, the Report recognised the need to accommodate any limitations in ATS provision when developing the requirement and assessed that the active involvement of service providers in the development of the new scheme was crucial. To prevent any future divergence between policy documents, the Phase 1 Report recommended that ATSOCAS should be governed by a single policy document that would provide the regulations, conditions, phraseology, pilot and controller responsibilities, and guidance on service provision techniques. Both the Safety Regulation Group (SRG) of the CAA and the Ministry of Defence (MOD), as regulators of ATS provision, have agreed that the key aspiration is uniform regulation to the same standards.
- 3.2 Phase 2 of the Review is being conducted in two parts: firstly, consultation with the aviation community to establish the Statement of User Requirement (SUR) and, secondly, consultation

with the service providers to determine the procedures and mechanisms required to meet that established requirement.

- 3.3 Consultation with the aviation community was undertaken in two parts; firstly, a consultation letter was given the widest possible distribution throughout the UK aviation community encouraging all airspace users to voice their opinion. The consultation letter was supported by an extensive publicity campaign: it was publicised at National Air Traffic Management Advisory Committee (NATMAC) meetings, notified to the wider audience through a number of press releases and advertisements in aviation magazines, published on the CAA website, and individual consultation papers and posters were distributed to over 185 organisations, flying clubs, airlines and MOD flying establishments. Moreover, further publicity was actively pursued at the 'Popular Flying Association (PFA) Fly In' at Kemble in July 2005, through presentations at General Aviation (GA) Safety Evenings and via the MOD Flight Safety system. The responses received were proportionate to the size of each user group and included responses from organisational bodies, such as British Airline Pilots Association (BALPA), Aircraft Owners and Pilots Association (AOPA), PFA, some airlines, and individual pilots. In December 2005, the CAA gave service providers initial feedback on consultation responses, which included a summary of the main issues raised.
- 3.4 In March 2006, part two of the user consultation process began with a series of User Workshops involving representatives from the three user categories - Military, GA and Commercial Air Transport (CAT). The workshops refined the responses from the wider consultation process and produced individual User Requirements for each category. All Air Navigation Service Providers (ANSP) and associated organisations (National Air Traffic Services (NATS), MOD, Aerodrome Operators Association (AOA), Guild of Air traffic Control Officers (GATCO) and Prospect) were invited to attend the Workshops and observe proceedings. The observers provided a valuable and professional contribution towards discussions and helped to ensure the quality of the output. The three individual user requirements (Military, GA and CAT) were subsequently amalgamated by DAP, in close liaison with workshop representatives, to create a single combined User Requirement, resulting in the production of the endorsed SUR in September 2006, which can be found at Annex A.

4. ANSP CONSULTATION PROCESS

- 4.1 Throughout the Review, an open and constructive two-way dialogue has been established between ANSPs and the CAA, which has helped maintain the Review's momentum and good work. Now, in accordance with the ATSOCAS Review Timetable, we seek your views and suggestions regarding any concepts, best practices or other proposals that you may have in relationship to meeting the SUR. It is important that any changes to ATSOCAS are based on the actual requirements of the airspace users and are not driven primarily by service providers.
- 4.2 The Review's work-to-date and this consultation paper are published on the CAA website at: <http://www.caa.co.uk/default.aspx?categoryid=7&pagetype=68&groupid=844>. The consultation process will be coordinated by Wing Commander Lou Braham, Manager ORA (0207 453 6540) and Squadron Leader Al Dunbar, ORA2 (0207 453 6542). If you require clarification on the content, or rationale behind the production, of the SUR please do not hesitate to contact us, preferably sooner rather than later to maintain the Review's momentum. The closing date for responses to this consultation paper is 1 December 2006.

- 4.3 You will fully understand the importance and significance of the ATSOCAS Review and recognise that your input is fundamental to ensuring that we achieve a conclusion that best meets the requirements of the UK Aviation Community as a whole. We very much appreciate the close working relationship that we already enjoy and believe it will help in ensuring the Review's work is taken forward in a collaborative and mutually understanding manner.

<Original Signed>

Lou Braham
Wing Commander
DAP (Manager ORA)

Annex:

A. Statement of User Requirement.

Distribution:

External:

Action:

NATS - Head Operational Policy, Operations Standards & Development
HQSTC ATC – Group Captain ATC
Fleet - SO1 Ops Support
AOA – Director of Policy Development
GATCO - President
Prospect – Garry Graham

Information:

MOD - DAS Ops A1

Internal:

Information:

ADAP2
SRG – Head ATSD

8AP/51/08/01/02

23 March 2007

ATSOCAS REVIEW – ANSP CONSULTATION RESPONSES TO SUR

<u>SUR Topic & Para</u>	<u>ANSP Response/Comments</u>	<u>CAA Comments</u>
General	<p>NATS: We offer these comments to be constructive and to move the debate forward but we need to be very clear about why we are trying to deliver any new services. When discussing future services we have to be clear about why ATSOCAS is provided: To provide information and advice to supplement the user’s prime responsibility which is see and avoid. We believe that these statements of user requirements will require further debate between stakeholders in order that they can be included as part of a more cohesive and clearly understood ATSOCAS policy.</p>	<p>The CAA agree with NATS’ view and look forward to taking the work forward with all stakeholders under the ASI and ATSOCAS Review.</p>
Application of Universal Rules & Procedures (Para 1.c)	<p>NATS: The rules and procedures for ATSOCAS requirements for both user and provider are only able to be applied within UK airspace and as such the scope and title should reflect this. (The word Universal is incorrect)</p> <p>As there is a need for commonality within ATSOCAS this should also be reflected accordingly. For example, standard phraseology and terminology must also be included within the definition. This is key to consistency in delivery of services.</p> <p>GATCO: GATCO fully supports the need for all parties to operate in full accordance with the same sets of rules and procedures. However, Danger Areas, AIAAs or notified military exercise areas should not be included in this context, due to the unknown and unpredictable nature of military flight and operations within them. The Guild recommends that all crews (including the military) be required to follow the ICAO rule of a maximum Indicated Air Speed of 250kt in class G airspace unless segregated or notified (i.e. AIAA).</p> <p>AOA: A major challenge is that pilots and regulators do not have first hand knowledge of the way in which the system functions. This can exacerbate the unwieldy nature of the arrangements, rendering controllers, as their workloads increase, increasingly loath to risk providing a flawed service. While the provision of ATS within CAS is relatively straightforward, provision outside is not. It is exceedingly complex and requires a huge increase in</p>	<p>The scope of this review is applicable to UK airspace only.</p> <p>The Phase 1 report identified commonality as crucial to the success of the overall review and the CAA wholeheartedly agrees with this statement.</p> <p>This statement falls outside the scope of the ATSOCAS Review.</p> <p>The ATM Standards WG will consider this statement during Phase 3 of the Review.</p>

