Radio and Transponder Mandatory Zones

Consultation report on revised SARG Airspace Policy Statement

April 2021

1 Introduction

1.1 At a meeting of the National Air Traffic Management Advisory Committee (NATMAC) on 15 October 2020, the CAA presented proposals to amend our Airspace Policy Statement on Radio Mandatory Zones (RMZ) and Transponder Mandatory Zones (TMZ). This led to a consultation with the members of the NATMAC from 26 October 2020 to 18 December 2020.

1.2 The main purpose of reviewing and proposing amendments to the Policy for RMZ and TMZ was to seek to utilise alternative forms of electronic conspicuity data, for example ADS-B, within a TMZ. This, in turn, being driven by our work on the Airspace Modernisation Strategy and, specifically, the delivery of Initiative 11.

1.3 The CAA has now concluded its assessment of the responses from members of the NATMAC. This report provides an overview of the key themes identified by NATMAC members, a detailed consultation response document, and a brief on how the CAA intends to progress the amendment of the Policy for RMZ and TMZ.

2 Overview of responses

2.1 The CAA received a significant number of comments from 10 different stakeholder organisations, and we are grateful for the level of engagement that we received with this consultation. Taking advice from our Unmanned Aircraft Systems (UAS) Unit, we also extended the consultation to a number of key UAS stakeholders that were not fully represented on the NATMAC.

2.2 A detailed consultation response document is contained at Annex A where the CAA has provided an individual response to each comment received from stakeholders. In this report, we will highlight some issues of note that affect how we will proceed.

3 Issues of note

3.1 End of the UK/EU Agreement Transitional Period

3.1.1 When the UK was a member of the European Union (EU) some aviation law was made by the EU that had direct legal effect, as a European Regulation, in the UK. Where these Regulations were applicable in law at 2300 on 31 December 2020, they have been retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018. In the specific context of this Policy for RMZ and TMZ, this means that the Standardised European Rules of the Air (SERA) have been retained in UK legislation and are now referred to as Reg UK (EU) No 923/2012 SERA.

3.1.2 On 31 December 2020, the CAA adopted[1] the acceptable means of compliance (AMC) and guidance material (GM) originally published by the European Union Aviation Safety Agency (EASA) as its policy with regard to compliance with the relevant EU law that has been retained under the European Union (Withdrawal) Act 2018; as such, the CAA is able to amend or create new AMC[2] and GM.

3.1.3 As a consequence, we have been advised by the CAA's Office of the General Counsel that much of the content of the Policy for RMZ and TMZ is considered to be AMC and GM to SERA.6005 'Requirements for communications and SSR transponders'. The CAA intends to:

(a) Retain an abbreviated Policy for RMZ and TMZ that will:

(i) Explain the background to and purpose of RMZ and TMZ;

(ii) Describe how the CAP 1616 airspace change process applies to the establishment of RMZ and TMZ;

(iii) Describe the implementation timeline for and applicability of the revised policy on RMZ and TMZ; and

(iv) Contain hyperlinks to the AMC and GM that will be hosted on the CAA website. Note that we will be unable to co-locate the AMC and GM with the policy.

(b) Develop the content relating to the establishment and operation of RMZ and TMZ which was consulted upon with the NATMAC into AMC and GM to SERA.6005. Note that:

(i) at present, no AMC or GM to SERA.6005 exists; and

(ii) where we have indicated in Annex A that we have amended (or intend to amend) text in a specific way, these proposals will be carried forward into the new abbreviated policy, AMC and/or GM.

(c) Promulgate the AMC and GM through a CAA ORS9 Decision and through the CAA's UK Regulations 'micro-site' which contains Reg UK (EU) No 923/2012 SERA and its associated AMC and GM.

3.1.4 At present, we are unable to state when we will complete the process of developing the AMC and GM and associated ORS9 Decision documentation. However, we will utilise appropriate means of communication to promulgate the publication of the documents described above and will seek to engage with stakeholders to identify an appropriate implementation timeline for them.

3.2 Unmanned aircraft

3.2.1 A number of stakeholders commented upon the exception permitted to 'small' unmanned aircraft to not comply with the requirements of a TMZ. The wording of the text presented to NATMAC members in October 2020 reflected the content of Air Navigation Order (ANO) 2016 at the time of drafting; i.e. that Article 23(1)(c) described exceptions from application of provisions of the Order for 'small unmanned aircraft'. This included an exception from the requirement for carriage of radio navigation equipment in notified airspace; i.e. an exception from the requirement for carriage and operation of a Mode S SSR transponder.

