

Change proposals for Class E airspace ATS procedures: Consultation report

CAP1800

Published by:

Safety and Airspace Regulation Group
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Change proposals for Class E airspace ATS procedures

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1. Introduction

- 1.1 On 14 September 2018, the Civil Aviation Authority (CAA) launched a consultation on proposed changes to Air Traffic Service (ATS) procedures in Class E airspace. The consultation sought industry comment on four change options and several issues for consideration by stakeholders and ended on 9 November 2018. Stakeholder comments were examined in detail by the CAA, leading it to refine its preferred option.
- 1.2 The purpose of this report is to inform industry of the outcomes of the consultation and of the way forward to refine ATS procedures in Class E airspace.

2. Consultation

2.1 Conduct of the Consultation

- 2.1.1 The consultation targeted airspace users as well as Air Navigation Service Providers (ANSPs) who would likely be affected by the proposed changes in service provision principles. Consequently, the consultation was open to members of the CAA's National Air Traffic Management Advisory Committee (NATMAC) plus a small number of ANSPs who provide ATS in airspace adjacent to extant volumes of Class E airspace. In total forty-seven stakeholders were consulted, with responses received from fourteen. A list of consultees is at Appendix A.

2.2 Options Presented

- 2.2.1 Four proposed options were presented:
- (a) Option A - Do nothing.
 - (b) Option B - Return to pre-2014 Class E ATS provision principles
 - (c) Option C - Adopt ICAO Class E airspace ATS provision principles without modification and assume that all unknown traffic within Class E airspace are operating in accordance with VFR.
 - (d) Option D - Redefine Class E ATS provision principles and implement VFR and IFR conspicuity codes.

Option D was the CAA's preferred option.

- 2.2.2 Comments from the consultation were examined in detail by CAA staff, which led the CAA to refine its preferred option. In addition, post-consultation correspondence with members of the Air Traffic Control Procedures Working Group (ATCPWG) led to further refinements.

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2.3 Consultation Response Analysis

2.3.1 Fourteen stakeholders responded directly to the consultation, nine of which were NATMAC members; the remaining five represented three different stakeholder groups. A breakdown of the nature of respondents is at Figure 1.

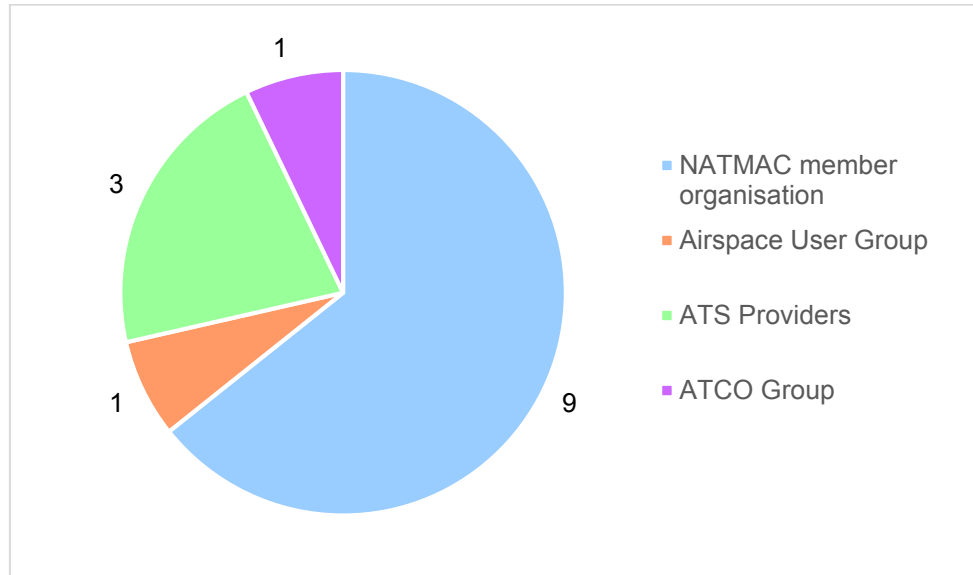
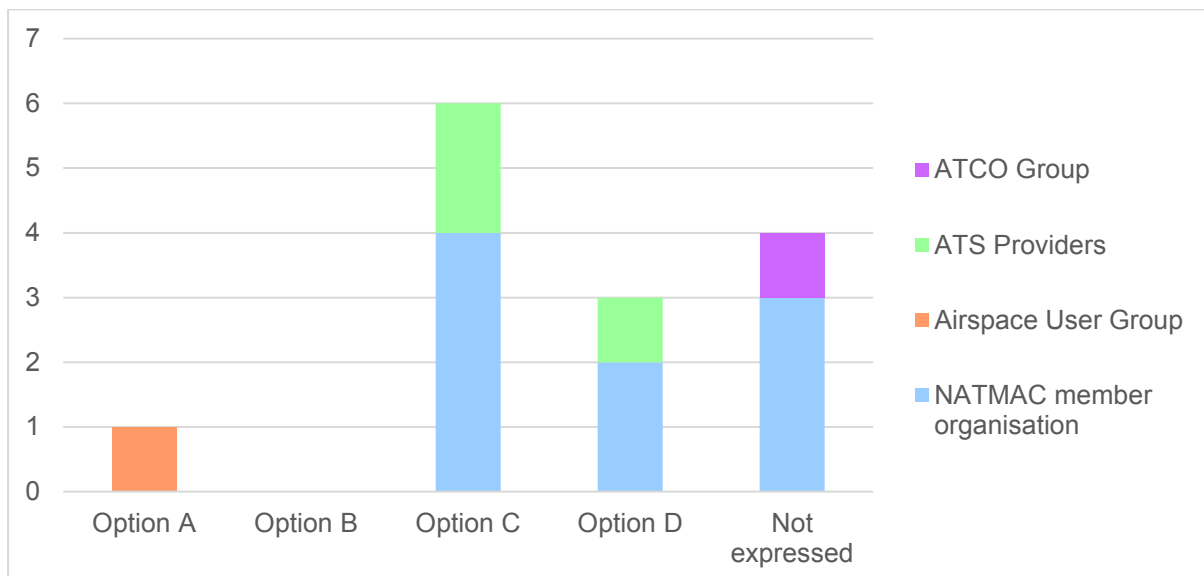


Figure 1: Consultation respondents by group

2.3.2 Of the fourteen stakeholders who responded, four either did not express a preference for any of the four proposed options or propose an alternative option. Of the ten stakeholders who expressed a preference, option C received the greatest level of support, option D received the second highest level of support, option A was supported by one stakeholder and option B was not supported. A breakdown of the support for each proposed option and support according to the nature of respondent is at Figure 2.



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Figure 2: Support for each option

2.3.3 Although option D received less support than option C, the proposal within option D to implement VFR and IFR conspicuity codes was generally supported. A breakdown of the support for the implementation of a VFR conspicuity code is at Figure 3 and the breakdown of the support for the implementation of an IFR conspicuity code is at Figure 4.