	<p>controller monitoring. It is not possible to provide a similar level of service for a similar workload, and, because of the increased workload, it is often not possible to disengage from a service that has been offered. There is consequently an unacceptable risk that pilots may believe they are in receipt of a service that is not being provided.</p> <p>RAF Waddington Staneveal: On a general level, it seems that the fundamental problem at the heart of the review (“...different interpretations of types of service”) is a standardisation issue that will not necessarily be comprehensively solved by re-evaluating and renaming services. Currently, Radar Advisory Service has a common definition between the civil and military communities, yet is applied in a considerably different manner. The same problems of different interpretations may surely arise whatever the services are called, and could potentially be mitigated by better communication and links at STANEVAL level between the different service providers in the ASACS, ISTAR, Military and Civil service provider environments.</p>	<p>It is recognised that a robust and effective education and communication campaign is crucial to the reviews success, and is being comprehensively examined by the Airspace & Safety Initiative in conjunction with the ATSOCAS Review. Additionally, centralised ownership of the policy applying to equally to both civil and military parties will assist in ensuring commonality. However, it is recognised that standardisation of application of services will need to be robustly and effectively monitored to ensure that parity is maintained.</p>
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SUR Topic & Para	ANSP Response/Comments	CAA Comments
<p>Service Availability (Para 1.d)</p>	<p>NATS: These are 2 separate issues, both of which require further clarification. With regard to availability of service, we must establish who provides what service and where. There are issues of comms and surveillance availability within this but there are also other drivers for determining who provides services.</p> <p>Communications in terms of frequency coverage and frequency availability for any extra services are key to determining the capability to provide a service. Effective frequency management of both civil and military frequencies is essential if there will be a need to free up any new frequencies for dedicated ATSOCAS tasks.</p> <p>Surveillance availability is also key to providing types of future service and it is unlikely that new surveillance capability will be provided for this task as it will incur significant extra cost. Issues of CNS capability, particularly PSR, SSR, and comms will form part of the determination of available service.</p> <p>GATCO: This paragraph should be expanded to include the proviso that ATSOCAS may not be available due to ANSP resource issues or controller workload.</p> <p>AOA: recognises that there are areas not covered and times not covered. It does not recognise the ability to provide cover, which may vary. It recognises limited hours of LARS providers but not any of the other</p>	<p>These wider issues are being considered by the ASI work where it will be debated in full by the relevant parties.</p> <p>This will be considered during the development of procedures.</p> <p>Availability of cover will inevitably form part of the ASI debate. In accordance with LARS policy, it is recognised that most units provide ATSOCAS on a goodwill basis and their core-business</p>

	<p>providers. Additionally, the growth of traffic in recent years, led in many cases by low cost carriers, has increased controller workload at a time when revenues are under continued pressure due to reduced passenger yield. The net result is less controller time to provide a free non-core service and little prospect of additional staff for non-core activity. The consequence of these pressures is that units providing services outside controlled airspace that are not dedicated LARS units, are gradually reducing the level of service they are able to provide</p>	<p>takes priority.</p>
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<p>Full use of Technology (Para 1.e)</p>	<p>NATS: There should be a clear understanding of who is asking for this requirement as we are aware that some of the users feel there is already excessive use of technology(e.g. use of TCAS in class G). Notwithstanding this, in order to support this requirement, there needs to be commitment from all stakeholders, not just ANSPs to implement appropriate technology both on the ground and in the air. It is not clear to me that GA wish to see this avenue explored, rather this is a CAT requirement. There also needs to be an understanding and appreciation of the financial impacts to all stakeholders with regard to any proposed technological improvements and a plan to fund this. Opportunities to use technologies such as ADSB or TIS-B should be encouraged as this will reduce reliance on ground based services.</p> <p>RAF - HQ STC ATC: Whilst some of the aspirations within the SUR are commendable and understandable from the customer point of view, they occasionally represent equipment capabilities beyond where we stand today or in the near future, i.e. provision of real-time weather and airspace usage information.</p>	<p>Whilst the CAT user group clearly would benefit the most from the exploration of emerging technology, GA users did express the view that transponder use could be improved to provide additional information – in fact they offered the proposal for the use of a squawk to indicate that a pilot was listening out on a certain frequency without having to check-in on the RT.</p> <p>This is noted and will inform the further development of the Review.</p>
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SUR Topic & Para	ANSP Response/Comments	CAA Comments
<p>Weather (Para 1.f)</p>	<p>NATS: Accepting that ATSOCAS could be available to aircraft, irrespective of whether the aircraft is operating in VMC or IMC, most of this requirement is already available.</p> <p>It is the responsibility of the pilot of an aircraft to pre flight plan accordingly, which includes weather forecasts for all phases of their flight. The controller is not aware of the route of an aircraft flying outside CAS and therefore cannot expect to provide weather information along the 'route'. Requests can be made for terminal weather from London or Scottish FIS. Provision of real time weather is not practical as weather not available on processed radar displays. The Flight Information Service position in the UK does not currently use radar-derived information. Any extra provision of dedicated weather information would require significant investment with funding having to be made available. It is not entirely clear what the scope of this</p>	<p>This is noted and will inform the further development of the Review.</p>

	<p>requirement is.</p> <p>GATCO: Many ATS units have neither time nor staff to obtain weather at destinations or alternates, and have no equipment suitable for providing information for weather avoidance. The GATCO review group doubts if many ATC units have this equipment as the majority of airfield radars are designed not to show weather.</p> <p>AOA: provision of real time weather information along an aircraft's route is not practical (although units will always provide what information they have available). The availability of weather information at planned destination and/or diversion aerodrome being available on request is a major additional demand.</p> <p>RAF - HQ STC ATC: Whilst some of the aspirations within the SUR are commendable and understandable from the customer point of view, they occasionally represent equipment capabilities beyond where we stand today or in the near future, i.e. provision of real-time weather and airspace usage information.</p>	<p>The ATSOCAS Procedures WG will consider this issue during Phase 3 of the Review.</p> <p>The ATSOCAS Procedures WG will consider this issue during Phase 3 of the Review. .</p> <p>The ATSOCAS Procedures will consider this issue during Phase 3 of the Review.</p>
<p>Choice of Service (Para 1.g)</p>	<p>NATS: There are a number of factors that would influence the level of service requested by the pilot or the service offered by the controller. In addition there are a number of factors and instances where a pilot may request the level of service to be upgraded or down graded or where a controller may indicate/offer a higher or lower level of service. We do agree that ultimately the service requested should be the choice of the pilot however, clear rules for upgrading and downgrading service must be included within any new service definition</p> <p>AOA: The type of service required should be the choice of the aircraft captain. This is possibly so. However, the type of service provided must be determined by the controller concerned and must be subject to capacity and workload.</p>	<p>The ATSOCAS Procedures WG are currently considering this issue under Phase 3 of the Review.</p> <p>The ATSOCAS Procedures WG are currently considering this issue under Phase 3 of the Review. However, it is envisaged that the type of service provided will be through a period of negotiation between the pilot and controller.</p>
<p>Flight Profiles (Para 1.h)</p>	<p>GATCO: The wording of this paragraph should be softened and enhanced to include the fact that all the functions mentioned are also carried out by civilian aircrew but, excepting point to point IFR flight and some civil instrument training and exam flights, exclusively under VMC conditions. The words "flight profile" are extremely relevant as it is the vastly superior performance of military aircraft, under VFR or IFR, which has caused the most problems in the FIR in the past, i.e. civil aircraft cannot fly out of the way fast enough. GATCO therefore suggests that military aircraft should in general operate in accordance with the ICAO 250kt IAS rule. This will give</p>	<p>The SUR is a complete and final document as agreed by the three User categories, therefore, it is not appropriate or possible to amend.</p> <p>The ICAO 250kt IAS rule is part of the Rules of the Air and will not</p>

	<p>more time for avoiding action to be given where required with a better chance that the avoiding action will be successful. Where this is not possible aircraft operating at high speed or engaged in high energy manoeuvres outside danger or exercise areas whilst under IMC should request a radar service from the nearest appropriate ATSU.</p> <p>AOA: This is also relevant in relation to 1l and 1m, Cockpit Workload. The implication here is that the more complex the task the greater level of service required. This will conflict with the ability of the controller to provide a higher level of service to an aircraft whose flight profile may be more unpredictable.</p>	<p>be considered by the ATSOCAS Review; however, it will be looked at during the wider ASI.</p> <p>The ATC Procedures WG will consider this issue during Phase 3 of the Review.</p>
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<u>SUR Topic & Para</u>	<u>ANSP Response/Comments</u>	<u>CAA Comments</u>
<p>Terrain & Obstacle Clearance (Para 1.i)</p>	<p>NATS: NATS agree with the recognition that ATC advice (not instructions) needs to be safe when a service is being provided. However, it should be understood that although this applies to the current definition of a RAS (Advisory De confliction) it may not apply with any new definition of a service. Terrain clearance responsibilities must be harmonised across civil and military pilots and controllers, with responsibility outside CAS remaining with the pilot.</p> <p>GATCO: The existing statement is too 'woolly'. A definite demarcation of pilot/controller responsibility for terrain separation is required and this may be achieved by being service dependant.</p> <p>AOA: in uncontrolled airspace terrain clearance must remain the responsibility of the pilot. ATC advice must be safe.</p> <p>RAF Waddington Staneveal: The sortie administration required for ATS provision in military control events could be reduced if the responsibility for terrain separation was specifically allocated to the airspace users for all ATSOCAS Service Types.</p>	<p>The ATC Procedures WG will consider this issue during Phase 3 of the Review.</p> <p>Agreed.</p> <p>Agreed. The ATC Procedures WG will consider this issue during Phase 3 of the Review.</p> <p>The ATC Procedures WG will consider this issue during Phase 3 of the Review.</p> <p>The ATC Procedures WG will consider this issue during Phase 3 of the Review.</p>
<p>Pre-Flight Planning (Para 1.j)</p>	<p>NATS: We agree that pilots should pre flight plan sufficiently in order to avoid any issues identified in the 2nd part of the paragraph of this requirement. Controllers cannot be expected to know what has been included in the user's pre-flight planning. However, subject to workload, requests for information on specific activity may be accommodated. ATSOCAS providers should not be obliged to provide navigational advice to avoid CAS or other airspace structures. This is the responsibility of the pilot however when radar is available it is reasonable to expect a controller to</p>	<p>The CAA agrees with this statement, in that when the controller has the time and information available he/she should help the pilot where possible.</p>