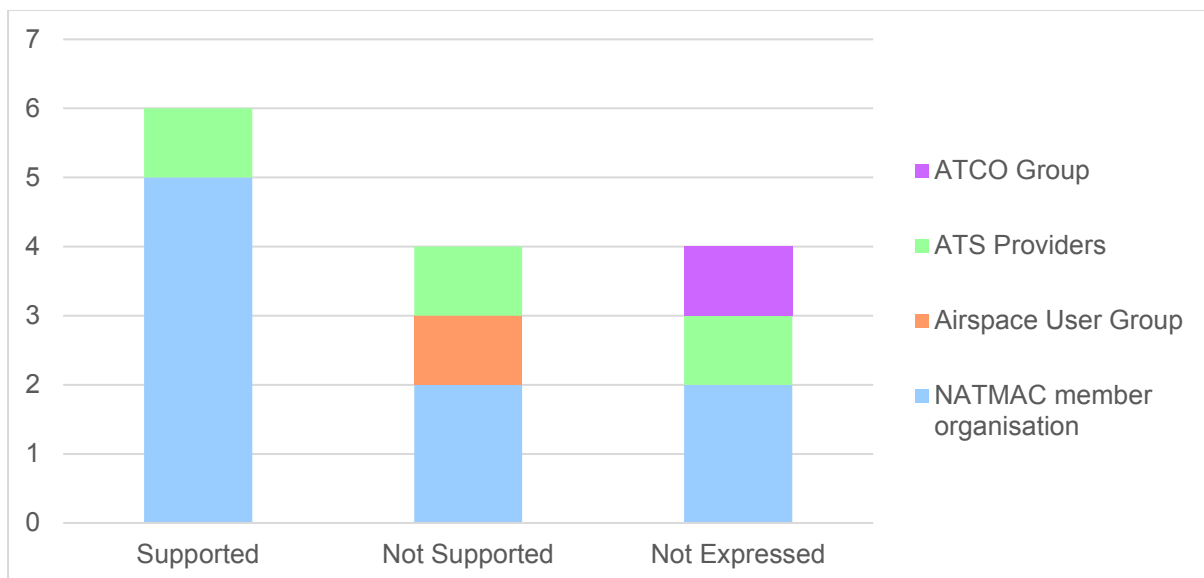


Figure 3: Support for implementing a VFR conspicuity code

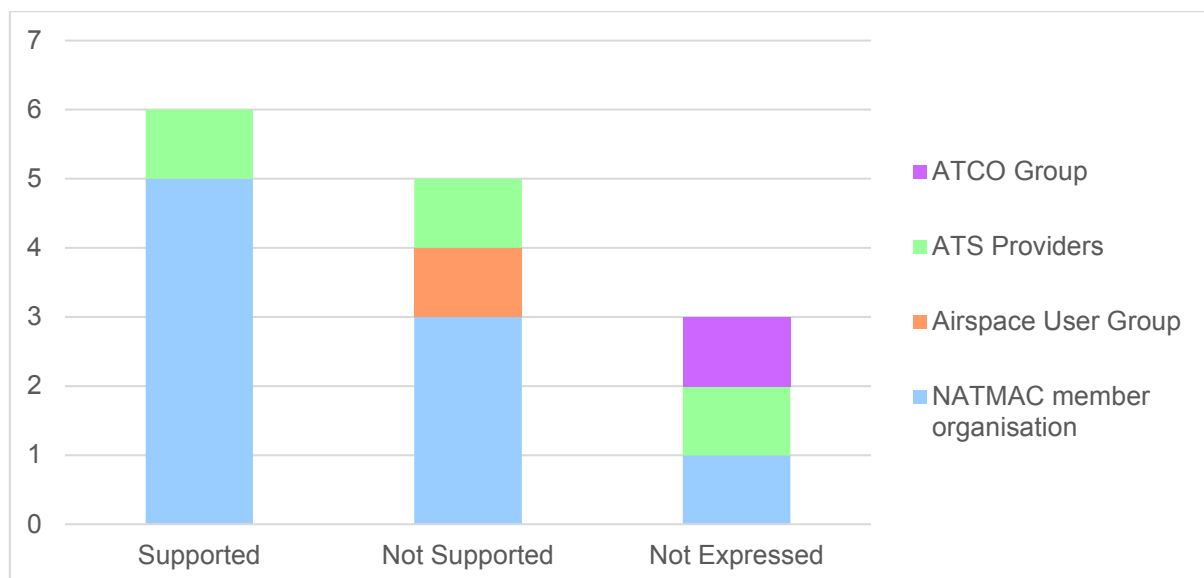


Figure 4: Support for implementing an IFR conspicuity code

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2.4 Key issues and themes

- 2.4.1 Stakeholder comment not only highlighted stakeholder preference but several additional key issues and themes. Consultation responses were grouped together into key issues and themes and are summarised as follows:
- (a) Four stakeholders expressed concern over the lack of a Class F replacement airspace change Post Implementation Review (PIR) to support the consultation document. However, the absence of the PIR should not prevent the inefficiencies being experienced by ANSPs from being resolved.
 - (b) Several ANSPs sought clarity over the number of ANSPs that may provide ATS within any given Class E airspace structure. As with any notified controlled airspace, there would be a notified controlling authority. Other ANSPs may provide ATS within a Class E airspace structure in accordance with the CAA's policy statement 'ATS Provision within Controlled Airspace by Units not Notified as the Controlling Authority'.
 - (c) Two stakeholders commented on potential inconsistencies between within UK FIS and ICAO's FIS provision requirements for Class E airspace. Any inconsistencies that might exist will be considered as part of the implementation of Regulation (EU) 2017/373¹ Annex IV (Part-ATS) 'Phase 2'². The CAA is not seeking to amend UK FIS as part of the Class E ATS procedures review. However, to ensure there are no inconsistencies between CAP 493 Manual of Air Traffic Services – Part 1 (MATS Pt 1) and CAP 774 UK Flight Information Services, the detail of UK FIS within the MATS Pt 1 will be replaced with appropriate cross-references to CAP 774.
 - (d) One stakeholder asserted that pilots are largely unaware of the airspace classification in which their aircraft is flying and that this lack of knowledge does not adversely influence safety. However, airspace classification directly influences the provision of Air Traffic Services and pilot responsibilities. In exercising the privileges of their licence, pilots are obliged to know their responsibilities, which in turn requires them to know when their responsibilities change according to the airspace classification within which they fly. If the assertion that pilots are largely unaware of the airspace classification in which

¹ Commission Implementing Regulation (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011.

² 'Phase 2' is the CAA's description of EASA rulemaking proposals contained within Notice of Proposed Amendment 2016-09 Requirements for air traffic services (RMT.0464) and subsequently Opinion No 03/2018.

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they fly, then Option C exposed controlled IFR flights within Class E airspace to greater risk than Option D.

- (f) One response indicated that there might be confusion amongst pilots in understanding their responsibility to comply with Visual Meteorological Conditions (VMC) when conducting flights in accordance with Visual Flight Rules (VFR). However, in exercising the privileges of their licence pilots are obliged to maintain VMC when operating in accordance with VFR. Pilots conducting flight in less than VMC cannot be VFR and more importantly, their ability to detect and avoid other aircraft will be reduced. Option D enables pilots – through the use of SSR conspicuity codes - to declare the flight rules under which their flight is being conducted, which in turn enables Air Traffic Control Officers (ATCOs) to provide the appropriate level of Air Traffic Control Service (ATCS) to IFR flights within Class E airspace. Pilots of aircraft who are not operating in accordance with VFR must not select the proposed VFR conspicuity code.
- (g) The majority of stakeholders supported option C over the CAA's preferred option D. However, given that option C requires the adoption of an operational assumption that all unknown aircraft within Class E airspace are operating in accordance with VFR and considering stakeholder opinions expressed in points (e) and (f) above, the CAA remains of the opinion that option D together with material to remind pilots of their responsibilities is operationally preferable. favourable.
- (h) Whilst stakeholders indicated their general support for the implementation of VFR and IFR conspicuity codes, an ANSP highlighted that significant ATS system modification will be required to support this change. The associated timescales will necessarily delay the implementation of VFR and IFR conspicuity, therefore a phased approach will be required to refine Class E ATS procedures.
- (i) ANSP stakeholder comments indicated that the interpretation and application of extant Class E ATS procedures ignore the operational efficiency that can be obtained when Class E airspace is additionally notified as TMZ airspace.

3. Introduction of refined Class E ATS procedures

- 3.1 Following the analysis of stakeholder comments, the CAA believes Option D remains the most appropriate way forward. However, given its dependency upon ATS system modification, Option D will need to be implemented in two stages, as follows:

Phase 1: Amendment of MATS Pt 1 UK FIS-related content.