	<p>warn of proximity if it appears that the aircraft will infringe CAS or DAs etc.</p> <p>GATCO: The title should be changed to "PRE FLIGHT PLANNING" which will better encompass all users. It should also be noted that most civilian ATCOs would not be willing to give any service to an aircraft operating within an active danger area. Therefore the military should exclude this type of airspace from any joint agreement regarding ATSOCAS and should have their own regulations within such areas.</p> <p>AOA: This is entirely the responsibility of the pilot. ATC's responsibility remains to provide advice and information useful for the safe and efficient conduct of flights – FIS.</p>	<p>As currently, controllers would not be expected to provide a ATSOCAS within a DA unless they are the controlling authority for that DA.</p> <p>We would envisage this information being passed by a controller if they have the information and time to do so, thus meeting the needs of 'providing advice and information useful for the safe and efficient conduct of flights'.</p>
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<p>Traffic Density (Para 1.k)</p>	<p>NATS: We agree with this statement however it is also true that these are the occasions when there may be limited capacity available to provide the service. If an aircraft is planning to route through known areas of high activity then pre flight planning should take this into account and pilots should be cognisant of the available services.</p> <p>GATCO: The content of paragraphs K, l and n should all be subject to the resource/workload caveat. However, GATCO cannot support the concept of providing a <u>higher</u> level of service in areas of intense activity. Feedback from controllers practiced in providing ATSOCAS suggests that there is no way you can do this. The tendency in fact is to either limit service or provide a <u>lower</u> level of service.</p> <p>As an example, if the pilot is flying through an area close to a busy gliding site under RIS, the only higher level of service would be RAS, but you couldn't provide that if the gliders are less than 1nm apart and close to him as you couldn't provide 5nm horizontal separation!</p> <p>GATCO does not feel that that any civil ATCO operating ATSOCAS will agree to an improvement in type of service in an area of high density traffic. Neither would they do so in areas of radar clutter, nor "chaff" dropped by the military, nor in areas of weather clutter. The Guild suggests that due to the higher risk of ATCO overload at commercially run civil ATC units outside CAS and due to the risk of liability claims in this day and age that this paragraph should be deleted.</p> <p>However, a statement allowing an ATCO to downgrade a service whenever it becomes necessary due to the previously mentioned reasons should be included in the document.</p> <p>AOA: Increased level of service in high traffic density leading to additional demand. This is not necessarily deliverable – the higher the density, the</p>	<p>Pre flight planning will not always identify areas of high-traffic density. However, it is accepted that the ATC capacity will have an impact. The ATM Standards WG will consider this issue during Phase 3 of the Review.</p>
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	harder it is to provide a service.	
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SUR Topic & Para	ANSP Response/Comments	
<p>Cockpit Workload (Para 1.l)</p>	<p>NATS: It is essential that all pilots recognise that their priority when operating outside CAS is pilot lookout and that ATSOCAS must not be relied on to allow attention to be focused on other tasks</p> <p>GATCO: A high cockpit workload may require a greater reliance on ATSOCAS and a pilot might therefore require an increased level of service from the ANSP. Whilst ATC can endeavour to provide this, the level of service provided must be subject to the resource / workload caveat.</p> <p>AOA: High workload may require additional service. Additional demand on the provider that is not necessarily deliverable – an aircraft behaving unpredictably is harder to provide a service to. If workload or performance is such that it cannot be operated safely, it should not be operated in uncontrolled airspace.</p>	<p>Whilst it is acknowledged that ‘See & Avoid’ is the primary means of maintaining separation outside CAS, there may be occasions, such as aircraft in emergency, when a pilot may place a greater reliance on assistance from ANSPs.</p> <p>It is understood that ATC capacity is a factor, which will need to be considered.</p> <p>It is acknowledged that whilst operating outside controlled airspace aircraft should comply with the Rules of the Air – if this is not possible then the activity should be conducted within segregated airspace.</p>
<p>Aircraft Type, Performance and Serviceability (Para 1.m)</p>	<p>NATS: Except in emergency situations, ATSOCAS must not be relied upon in order to operate aircraft in class ‘G’ airspace which have design or performance characteristics that degrades pilot lookout and the obligations on the pilot for safe separation. If aircraft cannot operate within the Rules of the Air then they must operate within segregated airspace.</p> <p>GATCO: This paragraph is again leaning heavily towards military operations. If any deviation from normal operations were to become apparent in civil operations then surely ATC would be advised and the pilot would then receive the best ATC service available, to the exclusion of most others, be he/she civilian or military. Whereas it may be relevant to mention this, surely it is not relevant under normal circumstances? If not, perhaps the statement regarding the aircraft’s serviceability should be deleted from this document.</p> <p>AOA: the same issues described for 1h and I apply.</p>	<p>Acknowledged.</p> <p>Agreed that we would expect emergency or unusual situations to be handled in the best way possible. As it formed part of the User requirement, it cannot be deleted from the SUR but it can be debated further during the next phase of work.</p>
<p>Expeditious Routes(Para 1.n)</p>	<p>NATS: ANSPs do not recognise ‘routes’ outside CAS and should only provide flight safety and collision avoidance Information and advice. Routings are the responsibility of the pilot and these routes should plan on avoiding CAS or other structures. Where a service is requested then the routing must also comply with the CAA policy on routings outside CAS.</p>	<p>Agreed.</p>

	<p>GATCO: The content of paragraphs K, l and n should all be subject to the resource/workload caveat.</p>	<p>ATC workload and capacity has been noted above.</p>
<p>CAT Operations within Class ‘G’ (Para 1.o)</p>	<p>NATS: All airspace users are entitled to request the level of service most suitable to their operation and flight circumstances. Priority and level of service provided is at the discretion of the ANSP and is influenced by many factors which must be made clear in the rules of new services.</p> <p>GATCO: The Guild doesn’t believe this statement to be universally true and therefore it should not be included. Some operators choose to fly their aircraft from a to b as quickly as possible. Sometimes ATC has the opportunity to allow traffic to do this and some airlines make their profits doing it - but, ATC should have the right to reroute traffic away from known hazard areas on the grounds of increased safety, or to give direct routeings in the FIR when safe to do so. Surely "safety" and "efficiency" are part of our job?</p>	<p>It is accepted that a number of issues and factors will affect the provision of ATSOCAS and these will be deliberated during the drafting of procedures.</p> <p>The SUR is a complete and final document as agreed by the three User categories, therefore, it is not appropriate or possible to amend. Work is underway under ASI to look at the routings available outside controlled airspace. The input from ATC regarding routeings and the responsibility regarding hazards will form part of the Phase 3 debate.</p>
<p>Service Names (Para 2. a – e)</p>	<p>RAF - HQ STC ATC: Overall, we would agree that to make any future change stand out we should look to re-name the services; however, the names used will probably be the subject of significant future debate.</p>	<p>The topic of ‘name-change’ is being considered by the ATC Procedures WG.</p>
<p><u>SUR Topic & Para</u></p>	<p><u>ANSP Response/Comments</u></p>	<p><u>CAA Comments</u></p>
<p>Type of ATSOCAS Required (Para2)</p>	<p>NATS: The types of service need to be defined according to an agreed set of criteria and we need to be able to provide a service which has a high enough level of service to replace Advisory Routes (ADRs). Furthermore, one or more of these services should be in place to facilitate Helicopter Main Route (HMR) operations in the North Sea.</p> <p>It does seem reasonable that these are a good starting point in defining new services although we would like to see them reordered in terms of highest level to lowest level—e.g a procedural service comes between a FIS and an enhanced information service.</p> <p>We would like to see the ICAO reference in FIS explored further as to my recollection this was a CAA input to the debate as none of the users actually understood it when tested in the margins. We understand the CAA desire to remove differences however we must also explore the provision of something which is appropriate to the UK in terms of safety. Examples of a difference to this may be the use of a squawk currently on trial in London FIS and actively used by many others. It may be that this does fit however when we define the rules for the UK we must include anything like this in the definition and education.</p>	<p>The ATC Procedures WG, which reports to the ATM Standards WG has been tasked with producing a Strawman, which will be distributed to ANSPs and will cover the Types of ATSOCAS. This Strawman is the initial part of Phase 3 of the Review and will be followed with further more detailed consultation with both ANSPs and Users. The topic of using specific squawks will also be covered by the ATC Procedures WG and will be covered within the Strawman.</p> <p>Acknowledged. This issue is being given considerable deliberation during the drafting of the Strawman and will require further exploration.</p>

	<p>GATCO: Pilots certainly should have the right to request a particular service, but not require it. Controllers have to have the discretion, under their duty of care to <u>all</u> aircraft receiving a service from them, to decline to provide an additional aircraft a radar service if their professional judgment is that it would be unwise to do so. Ultimately the only ATSOCCAS that can't be discretionary is the Alerting service.</p> <p>GATCO encourages the simplifying of the present situation as traffic increases in the future, along with ATCO workload. The proposed new phraseology requesting a service is too long and will take up even more valuable R/T time and should therefore be reconsidered.</p> <p>GATCO believes that the validity of Class F airspace outside of a TMA is questionable. Should we not now give it some dimensions if it is still to be used? Perhaps Class F should be abandoned altogether, or upgraded where necessary? Evidence exists that some advisory routes have been removed and a considerable increase in traffic has subsequently occurred with no apparently worse affect than when the advisory route was there. It is also highlighted that the military do not recognise ADRs anyway.</p>	<p>Acknowledged.</p> <p>Associated phraseology will be considered during the drafting of the procedures.</p> <p>The CAA has written to NATS regarding the applicability of Class F airspace and it awaiting a formal response, which is expected to deliver timelines for upgrading or removing existing Class F airspace.</p>
<p>Service Type 1 (No Service (Para 2.a)</p>	<p>GATCO: The Guild struggles to identify the point of this designation. If a pilot does not want an ATC service then he/she will simply not call on the R/T. Anyone who does call up surely has to be given a Flight Information Service of some sort, to enable an ATCO to identify the aircraft and monitor it for the purposes of search and rescue (not to mention radar separation) should that become necessary?</p> <p>However, it is felt that Alerting service fits in this 'no service' designation. All ATS units are required to provide alerting service, no 'contract' is required. A 'first call' on the frequency is a legitimate demand for alerting service. GATCO suggests that this is already covered by an ATCOs licence requirements and does not need to be included specifically in this document.</p>	<p>The Users felt that it was necessary to record that, in accordance with the rules associated with Class F and G airspace, it was not necessary to be in receipt of an ATS. There were times that flights may be conducted without even establishing two-way communications with a service provider.</p>
<p>Service Type 2 (Flight Information Service (FIS)) (Para 2.b)</p>	<p>AOA: described as an unambiguous and commonly understood service. In our view, it is unambiguous and commonly misunderstood. ICAO FIS includes the use of radar.</p>	<p>The ATC Procedures WG, which reports to the ATM Standards WG has been tasked with producing a Strawman, which will be distributed to ANSPs and will cover the Types of ATSOCCAS. This Strawman is the initial part of Phase 3 of the Review and will be followed with further more detailed consultation with both ANSPs and Users.</p>

<u>SUR Topic & Para</u>	<u>ANSP Response/Comments</u>	<u>CAA Comments</u>
<p>Service Type 3 (Traffic Information Service) (Para 2.c)</p>	<p>NATS: Class 'G' airspace is a 'see and avoid' environment and traffic can not expect the same level of separation protection afforded in controlled airspace. It is problematic for controllers when using different separation criteria for CAS and Outside CAS and between differing ATSOCAS service types.</p> <p>A controller may pass traffic information or advice in order to assist pilots avoid collisions or de-conflict from other known traffic. There is no current criteria or methodology for determining these target distances. The determination of inside CAS separations and the methodology used to achieve this is not compatible with the outside CAS airspace and so the current rules have been adopted through custom and practice rather than through fully safety managed processes. We should not use this as a basis for determining miss distances. The safest separation in this environment is visual identification and avoidance and services are provided to aid this. Therefore, in NATS' opinion, it is not appropriate to set separation targets for traffic outside controlled airspace. Statements on controllers professional judgement and expertise are not helpful as they do nothing to clarify the obligations on controllers. They also do not help to allocate risk and they are confusing when 'duty of care' considerations are taken into account.</p> <p>This area needs much more thought and appropriate expertise brought into the debate.</p> <p>GATCO: If pilots want Service 3 (Traffic Information service) the answer is the provision and use of TIS-B/ADS-B (possibly through Mode S?), not ATS. However, GATCO realises that GA opinion, ranging from low-performance single piston pilots thru' twin-piston taxi to exec jet pilots, is that RIS is a very valuable service to them.</p> <p>In the event that a controller needs to provide a Traffic Information service, for the purposes of practicality this should in general only give generic information or specific information should the controller consider a risk of collision exists.</p> <p>The review team felt that with a bit more thought and an adjustment to the wording, paragraphs c and d could be combined into one type of service. However, GATCO recognises that a large element of GA wants a RIS-type service whereas CAT require a RAS-type service.</p> <p>It is highlighted that the content of paragraph 2 c is already adequately covered in ICAO Doc 4444 par 8.</p> <p>A statement should be added which says that these services are available strictly subject to the ATCO workload and radar limitations.</p>	<p>Comments are noted and will be explored further as part of the development of procedures. Historic and current practices have led to expectations around what separations will be provided in the outside controlled airspace environment. We do not consider it appropriate to state that user requirements are not valid – expectations will need to be managed correctly and compromises between the views of users and service providers may be necessary to find an acceptable solution for all.</p> <p>See above.</p>