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Phase 2: Introduction of amended Class E ATS provision principles together the implementation of VFR and IFR conspicuity codes.

3.2 Phase 1 does not require the amendment of the UK Aeronautical Information Publication (UK AIP); rather CAP 493 The Manual of Air Traffic Services Part 1 (MATS Pt 1) will be amended through the issue of a Supplementary Instruction as described in paragraph 2.4.1(d). This Supplementary Instruction will be published in May 2019 and will include a 60-day notice period ahead of implementation. Appendix B contains the planned 'phase 1' changes to MATS Pt 1.

3.3 Phase 2 requires the coordination of several workstreams. One of the most significant is the amendment of ATS systems and due to the scheduling of this activity amongst other system upgrade activities, ATS systems are unlikely to support the adoption of VFR and IFR conspicuity codes until the end of the first quarter of 2020. The extent of these changes to the UK AIP, MATS Pt 1 and CAP 413 Radiotelephony Manual are contained within Appendixes C, D and E. These amendments will be published with a double-AIRAC notice period prior to the date on which ATS systems will support these changes.

3.5 No additional publication measures will be needed for phase 1, however, it will be necessary to undertake an additional awareness campaign to support phase 2. Awareness means considered to date include:

- (i) An Aeronautical Information Circular (AIC);
- (ii) CAA 'Clued Up' magazine;
- (iii) CAA website (www.caa.co.uk);
- (iv) Airspace and Safety Initiative website (www.airspacesafety.com);
- (v) CAA Skywise;

4. Changes from version 1 of this report

4.1 Version 1.1 of this report introduces a change to ENR 1.4 paragraph 2.5.1.2 contained within Appendix C.

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Appendix A: Comment Response Document

The following taxonomy has been applied to the Comment Response Document:

- (a) **Accepted** — CAA agrees with the comment and any proposed amendment is wholly transferred to the revised text.
- (b) **Partially accepted** — CAA either agrees partially with the comment or agrees with it but the proposed amendment is only partially transferred to the revised text.
- (c) **Noted** — CAA acknowledges the comment but no change to the existing text is considered necessary.
- (d) **Not accepted** — The comment or proposed amendment is not shared by CAA.

Commentor:	All Party Parliamentary Group on General Aviation
Page number:	All
Paragraph number:	All
Comment:	The consultation on Class E Airspace is another example of the 'fragmented' approach (to Airspace) which is causing confusion. Please would you convey to those concerned that it would be sensible to adopt a 'Do Nothing' Policy until the overall Airspace Management Strategy has been completed. Incidentally, the Class E comment response document seeks to avoid the necessary Impact Assessment by the owners of this CAA initiative. If you give me the name of the individual I should be happy to make the point as the CRD also does not enable an appropriate 'general' reply.
Justification:	Fragmented approach to airspace
Proposed text:	Not applicable
CAA response:	Noted: This consultation is concerned with how the CAA seeks to refine ATS procedures in existing Class E airspace. Ultimately, we want to reduce any operational burdens on both the users of Class E airspace and air navigation service providers whilst refining and clarifying the use of specific SSR codes. Given the narrow parameters of this engagement, we limited our engagement to those with a technical interest in the matter, including members of NATMAC.

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	This consultation is unrelated to the Airspace Modernisation Strategy.
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Commentor:	The Honourable Company of Air Pilots
Page number:	All
Paragraph number:	All
Comment:	The regulation of an international activity should be international. Where ICAO provisions are not deemed correct for national application, the national authority should seek to change ICAO provisions rather than to implement national variations.
Justification:	Deviating from the ICAO guidelines forces non-UK users to learn and apply different techniques and understanding. This is a challenge for pilots and organisations that operate internationally and increases the likelihood of human factor errors within aviation.
Proposed text:	In each instance of a proposal at variance to ICAO standard the document should describe: a. The expected impact of that non-conformity on international users. b. An explanation of the safety benefit gained by not following ICAO standards. c. An explanation of the action being taken to persuade ICAO to adopt a similar change.
CAA response:	Noted: With exception of implementing VFR cruising levels within Class E airspace, which is long-standing UK policy, the CAA's preferred option is consistent with the range of options permitted within ICAO's standards and recommend practices, and also with SERA.5005(g) 'Visual flight rules'.

Commentor:	UKAB
Page number:	18
Paragraph number:	5.3.4.4
Comment:	Option C is discounted purely due to the risk of an infringing IFR aircraft being assumed by the controller to be VMC (and therefore

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	not called to other IFR traffic) when it might be IMC. It seems to me that discounting an option because of someone breaching another rule (i.e. infringing and not being VMC) is not a particularly sound basis for rule making (it's a bit like saying 'cars shouldn't drive on the motorway because someone else might drive dangerously and crash into them). What needs to be done is to stop the infringing rather than change the rules (or not adopt them) just in case. Probably need to come up with a stronger case for discounting this option, or weight it up against the other potential options in a more analytical way.
Justification:	
Proposed text:	
CAA response:	Not accepted: The focus of the paper is to ensure controlled IFR flights in Class E airspace are provided with an air traffic control service that is compliant with the ICAO Annex 11/SERA.6001 airspace classification system. Airspace infringements can and unfortunately do occur, and I various airspace classifications. Option C is not preferred - as it does not offer a solution to detect infringements and in particular those that pose the greatest potential risk.

Commentor:	UKAB
Page number:	19
Paragraph number:	5.3.5.4
Comment:	Another disadvantage of Option D is the potential for TCAS interactions between squawking VFR traffic and IFR traffic with TCAS. By mandating all aircraft squawk, there is considerable potential for VFR aircraft flight vectors to impinge on TCAS envelopes causing TCAS RAs and increased Airprox incidents. We have already seen this in Class E airspace where squawking VFR traffic with rapidly changing altitudes, or simply applying VFR separation criteria, have caused TCAS RAs and Airprox in commercial IFR traffic. So an unintended consequence of TMZ status in Class E will be an increase in Airprox notifications, commercial aircraft being forced to respond to TCAS RAs, and potential 'laddering' of TCAS alerts as aircraft respond to RAs (which will potentially considerably reduce safety and increase

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	controller workload). Whilst this risk may be acceptable, it needs to be highlighted in the disadvantages so that it is properly considered and understood when evaluating preferred Class E options.
Justification:	
Proposed text:	
CAA response:	Noted: The issues raised are not specifically related to Class E airspace or Class E + TMZ airspace. There are distinct benefits of electronic conspicuity and the ACAS II Resolution Advisory phenomena is not unique to Class E. The ATM system is not predicated on safety nets, however increased electronic conspicuity is considered to enhance ATM efficiency and safety. SERA.13001 details the 'operation of an SSR transponder' within controlled and uncontrolled airspace, whereas a TMZ ensures an electronic conspicuity-rich environment as far as practicable. The CAA's Policy for Radio Mandatory Zones and Transponder Mandatory Zones outlines TMZ transponder carriage requirements together with access arrangements for pilots in aircraft without a serviceable transponder.

Commentor:	UKAB
Page number:	n/a
Paragraph number:	n/a
Comment:	I don't think that the overall analysis of options is particularly robust. Whilst a statement on advantages and disadvantages is useful, normally there are some common stated criteria that options are judged and scored against. As it reads, the paper could be criticised for the author cherry-picking those aspects that suit the argument for Option D rather than a proper analytical assessment. As a starting point I'd suggest you use the ICAO objectives for ATS as stated in para 5.2.1 on page 13 as 4 criteria that each option is scored against: i.e. suitability in 'prevent collisions between aircraft'; 'expedite and maintain an orderly flow of air traffic'; 'provide advice and information useful for the safe and efficient conduct of flight'; and 'notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required'. The last one is a bit moot, but

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	there may be other criteria such as: 'efficient provision of ATC service'; 'clarity of RTF phraseology'; and 'commonality with ICAO procedures' in recognition of the discussion points made by the author in Section 4.
Justification:	
Proposed text:	
CAA response:	Noted: The objectives for ATS must be considered within the context of the airspace classification under consideration. Consultation document appendices B and C contain references to how the UK satisfies the associated ICAO / SERA requirements for Class E airspace.