	<p>AOA: FIS/TIS Definition is in conflict with ICAO requirements. There is no such service as a Traffic Information Service. There is only Flight Information Service and radar derived information can be used within FIS. Service Type 2 and 3 should therefore be FIS, with or without radar monitoring.</p>	<p>There was a requirement from the users for more than an ICAO FIS would provide, this would include traffic information regarding any relevant traffic.</p>
<p>Service Type 4 (Advisory Deconfliction Service) (Para 2.d)</p>	<p>GATCO: The review team felt that with a bit more thought and an adjustment to the wording, paragraphs c and d could be combined into one type of service. However, GATCO recognises that a large element of GA wants a RIS-type service whereas CAT require a RAS-type service. It is highlighted that the content of paragraph 2 c is already adequately covered in ICAO Doc 4444 par 8. A statement should be added which says that these services are available strictly subject to the ATCO workload and radar limitations.</p>	<p>The ATC Procedures WG, which reports to the ATM Standards WG, has been tasked with producing a Strawman, which will be distributed to ANSPs and will cover the Types of ATSOCAS. This Strawman is the initial part of Phase 3 of the Review and will be followed with further more detailed consultation with both ANSPs and Users via a workshop. This will form part of the debate during Phase 3, not as part of the SUR.</p>
<p>Service Type 5 (Procedural Service) (Para 2.e)</p>	<p>GATCO: A mention of ATC having to revert to this service in the event of a radar failure and the risks to aircraft due to service change initially might be a useful addition. Service 5 should otherwise be limited to lower advisory routes only and those ATS units with instrument let-downs but no radar.</p>	<p>Noted. This will be a useful input for the Phase 3 work.</p>

<u>SUR Topic & Para</u>	<u>ANSP Response/Comments</u>	
Traffic Information (TI) and Collision Avoidance Criteria (Para 3)	Nil Return	Nil
TI (Para3.a)	<p>GATCO: GATCO suggests the deletion of "...and by (at the latest) 5nm". These words bring muddle to an otherwise clear issue. Which 5nm? Bubble or aircraft position? If two tracks have an extremely slow convergence rate at 5nm apart it may take more than 20nm of travel before they are within 4nm of each other.</p> <p>Also "...and by (at the latest) 5nm" could become a stick used, following incident investigation, to beat a controller in a high-workload situation who passed TI at 4.8nm.</p> <p>The Guild has seen one ANSP remove RAS from controller tasks because the regulator decided that "should endeavour to" could be interpreted as "must provide".</p> <p>GATCO agrees with the statement that, "Conditions such as aircraft type, speed and closure rates will dictate what constitutes relevant TI and will be determined on a case-by-case basis using controllers' professional judgement and expertise." It is the controller's judgement, which should be used to determine when TI is passed, rather than a hard and fast rule.</p> <p>AOA: Provision of Traffic Information if within 5nm and 3000ft (there is a need for clarity on whether this means 3000ft, or, 3000ft or less) will increase workload to a great extent. This is greater than provided within Controlled airspace, and the provision of traffic information about traffic in level flight that is probably no threat.</p>	<p>All comments are noted and will be considered further during the development of procedures. It is essential that the final, agreed procedures are applied consistently, without different interpretations, across Service Providers. Regulators will have a responsibility to ensure that this is achieved.</p> <p>Comments are noted and will be considered as part of the drafting of the revised procedures.</p>

SUR Topic & Para	ANSP Response/Comments	CAA Comments
<p>Planned deconfliction distance (Para 3.b)</p>	<p>NATS: With regard to separation criteria the figures stated in section 3 were not the idea of users. Commercial aviation wished to see time based separations and these were translated by CAA into distances. We strongly feel that trying to prescribe separation criteria and distances is illogical and unnecessary as separation is and should remain the responsibility of the pilot. This is an example of a diluted or unclear statement of requirement.</p> <p>GATCO: The Guild believes that the stated miss distances are unrealistic. A military pilot who is used to flying in close formation or connecting to a tanker in flight might think he has plenty of "miss distance" from another aircraft, whereas a less manoeuvrable civil airliner captain, who only sees other aircraft up close on the ground, might have a different opinion!</p> <p>The UK Quadrantal Rule which is used in the FIR allows for only 500 ft between aircraft crossing tracks, in IMC in the FIR. It would be beneficial to see this quadrantal rule being promoted to ensure 500 feet separation in the FIR. Such a procedure removes lots of potential conflicts straight away. An alternative approach is to consider changing from the present orientation of the airways system to the Semi-Circular Rule outside CAS to provide 1000 ft separation.</p> <p>Some of the Guild's review team are pilots and stated it is quite difficult to judge distance from cloud and other aircraft in the air. GATCO suggests therefore that the radar ATCO has the best equipment to monitor "miss distance" and that the 3nm or 3000ft is sufficient at present. Perhaps the same "keyhole" should be used for avoiding aircraft as is used for avoiding terrain to keep a continuity, with the 3000 ft vertical distance being added?</p> <p>Paragraphs 3 b i, ii and iii.</p> <p>The avoidance of unidentified traffic needs to be clear cut and unambiguous so that no doubt arises for the ATCO trying to effect the avoiding action. The proposal in the document is far too complicated and appears to suffer as a result. If the suggestion of using the "keyhole" to trigger avoiding action, as in the above section, was to be adopted then a standard 15 nm ahead of the aircraft and 5 nm around the aircraft <u>or</u> (to be decided, one or the other) 10nm ahead of the aircraft and 3nm around the aircraft would fit the requirements and cater for head on or crossing situations with increased safety.</p> <p>It should also be noted in this section that providing this service in the FIR depends on ATCO workload as some units work both inside and outside CAS at the same time, using one controller on one frequency, and the CAS traffic usually demands a higher attention factor.</p>	<p>Commercial aviation did wish to see time based separations; however, they did recognise that this was not possible for ATC to implement and they agreed that the translation into distances fully met their expectations.</p> <p>It is understood that different users have different interpretations on miss-distances and individual user groups had separate requirements. However, it was felt that it would be unrealistic to have different criteria for different users and an agreed compromise was achieved to simplify the requirement that would be out to ANSPs. A useful input for potential further debate during Phase 3.</p> <p>Will be considered under the development of revised procedures.</p> <p>This will be debated further under Phase 3.</p> <p>Noted.</p>

It should be made mandatory for all aircraft operating above FL95 to take part in a radar service, no matter who is providing it. This way at least a greater number of aircraft in the FIR would become "known traffic" where co-ordination could be effected. However, the Guild recognises that such a requirement could be unworkable if ATCO workload, staffing or radar performance prevents a radar service from being offered.

Final Approach Tracks to military and civil airfields operating high traffic volumes outside CAS should all have a MATZ stub around them of perhaps class D or E airspace and be boldly marked on low level aviation charts. This would increase pilot awareness around airfields and help to better protect them.

AOA: Planned Deconfliction Distance. This introduces another non-standard expression into the mix. The ICAO expression used and understood is Separation. Minimum Radar Separation is 5nm or 1000ft. Why is the miss distance not defined as the minimum radar separation i.e. 1000ft vertically and 5nm horizontally?

This does however keep separation concepts that belong in controlled airspace in uncontrolled airspace where, by its very nature as an unknown environment, they should not be. Class G airspace is an unknown, see and avoid environment. Operating within this environment carries risk. ATC will try to help pilots reduce this risk. If all aircraft miss that is an effective result, if they miss by the minimum radar separation so much the better. Mandating that they should do so is much harder to achieve and cannot be guaranteed.

RAF Waddington Staneveal: The planned deconfliction distances for Type 4 service include what appears to be a fallback option of 3nm and 1000' in the event that neither of the (extant) distances of 5nm or 3000' could be achieved. However, given the caveats already built into Radar Advisory Service (235.110.1 e) that allow for 5nm or 3000' not being achievable, is a fallback option of 3nm and 1000' in danger of being unnecessary and actually complicating an already difficult service? In any case, notwithstanding the fallback option, would the rules on plots merging when applying 5nm/3000' remain iaw extant guidelines in JSP 552 235.155.5 (b)?

In terms of separation under Type 4 Service following coordination, the E-3D would expect to apply 1000' following coordination as things stand now (inter crew or with ASACS). However, given the current modus operandi

Not all users actually require a service in this band of airspace. This is not compatible with the classification of the airspace. There are issues over availability of service provision and cover, including the resource implications of mandating such a service. .

In Class G airspace, which is an unknown environment, it is impossible for an air traffic controller to issue control instructions and maintain separation. An air traffic controller can only pass advisory information and thus cannot guarantee maintaining separation. The information and controller passes is designed to help a pilot maintain separation. This issue will be covered during Phase 3 of the Review, through consultation between all stakeholders. This view is contrary to that provided by other ANSPs and only goes to highlight the disparity in opinions held by all stakeholders.

This was not a fall back option but a separate third option; however, these issues will be covered during Phase 3 of the Review, through consultation between all stakeholders.

	<p>with regard to coordination, further reductions in separation under coordination (500', and 3nm instead of 5nm) would unduly complicate what is still a nascent procedure. We would therefore request the right to continue implementing a higher separation under coordination law extant regulations.</p>	
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<u>SUR Topic & Para</u>	<u>ANSP Response/Comments</u>	<u>CAA Comments</u>
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<u>OTHER TOPICS</u>		
Division of Services	<p>HQ STC RAF: Under current service provision the dividing line between FIS and RIS, and between RIS and RAS is often blurred by users and providers alike. Any changes to the services must try to address this issue and create distinct dividing lines that are understood by all and consistently applied by controllers.</p>	<p>Agreed.</p>
Refusals, Upgrades & Limiting Services	<p>RAF - HQ STC ATC: It is understood that refusals and upgrades of services would not be recognised as a point for the customer in 'their' requirements; however, this is an important area for future agreement between the provider and user.</p>	<p>Noted and will be incorporated into Phase 3 of the Review.</p>
	<p>AOA: There is not, and possibly in the user requirement there is no need to address the issue, any reference to limiting the service. However it is a fundamental issue that must be addressed.</p>	<p>Agreed, this issue will be discussed and covered by Phase 3.</p>
UAVs	<p>RAF - HQ STC ATC: Not surprisingly, the SUR does not cover the provision of service to UAVs. This is an area we are becoming increasingly involved in and we feel that, whilst the general principle is that UAV status should be transparent to controllers, in reality the peculiarities of UAVs and the future operation of them outside CAS should be considered as part of the ATSOCCAS review.</p> <p>RN - Fleet : Further, it is now known that the UAV work strands to identify airspace and operator control, iterated in the Strawman paper from DJtCap, are viewing TC as the solution to the issue of what ATSOCCAS to provide a UAV.</p>	<p>It is current policy that UAV status should be transparent to controllers regarding service provision. It is logical that in the absence of a 'sense and avoid' capability that the migration of UAV activity would be from segregated airspace to the known environment of controlled airspace before it was flown in Class F/G airspace where reliance on 'see and avoid' is the bottom line for separation between aircraft. Whilst the possibility of UAVs may inform the debate, they should not dictate the service.</p>
RN Terminal Control (TC)	<p>RN - Fleet: Agreeing ATS solutions is a joint effort, and Fleet has a duty to ensure that where ATSOCCAS does not meet the RN's specific needs, enhancements will be provided. Accordingly, Fleet is content to provide limited endorsement of the ATSOCCAS SUR, with the caveat that the RN <i>has an enduring requirement for an ATS that meets the definition and conditions of the current Terminal Control.</i> In summary the RN currently</p>	<p>This issue will need to be debated and clarified further during Phase 3.</p>

	<p>provide a Terminal Control (TC) ATS to RN, other UK military and MoD contracted aircraft, but not normally to civil aircraft. TC provides a higher level of ATC authority than that available in Class G airspace under RAS or RIS. Fleet are concerned that none of the proposed new Service Types will afford this higher authority within Class G airspace and, as it is their duty to ensure that where ATSOCAS does not meet the RN's specific needs, TC will continue to be provided. Therefore, it is the RN's intention to retain TC.</p>	
<p>Rules of the Air v Segregated Airspace</p>	<p>GATCO: The Guild recommends that all crews (including the military) be required to follow the ICAO rule of a maximum Indicated Air Speed of 250kt in class G airspace unless segregated or notified (i.e. AIAA).</p>	<p>This falls outside the remit of the ATSOCAS Review.</p>
<p>ICAO</p>	<p>AOA: It would seem that given the UK's desire to comply with ICAO recommendations wherever possible, the provision of a compatible service would be a logical first step. ICAO recognises Controlled Airspace, Advisory Airspace and Uncontrolled Airspace. Within Controlled Airspace an Air Traffic Control Service is mandated. Within Advisory Airspace an Air Traffic Advisory Service is mandated. Within Uncontrolled Airspace a Flight Information Service (FIS) is mandated. This service may use radar-derived information as a method of providing advice and information useful for the safe and efficient conduct of flights. Unfortunately the SUR shows confusion about the status of FIS and the use of radar. ICAO further recommends that an Air Traffic Advisory Service should only be implemented where the air traffic services are inadequate for the provision of air traffic control, and the limited advice on collision hazards otherwise provided by FIS will not meet the requirement. Where air traffic advisory service is implemented, this should only be considered normally as temporary measure only until such time as it can be replaced by air traffic control service. Therefore, to comply with ICAO recommendations the UK should adopt advisory airspace as a temporary measure in those areas that FIS is not considered adequate, until controlled airspace is established.</p> <p><u>Conclusion.</u> Against a backdrop where the UK is striving to standardise its procedures with those of ICAO, we consider that the direction that the review has taken is at odds with this aim and a solution more in line with ICAO standards and practices should be investigated.</p>	<p>ICAO Services will be considered during Phase 3 of the Review and specifically during the construction of the Strawman Paper and subsequent Stakeholder Workshop.</p>