Commentor:	Humberside Airport - ANSP Response
Page number:	1
Paragraph number:	Executive Summary, Paragraph 1, Last Sentence.
Comment:	Where did the idea of 'uncertainty' over flight rules derive from and is it relevant in the 'Executive Summary', especially as the word 'uncertainty' does not appear elsewhere within this document?
Justification:	Class E responsibility is clear; aircraft operating VFR are to avoid IFR aircraft. Any aircraft not under the control of the ANSP responsible for the Class E airspace should be VFR. There should be no 'uncertainty' over the flight rules employed as all aircraft not under the control of the ANSP responsible for that area of Class E airspace should be VFR unless it is believed that the aircraft is lost and/or has inadvertently penetrated CAS.
Proposed text:	N/A
CAA response:	Not accepted: As the UK does not prohibit autonomous IFR flight in Class G airspace, unless additional measures are established to enable a pilot to indicate which flight rules are being followed there is no means through which a controller can detect, with certainty, whether an 'unknown' aircraft within Class E airspace is operating in accordance with VFR or an infringement operating in accordance with IFR. See consultation document paragraph 5.3.5.2.

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Commentor:	Humberside Airport - ANSP Response
Page number:	1
Paragraph number:	Executive Summary, Paragraph 2, Option C.
Comment:	The UK CAA has stated an aspiration for the UK airspace structure to become more ICAO-compliant; therefore, Option C is the correct option to choose. That said, there is no reason that standard ICAO Class E rules could not be applied but within the addition of a TMZ to some areas of Class E within which the rules for the TMZ include the transponder options suggested here of A7000 for VFR (together with a UK change of A2000 also meaning uncontrolled IFR in Class G as well as crossing a FIR boundary).
Justification:	Option C is the only option that fully meets ICAO requirements. Option D adds additional safety mitigation that, whilst sensible, will add a potential difference to other States application of Class E rules. It would be better to adopt standard ICAO rules and add additional measures, such as A7000 for VFR, by using other items from the airspace toolbox such as the TMZ.
Proposed text:	N/A.
CAA response:	Not accepted: The CAA's preferred option (Option D) is constructed using a 'toolbox' approach by selecting measures permitted by ICAO / SERA, whereas Option C introduces an operational assumption that all unknown aircraft within Class E airspace are operating in accordance with VFR, when this might not necessarily be correct on every occasion, which the majority of European States with Class E airspace do not have to consider. A7000 is defined for the purposes of VFR conspicuity by the following European States: 1 - Austria: ENR 1.6 Paragraph 3.1.2 2 - Czech Republic: ENR 1.6 Paragraph 1.6.2.4.3 3 - Denmark: ENR 1.6 Paragraph 1.6 Paragraph 2.1 c. 4 - France: ENR 1.6 Paragraph 1.6.2 b) 5 - Greece: ENR 1.6 Paragraph 1.6.6.2.2.2 6 - Netherlands: ENR 1.6 Paragraph 2.1.1 d. 7 - Poland: ENR 1.6 Paragraph 15.3

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	8 - Portugal: ENR 1.6 Paragraph 1.6.5.6 9 - Romania: ENR 1.6 Paragraph 2.2.2 10 - Slovenia: ENR 1.6 Paragraph 2.4.1 A2000 is also used for IFR conspicuity within: 1 - Denmark: ENR 1.6 Paragraph 2.1 c. 2 - France: ENR 1.6 Paragraph 1.6.2 a) 3 - Greece: ENR 1.6 Paragraph 1.6.6.2.2.1 4 - Poland: ENR 1.6 Paragraph 15.2 5 - Romania: ENR 1.6 Paragraph 2.2.1 6 - Slovenia: ENR 1.6 Paragraph 2.4.1 In addition, SERA.13001 details the 'operation of an SSR transponder' within controlled and uncontrolled airspace whereas a TMZ ensures an electronic conspicuity-rich environment as far as practicable. The CAA's Policy for Radio Mandatory Zones and Transponder Mandatory Zones outlines TMZ transponder carriage requirements together with access arrangements for pilots in aircraft without a serviceable transponder.
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Commentor:	Humberside Airport - ANSP Response
Page number:	1
Paragraph number:	Executive Summary, Paragraph 2, Option D.
Comment:	This is the CAA's preferred option but this option has risks. What if an aircraft's pilot 'forgets' to select the required VFR or IFR conspicuity code? What does another ANSP use when controlling IFR or VFR aircraft in the vicinity of an area of Class E? Can another ANSP provide an ATS within an area delegated to a particular ANSP (this could impact the military or other ANSPs located close to the Class E airspace)? In all cases, an authorised ANSP for provision of ATS within a particular area of Class E should have priority and all other aircraft either uncontrolled VFR or under an ATS from another ANSP would have to give way unless coordination had been agreed.

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Justification:	Option C is the preferred Option to maintain as close to ICAO as possible. Should ICAO move towards conspicuity codes, then the proposed regulation should change towards any ICAO modification. It would be better to adopt standard ICAO rules and add additional measures, such as A7000 for VFR, by using other by using other items from the airspace toolbox such as the TMZ.
Proposed text:	N/A.
CAA response:	Not accepted: In response to question 1: The purpose of introducing VFR and IFR conspicuity codes is to enable the pilot to indicate the flight rules he / she is complying with. If the pilot is operating in accordance with VFR but makes an incorrect transponder selection, the controller providing the ATS to controlled IFR flights will avoid the 'unknown' aircraft because it will be assumed to be an IFR infringement. Option D enables better exploitation of the benefits of electronic conspicuity. In response to question 2: Extant procedures apply. The remainder is outside the scope of this consultation.

Commentor:	Humberside Airport - ANSP Response
Page number:	5
Paragraph number:	2.1.2
Comment:	Stakeholders are asked to consider an assessment of the impacts of this proposed amendment to Class E airspace procedures, on their procedures and operations; however, in parallel there is a consultation on FISOs that could impact in the future but there is no mention of the consultation on FISOs (or even 'FISO') within this consultation on Class E airspace procedures.
Justification:	Alignment of consultations where there is potential impact.
Proposed text:	N/A.
CAA response:	Not accepted: The scope of this engagement was limited to changes to ATS service provision principles to volumes of Class E airspace currently established. All affected stakeholders have been approached as part of this engagement.

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Commentor:	Humberside Airport - ANSP Response
Page number:	5
Paragraph number:	2.3.1
Comment:	Why only an 8-week consultation?
Justification:	With the parallel FISO consultation, it may have been useful to link these two consultations together with a statement on EU 2017/373 and potential future airspace change requirements to meet this regulation that may mean that the amount of Class E airspace within the UK could increase and affect more stakeholders.
Proposed text:	N/A.
CAA response:	Noted: These are separate issues and the 8-week consultation period was considered appropriate due to the narrow scope of the subject matter.