SUR Topic & Para	ANSP Response/Comments	
Operational requirement	<p>AOA: No operational requirement appears to have been produced, and we believe one should be produced before a solution can be addressed.</p>	
Workshop Fallout	<p>NATS: In some areas they show a misunderstanding of responsibilities and in others we do not recognise the statements as having actually been initiated by users.</p> <p>With regard to separation criteria the figures stated in section 3 were not the idea of users.</p> <p>AOA: having attended workshops earlier in this process, AOA also notes that the user requirements proposed were to a large extent suggested to the users before consultation with them took place.</p>	<p>At the end of each User Workshop a PowerPoint brief summarising the day’s discussions was provided, which allowed all attendees to confirm they were happy with the points raised that would be recorded. This was followed up by a written summary, which all attendees received after the workshops and had the opportunity to comment on and submit amendments. While it is acknowledged that the CAA staff made suggestions to initiate debate, the final outcome was generated by, and agreed upon, by the participants.</p>
Summaries/Conclusions	<p>NATS: In summary we welcome this attempt to define the users requirements and look forward to maturing them. We are fully committed to the development of new rules and will commit necessary resource to achieving this. We are also keen to ensure that users are given ample opportunities to further comment on the debate and look forward to getting to a stage where we can invite users to a workshop to debate further.</p> <p>AOA: Despite our concerns, we acknowledge that much good work has gone into formulating the user requirement. It is logical, but we believe seriously deficient in some areas. It introduces further non-standard (non-ICAO) concepts. While it is certainly an important first step, we think that is all it is. It does not, in itself, solve the problem.</p> <p>The user requirement is just that: what the users require. While we acknowledge that the process was designed in this way, we believe that the potential for a very large gap between what the users require and what the ANSPs may be able to safely and economically provide, means that this area must be addressed as a fundamental next step.</p> <p>We are disappointed that there is no recognition that by making ATSOCAS more complex, the ability of the ANSPs to provide it is reduced. There is not, and possibly in the user requirement there is no need to address the issue, any reference to limiting the service. However it is a fundamental issue that must be addressed.</p>	<p>This will be done during Phase 3 and the ANSP/User workshop.</p> <p>The Review is still in its relatively early stages and it is hoped that the open and cooperative manner in which the Review has been conducted will ensure that the potential for a large gap between what the users require and what the ANSPs may be able to safely and economically provide will not materialise. It is believed that there will have to be compromise by all stakeholders to ensure the overall success of the output.</p>

No operational requirement appears to have been produced, and we believe one should be produced before a solution can be addressed.

Against a backdrop where the UK is striving to standardise its procedures with those of ICAO, we consider that the direction that the review has taken is at odds with this aim and a solution more in line with ICAO standards and practices should be investigated.

GATCO: As a professional organisation representing Air Traffic Controllers, GATCO strongly believes that ATC is a service industry provided to do the best we can for all users. However, the provision of ATSOCAS to the standards proposed in this document would appear to demand additional controllers to provide dedicated ATSOCAS or LARS positions. The inevitable question is who will pay for this enhanced ATSOCAS?

Bristol ATC: It is long overdue that the criteria for provision of ATSOCA were clarified, particularly in respect of the interaction of traffic operating under different flight rules and in receipt of different services.

The following is proposed as an appropriate method of operation, based on the underlying principle that separation minima are applied only between IFR flights.

An IFR flight (regardless of service) is provided with standard separation from other known IFR flights
PLUS
 under RAS, is provided with separation, ideally of 5nm/3000ft, from unknown traffic
 and
 with traffic information and “de-confliction” from known VFR traffic
 or
 under RIS or FIS *, provided with traffic information in respect of unknown traffic and known VFR traffic.
**or, more precisely, procedural approach control service
 - unlikely in a radar environment, but possible, e.g. in a holding pattern*

A VFR flight is provided with traffic information in respect of known traffic, both IFR and VFR, judged to be a confliction
PLUS
 under RIS, radar-derived traffic information in respect of unknown traffic judged to be a confliction.

Phase 3 of the Review will identify the future requirements and what could or could not be provided.

Included for completeness of record although it was not received as part of the consultation with ANSPs.

	<p>An IFR flight may be vectored for sequencing under either RAS or RIS. The specific service will indicate whether or not ATC is taking responsibility for applying separation minima in respect of unknown traffic.</p> <p>Aircraft are frequently provided with an Approach Control Service or FIS only (i.e. no radar service) but are identified for monitoring purposes. Therefore, although any associated Mode A/C must be validated/verified, in order to avoid implication of a radar service the pilot will <i>not</i> be informed of the identification.</p> <p>RAF - HQ STC ATC: It is appreciated that the SUR is only one step in the process of reviewing ATSOCAS and as such we look forward to working with yourselves and other ATS providers to take it forward. If you have any questions or require additional information at this stage, please do not hesitate to contact the undersigned.</p> <p>RAF Waddington Staneveal: On a general level, it seems that the fundamental problem at the heart of the review (“...different interpretations of types of service”) is a standardisation issue that will not necessarily be comprehensively solved by re-evaluating and renaming services. Currently, Radar Advisory Service has a common definition between the civil and military communities, yet is applied in a considerably different manner. The same problems of different interpretations may surely arise whatever the services are called, and could potentially be mitigated by better communication and links at STANEVAL level between the different service providers in the ASACS, ISTAR, Military and Civil service provider environments</p>	<p>The Review is still in its relatively early stages and the CAA looks forward to working with all Stakeholders to successfully produce a revised and effective set of ATSOCAS procedures.</p> <p>It has already been identified that education, communication and publication of a revised ATSOCAS will be absolutely fundamental to the Review’s success. To that end work will be undertaken throughout the remainder of the review to ensure this aspect is comprehensively addressed.</p>
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Note: Some elements of the ANSP responses above have been précised; however, the majority are the complete comments for each section.

<original signed>

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