Commentor:	Humberside Airport - ANSP Response
Page number:	13
Paragraph number:	5.1.2
Comment:	Does ICAO state that unknown aircraft are to be separated?
Justification:	This appears to be solely a MATS Part 1 requirement. Where did this MATS Part 1 requirement come from and why? Is the safety information available to be reviewed as the change proposed for Class E may be equally valid for other airspace classifications within the UK, or if the safety-related evidence is rigorous it would provide the evidence for no change in Class E? Where the safety evidence for the MATS Part 1 statement that “unknown aircraft are to be separated” is valid, it should be equally applied to all UK CAS; where there is no safety-related evidence, it should be reviewed for all UK CAS.
Proposed text:	N/A.
CAA response:	Noted: The requirement to separate controlled IFR flights from unknown aircraft is applied equally to all controlled airspace

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	classifications see MATS Part 1, Section 1, Chapter 6, Paragraph 15.1 through 15.6. This separation requirement enables the UK to satisfy the objectives of the ATS as stated within ICAO Annex 11.
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Commentor:	Humberside Airport - ANSP Response
Page number:	17
Paragraph number:	5.3.3.4
Comment:	What validity is the 'significant concern'?
Justification:	If there is no safety-related evidence from other States with ANSPs that operate Class E, the UK should consider reviewing the retention requirement anyway.
Proposed text:	N/A.
CAA response:	Not accepted: The majority of European states permit IFR flight within Class G airspace. However, the volume of Class G airspace established in each state is variable. For example, in the remainder of core Europe and by volume, the amount of Class G tends to be less than that established within the UK. In addition, of those States have established Class E airspace, the majority additionally define A7000 as 'VFR conspicuity' and a number also use A2000 for IFR conspicuity.

Commentor:	Humberside Airport - ANSP Response
Page number:	17
Paragraph number:	5.3.3.5
Comment:	The ATS procedures within MATS Part 1 regarding "unknown aircraft are to be separated" should be reviewed and unless there is valid safety-related evidence, it should be removed as a procedure to be followed from all CAS.
Justification:	Unless other ICAO States have similar procedures and safety-related justification, it would not make sense for the UK to continue to hold a difference in this area.
Proposed text:	N/A.

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CAA response:	Noted: The requirement to separate controlled IFR flights from unknown aircraft is applied equally to all controlled airspace classifications: see MATS Part 1, Section 1, Chapter 6, Paragraph 15.1 through 15.6. This separation requirement enables the UK to satisfy the objectives of the ATS as stated within ICAO Annex 11.
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Commentor:	Humberside Airport - ANSP Response
Page number:	17
Paragraph number:	5.3.3.5
Comment:	Notwithstanding that we do not agree with Option B (unless there is valid safety-related evidence for the MATS Part 1 entry regarding “unknown aircraft are to be separated”), we suspect that the ‘rejection’ reason for this option of “These ATS procedures require the establishment of large expanses of Class E airspace to facilitate the provision of separation” may have to be reviewed.
Justification:	Whilst the amount of Class E today is limited, it is probable that to meet EU 2017/373 Annex IV Part-ATS requirements (and the UK CAA’s stated intent to become more ICAO-compliant), the whole of the current UK Class G airspace structure will have to be reviewed and, potentially, much greater amounts of Class E CAS established.
Proposed text:	N/A.
CAA response:	Noted.

Commentor:	Humberside Airport - ANSP Response
Page number:	17
Paragraph number:	5.3.4.2
Comment:	If the MATS Part 1 statement regarding “unknown aircraft are to be separated” is wrong for Class E, it should be also incorrect for all other CAS classifications equally.
Justification:	Consistent approach across CAS.
Proposed text:	N/A.

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CAA response:	Not accepted: The requirement to separate controlled IFR flights from unknown aircraft is applied equally to all controlled airspace classifications see MATS Part 1, Section 1, Chapter 6, Paragraph 15.1 through 15.6. This separation requirement enables the UK to satisfy the objectives of the ATS as stated within ICAO Annex 11.
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Commentor:	Humberside Airport - ANSP Response
Page number:	18
Paragraph number:	5.3.4.4
Comment:	The following assumption should not be made without evidencing the risk for ANSPs and operators to review: “that all unknown aircraft entering Class E airspace are operating in accordance with VFR, which might not be correct on every occasion. This assumption generates a mid-air collision risk when an IFR aircraft infringes Class E airspace in IMC and traffic information is not passed to the pilot of a conflicting controlled IFR flight” So how great is this risk? Can you provide the safety-related information for us to review? Why do other ICAO States operate this procedure, presumably safely, today? How do other ICAO States regulate in this area?
Justification:	We need to understand the level of risk of before a judgement can be effectively made. If other ICAO States are operating to the ICAO rules for Class E, presumably they operate safely otherwise there would be more reports of incidents or accidents between IFR and VFR aircraft operating within Class E?
Proposed text:	N/A.
CAA response:	Noted: Extant arrangements do not readily facilitate the gathering of data to quantify this risk for the following reasons: (i) extant conspicuity codes are not defined as either VFR conspicuity or IFR conspicuity; (ii) not all Class E airspace is additionally notified as TMZ; and (iii) not all airspace infringements are successfully traced to determine the flight rules employed.

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	However, of those States have established Class E airspace, the majority additionally define A7000 as 'VFR conspicuity' and a number also use A2000 for IFR conspicuity.
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Commentor:	Humberside Airport - ANSP Response
Page number:	18
Paragraph number:	5.3.5.1 (i)
Comment:	Whilst not mandated by ICAO, all Class E airspace could be notified as a TMZ, as this would increase safety. Where a non-transponding aircraft requires entry, this could be arranged through the ANSP that is delegated with responsibility for ATS provision within the Class E airspace and such aircraft would be under their control and/or approval.
Justification:	It would be better to adopt standard ICAO rules and add additional measures, such as A7000 for VFR, by using by using other items from the airspace toolbox such as the TMZ. A notified TMZ coincident with Class E would increase safety.
Proposed text:	N/A.
CAA response:	Noted.

Commentor:	Humberside Airport - ANSP Response
Page number:	18
Paragraph number:	5.3.5.1 (ii)
Comment:	We would be content for this change as we believe that all CAS should be promulgated as TMZ. Where a non-transponding aircraft required access, arrangements would be made through the responsible ANSP.
Justification:	Traffic levels and safety concerns require a more 'known' environment that a TMZ would provide. This would not differ greatly from ICAO as a TMZ is part of the toolbox for airspace design that could be used. It would be better to adopt standard ICAO rules and add additional measures, such as A7000 for VFR, by using other items from the airspace toolbox such as the TMZ.

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Proposed text:	N/A.
CAA response:	Noted.

Commentor:	Humberside Airport - ANSP Response
Page number:	18
Paragraph number:	5.3.5.1 (iii)
Comment:	A2000 is presumably being established solely to provide controllers an indication that a non-controlled IFR aircraft has inadvertently penetrated the Class E airspace? Is there available evidence of the number of non-controlled IFR aircraft that are currently flying in Class G? Our belief is that most aircraft flying IFR seek an ATS so the risk should be very small.
Justification:	There is probably an equal or greater risk of the aircraft pilot forgetting to select A2000 when flying IFR without an ATS in Class G.
Proposed text:	
CAA response:	Noted: Extant arrangements do not readily facilitate the gathering of data to quantify this risk for the following reasons: (i) extant conspicuity codes are not defined as either VFR conspicuity or IFR conspicuity; (ii) not all Class E airspace is additionally notified as TMZ; and (iii) not all airspace infringements are successfully traced to determine the flight rules employed. However, of those States have established Class E airspace, the majority additionally define A7000 as 'VFR conspicuity' and a number also use A2000 for IFR conspicuity.

Commentor:	Humberside Airport - ANSP Response
Page number:	18
Paragraph number:	5.3.5.1 (iv)

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Comment:	Unless frequency monitoring is to be mandated, how does this proposal change anything?
Justification:	A standard approach should be applied across all airspace and not all ANSPs use Frequency Monitoring Codes.
Proposed text:	N/A.
CAA response:	Not accepted: Airspace users might not necessarily operate in accordance with VFR when using a Frequency Monitoring Code (FMC). Additionally, notifying an FMC for the purpose of 'VFR flight within Class E airspace' provides the ANSP with certainty that the pilot is operating in accordance with VFR within Class E airspace. However, if a pilot was flying in accordance with IFR using an FMC within Class G but needed to continue his flight into Class E airspace, the pilot would need to obtain an IFR clearance prior to entry.

Commentor:	Humberside Airport - ANSP Response
Page number:	19
Paragraph number:	5.3.5.1 (v)
Comment:	A0024 has a specific meaning and the nature of the task would suggest that such transponding aircraft should have priority.
Justification:	Within Class E, the A0024 aircraft should be under an ATS from the controlling ANSP and given priority over other aircraft within the area where possible. A0024 also identifies the type of task being undertaken to other agencies. Most operators of aircraft on such tasks would normally prefer to be under an ATS and the task could be undertaken under IFR.
Proposed text:	N/A.
CAA response:	Noted: A0024 will not now be considered for dual purpose, it will remain for conspicuity purposes without reference to flight rules.

Commentor:	Humberside Airport - ANSP Response
Page number:	19
Paragraph number:	5.3.5.2

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Comment:	If, by logic, a threat is perceived from both uncontrolled IFR (A2000), that may have inadvertently penetrated Class E, and from VFR (A7000), there is a greater risk that an aircraft flying under VFR will not observe an IFR aircraft in time to avoid it. So why are these additionally transponding mitigation measures believed to be required?
Justification:	There is equally a risk of a VFR aircraft operating in Class E not observing an IFR aircraft and avoiding it.
Proposed text:	N/A.
CAA response:	Not accepted: The purpose of redefining A7000 as 'VFR conspicuity' and using A2000 for 'IFR conspicuity', is to enable a controller providing an ATS within Class E airspace, additionally notified as TMZ, to provide an air traffic control service to IFR flights that aligns as close as possible with ICAO / SERA requirements. Pilots of VFR flights who intend to operate within Class E airspace additionally notified as TMZ have the following options: (i) if available, select a Frequency Monitoring Code and operate autonomously; or (ii) select A7000 and operate autonomously; or (iii) if without a serviceable transponder, obtain permission to enter the TMZ from the controlling authority notified for the volume of airspace under consideration (as per Policy Statement for radio mandatory zone and transponder mandatory zone); or (iv) receive an ATS in accordance with UK FIS, regardless of transponder carriage circumstances. Pilots of VFR flights that have concerns over their ability to see and avoid IFR flights should obtain the best ATS available to assist them mitigate their concerns. Additionally, within Class E airspace that is not TMZ, extant ATS provision principles will be applied.

Commentor:	Humberside Airport - ANSP Response
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Page number:	19
Paragraph number:	5.3.5.3
Comment:	It is agreed that CAS should all be associated with a TMZ. However, the risk of transponder failure or non-selection of a required SSR code occurring should be assessed to maintain a consistent approach.
Justification:	Increase in safety.
Proposed text:	N/A.
CAA response:	Noted.

Commentor:	Humberside Airport - ANSP Response
Page number:	19
Paragraph number:	5.3.5.4
Comment:	If we trust a flight to fly under IFR, we should trust the pilot to know the airspace that the aircraft is being flown in and their additional responsibilities.
Justification:	The ANSP is responsible for separating against IFR and providing information on VFR where necessary.
Proposed text:	N/A.
CAA response:	Noted.

Commentor:	Humberside Airport - ANSP Response
Page number:	19
Paragraph number:	5.3.5.4 (i)
Comment:	We do not agree with this approach. The Competent Authority, the CAA, should produce a standard solution for all Class E. Such a solution could be based on comments made by ANSPs during this consultation.
Justification:	There should not be different measures applied for each ANSP in different areas of Class E. Standardisation should be the aim to ensure all operators work to common regulations and procedures,

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	preferably to an ICAO-compliant standard to reduce the number of differences across the world.
Proposed text:	N/A.
CAA response:	Noted: Following further consideration of practices within Europe, the following text will be inserted into MATS Part 1, Section 1, Chapter 6: 1B.3 Additionally, pilots of IFR flights must be advised of the change of airspace classification when entering and leaving Class E airspace when the flight is: (1) an unplanned diversion; or (2) no flight plan has been filed at the time a clearance to enter controlled airspace is requested. The associated phraseology is contained within CAP 413.

Commentor:	Humberside Airport - ANSP Response
Page number:	20
Paragraph number:	5.3.5.4 (iii)
Comment:	We do not agree with this approach. The Competent Authority, the CAA, should produce a solution for additional training that might be necessary for flights within Class E. Such a solution could be based on comments made by Flight Training Organisations and Aircraft Operators during this consultation.
Justification:	There should not be different measures applied for each Flight Training Organisation and Aircraft Operator for Class E. Standardisation should be the aim to ensure all operators work to common regulations and procedures, preferably to an ICAO-compliant standard to reduce the number of differences across the world.
Proposed text:	N/A.
CAA response:	Not accepted: The purpose of this paragraph was to remind Flight Training Organisations and Aircraft Operators of the need to ensure that all pilots are fully aware of the characteristics of Class E airspace.

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Commentor:	Humberside Airport - ANSP Response
Page number:	20
Paragraph number:	5.4.2
Comment:	Why would pilots of IFR flights entering Class E airspace need to be alerted when their aircraft enters and leaves Class E airspace? Pilots should know the airspace they are flying through/within. Is this applied elsewhere across other ICAO States? If it is not applied, why would the UK need to apply such mitigation?
Justification:	Standardisation should be the aim to ensure all operators work to common regulations and procedures, preferably to an ICAO-compliant standard to reduce the number of differences across the world.
Proposed text:	N/A.
CAA response:	Noted: The CAA is aware that in a number of European states pilots are advised when they enter and leave Class E airspace; for example, the Netherlands.

Commentor:	Humberside Airport - ANSP Response
Page number:	21
Paragraph number:	6.5.1
Comment:	The timing for the post-implementation review is agreed.
Justification:	Within three years is an appropriate period to gather sufficient evidence.
Proposed text:	N/A.
CAA response:	Partially accepted: The CAA welcomes Humberside's support in this regard, however, the timing of the post implementation review has yet to be decided.

Commentor:	Humberside Airport - ANSP Response
Page number:	31
Paragraph number:	'(i) 2.5.1.2'

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Comment:	Is the intent that other ANSPs who are not responsible for the Class E airspace are to remain clear at all times or could they provide an ATS to VFR aircraft that are transponding that ANSPs allocated SSR codes, especially if the ANSP responsible for that area of Class E does not have the capacity to provide an ATS to VFR aircraft? In addition, is the intent that Frequency Monitoring Code must be assigned to aircraft operating under VFR in Class E?
Justification:	Whilst a code A7000 would clearly identify a VFR aircraft, it may be that the aircraft wishes an ATS but that the ANSP responsible for the Class E airspace is working to capacity. In which case, through a Letter of Agreement (LOA), another ANSP could provide an ATS to VFR aircraft notified to the 'owning' ANSP of the Class E through a specific SSR Code or Codes detailed within an LOA.
Proposed text:	"2.5.1.2 Pilots who wish to operate within Class E airspace in accordance with the VFR without receiving an ATS must display the general VFR conspicuity code A7000 with altitude reporting, or designated Frequency Monitoring Code defined as VFR conspicuity with altitude reporting, where allocated for the area of Class E airspace."
CAA response:	Partially accepted: The proposed text will be adopted to ensure consistency with ENR. 1.6 Paragraph 2.2.5.1. Regarding the questions concerning service delivery, these are outside the scope of this consultation.

Commentor:	Humberside Airport - ANSP Response
Page number:	31
Paragraph number:	'(ii) ENR 1.6 paragraph 2.2.5.6 to state which Frequency Monitoring codes are used for 'VFR conspicuity'.
Comment:	Is the intent to mandate that Frequency Monitoring codes are used for 'VFR conspicuity'? If so why, as it is not mandatory to monitor a frequency within Class E airspace in accordance with ICAO rules.
Justification:	It is not mandated that an aircraft operating under VFR within an area of Class E has to monitor a frequency unless the Class E airspace is associated with an RMZ. Standardisation should be the aim to ensure all operators work to common regulations and

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	procedures, preferably to an ICAO-compliant standard to reduce the number of differences across the world
Proposed text:	“ENR 1.6 paragraph 2.2.5.6 to state which Frequency Monitoring codes are used for ‘VFR conspicuity’ where a VFR conspicuity code is published for use.”
CAA response:	Partially accepted: The following will be inserted into ENR 1.4: 2.5.1.2 Pilots who wish to operate within Class E airspace in accordance with VFR without receiving an ATS must display either: a) the VFR conspicuity code A7000, with altitude reporting; or b) the Frequency Monitoring Code defined as VFR conspicuity with altitude reporting established for use in that airspace (see ENR 1.6). The proposed text is accepted; however, following further consideration of the intent of the text, the following refinement will be adopted: “ENR 1.6 paragraph 2.2.5.6 to state which Frequency Monitoring codes are used for ‘VFR conspicuity within Class E airspace’ where a transponder code is notified for such use.”

Commentor:	Humberside Airport - ANSP Response
Page number:	32
Paragraph number:	‘10A.5’
Comment:	Is the MATS Part 1 statement that “unknown aircraft are to be separated” being similarly reviewed for other CAS?
Justification:	If it is considered that there is insufficient safety-related evidence to maintain the MATS Part 1 entry for Class E airspace, this should be equally applicable for other CAS. Where there is no safety-related evidence, the operating methods of other ICAO States should be reviewed. Standardisation should be the aim to ensure all operators work to common regulations and procedures, preferably to an ICAO-compliant standard to reduce the number of differences across the world.

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Proposed text:	N/A.
CAA response:	Noted: The requirement to separate controlled IFR flights from unknown aircraft is applied equally to all controlled airspace classifications, see MATS Part 1, Section 1, Chapter 6, Paragraph 15.1 through 15.6. This separation requirement enables the UK to satisfy the objectives of an ATS as stated within ICAO Annex 11 and SERA.7001. As Class E airspace permits autonomous VFR flight, the proposed VFR conspicuity code provides controllers a method of discriminating between 'unknown' IFR flights and 'unknown' VFR flights to enable the proposed amendment to MATS Pt 1 to elevate against VFR flights displaying VFR conspicuity. In airspace classifications A - D, the intentions of all flights must be known; an aircraft displaying the proposed VFR conspicuity code merely indicates the applicable flight rules, the code does not indicate the pilot's intentions.

Commentor:	BAE Systems Warton
Page number:	N/A
Paragraph number:	N/A
Comment:	BAE Systems Warton has reviewed the Class E Change Proposals consultation document and supports the CAA's preferred Option D. As the amount of Class E airspace within which Warton has autonomy to operate is low, the impact of any change is considered minimal. However, as the UK seeks to consider the implications of Regulation (EU) 2017/373 - the Air Traffic Management Common Requirements Implementing Regulation (ATM IR), it is worth noting that any change to Class E principles made as part of this consultation may have an unintended impact should there be a requirement for airspace changes as part of Regulation 2017/373.
Justification:	N/A
Proposed text:	N/A
CAA response:	Noted: The CAA welcomes BAE System's support for its preferred option.

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Commentor:	Isle of Man Civil Aviation Administration
Page number:	18
Paragraph number:	5.3.5
Comment:	Our preferred solution would be Option C : Adopt ICAO Class E Airspace ATS provision principles without modification and assume that all unknown traffic within class E airspace is operating in accordance with VFR.
Justification:	As the requirement seems to relate only to mode C transponding traffic, there is obviously a question regarding non-transponding traffic, and traffic which is not reporting a mode C level. If there is no requirement to provide a “gap” in these circumstances, where no level information is available, then why is a gap required where the level is indicated? For unknown mode C transponding aircraft, it would seem that the guidance on “relevant traffic” in CAP774 UK Flight Information Services chapter 3 paragraph 3.5 is appropriate here. This implies that traffic indicating more than 3000ft (even unverified) from the level of the controlled traffic is of no significance, but under the current class E procedures traffic with even greater vertical displacement would require avoiding action. Our preferred Option C removes the requirement to provide a “gap” between known IFR and unknown VFR traffic, which clears up this inconsistency and is commensurate with the reduction in workload as is sought. This option also realigns with the ICAO requirements for class E airspace, which makes service provision more transparent to flight crews with the attendant safety benefits. Considering the changes to the conspicuity squawks raises other issues. An aircraft operating in class G is able to change between VFR and IFR to suit their needs and the prevailing weather conditions. Under the proposal this would necessitate a change of squawk between 7000 and 2000 each time the pilot changes flight rules, possibly several times per flight. This obviously leads to significant potential for the incorrect conspicuity squawk being selected at any particular time, including while operating autonomously in class E. This is without considering that pilots may simply be unaware of the change and default to 7000 in all circumstances as they are currently used to doing, which is obviously not fail-safe. There is also an unfair increase in workload

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	placed upon flight crews operating outside controlled airspace who have no intention of transiting class E. The disadvantage of Option C stated in the consultation document is that it assumes that all unknown aircraft entering class E airspace are operating under VFR and this may not always be the case. However, our issue with Option D is that it relies upon the assumption that all unknown aircraft have set the correct VFR or IFR conspicuity squawk and, indeed, this may not always be the case. If Option C were to be implemented, the issue of class E infringing IFR traffic could be appropriately resolved by the application of CAP774 UK Flight Information Services Appendix A: Duty of Care which states, inter alia, “...there is a need for controllers/FISOs to remain free to use their professional judgement to determine the best course of action for them to take for any specific situation...”. This would be consistent with CAP493 Manual of Air Traffic Services – Part 1 section 1 chapter 1 paragraph 1.2: “...nothing in this manual prevents controllers from using their discretion and initiative in response to unusual circumstances, which may not be covered by the procedures herein.” In summary the proposed Option D seems to be based on lack of trust in IFR aircraft obtaining a clearance to cross or remaining outside class E, but assumes that the mode A squawk of all relevant traffic is set correctly. On balance, taking into account the needs of ANSPs and flight crews, we consider that the adoption of ICAO principles as outlined in Option C, bolstered by the duty of care safeguards from the UK FIS principles, would be the most appropriate course of action.
Proposed text:	N/A
CAA response:	Noted: Whilst the assumption that all ‘unknown’ flights operating within Class E airspace are operating in accordance with VFR is not unreasonable, the possible infringement of Class E airspace by an ‘unknown’ IFR flight cannot be completely discounted. Therefore, under extant arrangements there is a need to separate controlled IFR flights from all ‘unknown’ flights by ensuring “radar returns, however presented, are not allowed to merge”. The purpose of the proposed VFR conspicuity code (as proposed in option D) provides controllers a method of discriminating between ‘unknown’

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	IFR flights and 'unknown' VFR flights to enable the proposed amendment to MATS Pt 1 to elevate against VFR flights displaying VFR conspicuity. Use of the word "may" in proposed paragraph 10A.5 is consistent with extant MATS Pt 1, paragraph 10A.4(2) text. Unlike option C, option D enables pilots, through conspicuity codes, to indicate the flight rules being applied at the time. As for pilots not being aware, SERA.2010(b) outlines the pilot's pre-flight action responsibilities. Furthermore, in comparison to option D, option C generates a conflict when considering the objectives of ATS. Option C does not readily enable the controller to discriminate between unknown VFR and unknown IFR flights for determining the extent to which they should apply their professional judgement. In the absence of being able to make this determination, controllers may resort to applying separation against all 'unknown aircraft' i.e. effectively continuing with extant practice (option A) or implementing option B.
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Commentor:	NATS
Page number:	19
Paragraph number:	5.3.5.3
Comment:	Clarification required that the line "non-transponding unknown aircraft would be deemed to be operating beneath those control areas" does mean that controllers can deem such contacts to be below Class E airspace and therefore no action is required with respect to aircraft within the Class E airspace above.
Justification:	Clarity required that the text in this paragraph is not merely an observation but instead can be translated into an ATC procedure.
Proposed text:	Appropriate MATS Part 2 entry required.
CAA response:	Accepted: MATS Pt 1, Paragraph 10A.5 will be modified and a new 10A.6 and 10A.7 added as follows: 10A.5 Unverified Mode S altitude reporting or Mode C data may be used for separation purposes within controlled airspace as follows:

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	(1) for IFR flights within Class A, C and D airspace, and VFR flights within C airspace, a minimum vertical separation of 5,000 feet, or an alternative approved minima within MATS Part 2, and surveillance returns however presented are not allowed to merge; (2) for IFR within Class E airspace, except against aircraft displaying VFR conspicuity or a Frequency Monitoring Code, a minimum vertical separation of 5,000 feet, or an alternative approved minima within MATS Part 2, and surveillance returns however presented are not allowed to merge; and (3) for IFR flights within Class E airspace, against aircraft displaying VFR conspicuity or a Frequency Monitoring Code, wherever practicable, pass traffic information and if requested by the pilot or when deemed necessary by the controller, suggest traffic avoidance advice. Note: The procedure in (2) & (3) only applies to Frequency Monitoring codes notified for the purposes of VFR conspicuity. 10A.6 Aircraft that do not meet the published operating requirements for a particular volume of TMZ may be deemed to be operating outside that TMZ unless: (1) the controller has approved such an aircraft to enter TMZ airspace without identifying the aircraft using an appropriate method; or (2) information received indicates that an aircraft is lost or has experienced a radio failure. 10A.7 When suggesting traffic avoidance advice, controllers shall aim to prevent surveillance returns from merging.
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Commentor:	NATS
Page number:	11
Paragraph number:	4.2

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Comment:	The removal of the requirement to advise the pilot of an aircraft operating under IFR when they transition from Class D to Class E and vice versa is a significant workload issue and should be removed for this reason. However, this Option for Change paragraph explains the rationale for having to consider the link between service provision principles and phraseology, but stops short of actually providing any options for phraseology. Does the preferred Option D permit the removal of this undesirable phraseology requirement?
Justification:	Ambiguity.
Proposed text:	
CAA response:	Noted: Following further consideration of practices elsewhere within Europe, the following text will be inserted into MATS Part 1, Section 1, Chapter 6 (and CAP 413 amended accordingly): 1B.3 Additionally, pilots of IFR flights must be advised of the change of airspace classification when entering and leaving Class E airspace when the flight is: (1) an unplanned diversion; or (2) no flight plan has been filed at the time a clearance to enter controlled airspace is requested. The associated phraseology is contained within CAP 413.

Commentor:	NATS
Page number:	30
Paragraph number:	Appendix D
Comment:	The dual use of 0024 for two different purposes seems to have the potential for error. For example a controller unaware of a calibration flight taking place in adjacent Class E airspace incorrectly assumes the aircraft to be VFR within Class E.
Justification:	Potential for misinterpretation of the procedure.
Proposed text:	

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CAA response:	Accepted: A0024 will not now be amended considered for dual purpose, it will remain for conspicuity purposes without reference to flight rules.
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Commentor:	NATS
Page number:	
Paragraph number:	
Comment:	A general comment on the proposals: Working through some practical examples of how we would apply the proposed procedure in Option D, concern exists that the SSR code displayed by an unknown aircraft together with the Mode C value will determine the correct course of action. However, there could be a number of different combinations that require a different course of action. This makes it difficult for controllers to remember the correct procedure they should follow in a given situation and increases the potential for inadvertent non-conformance to procedure should they select an incorrect option. For example, when vectoring an IFR aircraft within Class E airspace where the base is base of 4500ft an unknown aircraft is observed displaying 0020 with Mode C of 4000ft. This would need 5000ft vertical separation and the returns don't merge, whereas an aircraft displaying 7000 at 4000ft would be 5000ft and the returns may merge (under paragraph 10A.5).
Justification:	
Proposed text:	
CAA response:	Not accepted: Extant Class E airspace ATS requirements state "... radar returns, however, presented, are not allowed to merge unless the pilot in receipt of traffic information advises that he intends to avoid the other aircraft without ATC assistance." The proposal enables the detection of the flight rules employed by pilots of 'unknown aircraft' equipped with serviceable transponders, which in Class E airspace facilitates the application of ATS service provision principles that are closer aligned with ICAO and SERA requirements. Therefore, within Class E airspace, with exception

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	to IFR flights airspace against aircraft displaying VFR conspicuity, radar returns, however presented, are not allowed to merge. Within Class E airspace additionally notified as TMZ, unless a controller has granted permission for a VFR flight that cannot comply with the conditions of the TMZ to enter, all VFR flights within Class E + TMZ airspace operating autonomously will be displaying VFR conspicuity. Autonomous VFR flights in transponder or non-transponder-equipped aircraft may operate within Class E airspace that is not additionally notified as TMZ. In comparison to airspace notified as TMZ, which requires aircraft to comply with the TMZ requirements, unless permission has been granted by the designated ATSU, SERA.13001(a) applies to any aircraft that has a service transponder. The exemplar scenario is analogous to traffic observed in Class G airspace beneath airspace classifications A – D. The ability to detect which flight rules are employed by aircraft observed beneath Class E airspace should not influence the provision of ATS in controlled airspace above. However, in the case of non-transponding returns, unless controlling authority for the airspace has given permission for such aircraft to enter Class E airspace that is also TMZ, non-transponding aircraft should be operating beneath Class E + TMZ airspace. In comparison, within non-TMZ Class E airspace it is not possible to determine whether a non-transponding aircraft is in or beneath it. The following will be added to MATS Pt 1, Section 1, Chapter 6: 10A.6 Aircraft that do not meet the published operating requirements for a particular volume of TMZ may be deemed to be operating outside that TMZ unless: (1) the controller has approved such an aircraft to enter TMZ airspace without identifying the aircraft using an appropriate method; or (2) information received indicates that an aircraft is lost or has experienced a radio failure.
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Commentor:	NATS
Item	1
Page number:	General
Paragraph number:	General
Comment:	Class E as a suitable airspace classification.
Justification:	NATS does not believe that the CAA decision to impose Class E in UK airspace, particularly within the complex LTMA environment around Farnborough, is an appropriate classification for where safety benefits over Class G airspace are deemed necessary. We believe Class D would be the minimum classification to provide a meaningful safety improvement over Class G airspace. Compliance with the objectives of ATS will result in three separate ATS units operating in the same piece of airspace, and whilst this may be manageable in a known Class D environment, unknown VFR operating in Class E airspace will present unique difficulties in ensuring traffic information on relevant traffic, where passed, is known to all parties as part of any co-ordination. For example during an interaction where Traffic Information/Traffic Avoidance is considered, is it realistic for all such instances to be co-ordinated between the relevant units. At this stage it is determined that such complexity may prohibit all action being co-ordinated between all parties. Class E obligations with respect to the prioritisation of IFR against VFR are subject to workload and as Traffic Information/Traffic Avoidance situations are both transient and unpredictable, these limitations need to be recognised in the Class E rules.
Proposed text:	In order to support CAP1678, clarification is required around delineation of requirements/rules around this complex set of interactions and so NATS requests some guidance from the CAA on the management and prioritisation of mixed VFR/IFR operations where more than one ATSU is providing an ATS in the airspace. As part of this we propose the CAA consider stating that ATS obligations shall be considered in isolation and there should not be a requirement to co-ordinate or communicate individual actions taken. Such guidance is an essential enabler for the successful SMS validation of the new airspace.