3.2.2 Article 23(1)(c) was amended in late 2020 to state that an unmanned aircraft that is not subject to certification (i.e. it is in the Open/Specific category) is not subject to the rest of the ANO other than

[1] ORS9 CAA Decision No 1 "Decision enabling EASA Acceptable Means of Compliance, Guidance Material and Certification Specifications adopted by EASA to continue to be valid in the United Kingdom from Exit Day onwards unless and until amended or withdrawn by the CAA", dated 22 May 2021.

[2] 'Acceptable means of compliance (AMC)' means non-binding standards adopted by the competent authority to illustrate means to establish compliance with Regulation (EC) No 216/2008 and its implementing rules (UK (EU) Reg No 2017/373 Annex I Part-Definitions).

those exceptions listed. In the Open category (i.e. less than 25kg), within visual line of sight (VLOS) and below 400ft, typically, such unmanned aircraft are not required to comply with the requirements of a TMZ or RMZ. However, the CAA may 're-apply' requirements for Specific category operations (i.e. those that we issue an 'operational authorisation' for), if the CAA deem it necessary following a suitable risk assessment submitted by the unmanned aircraft operator.

3.2.3 This is the legislative position today and we will continue to review that position to ensure that it maintains pace with technology, airspace and air traffic management concepts as they develop.

3.3 The future

3.3.1 Stakeholder responses indicated a need to consider other forms of electronic conspicuity data and the future as it relates to the integration and management of unmanned aircraft[3]. The CAA is considering the next phase of development of SERA.6005 which could see us establish a clear delineation between a TMZ and a surveillance mandatory zone (SMZ); this latter structure being linked only to other forms of electronic conspicuity data, and could be a key enabler for the development of a unified approach to unmanned aircraft systems traffic management. Moreover, the CAA will, this year, begin the process of developing its electronic conspicuity standard (CAP1391) to increase its suitability for detection and useability on the ground. We encourage input from all interested stakeholders in developing this standard.

3.3.2 As such, the output from this consultation (i.e. the revised Policy for RMZ and TMZ and the accompanying AMC and GM) should be seen as a first step towards the delivery of Initiative 11 of the Airspace Modernisation Strategy.

4 Conclusion

4.1 The CAA is grateful for the level of engagement that we have received with this consultation, with comments from stakeholders contributing to improvements in the RMZ and TMZ provisions.

4.2 The UK's exit from the EU has affected how we will proceed but, the redevelopment of the RMZ and TMZ provisions into AMC and GM to SERA.6005 can be seen as positive in that it will increase their visibility to all stakeholders.

4.3 Whilst unmanned aircraft that are not subject to certification will, typically, remain exempt from the requirements of a RMZ and TMZ, technology continues to develop at pace. The development of a unified approach to unmanned aircraft systems traffic management is likely to compel us to undertake further work on airspace structures such as RMZ and TMZ.

[3] The CAA's CAP 1868 'A Unified Approach to the Introduction of UAS Traffic Management' contains relevant information.

Annex A

RMZ/TMZ Airspace Policy Statement – Consultation Response Proforma

Stakeholder:	Skyports
Line number:	n/a
Paragraph number:	3.2.3 [of the CAA's proposal document]
Comment:	This is welcomed as it is harder to detect Mode A and C. However, in a lot of areas where BVLOS drone operators want to establish a very low level TMZ (0-400ft AGL) to create an additional safety layer, the SSR interrogator coverage will not be adequate to enable passive systems to detect Mode-S equipped aircraft, as these still rely on a direct line of sight to the nearest SSR interrogator system. In order to enable TMZs to support BVLOS drone operations, the CAA will either have to allow the means of EC to be limited to ADS-B only or they will need to allow low power SSR interrogators to be installed and operated by drone operators as well to create additional low level Mode-S coverage
Proposed revised text:	
Justification:	
CAA Response	Noted. In response to ICAO State Letter 2019/77 the CAA is considering the implications of frequency congestion on 1030 MHz and 1090 MHz below 500 ft.

Stakeholder:	Skyports
Line number:	n/a
Paragraph number:	4.2 [believed to refer to the CAA's proposal document]
Comment:	Suggest 'altitude' is included in addition to flight levels, as drones will operate below transition level.
Proposed revised text:	
Justification:	
CAA Response	Not accepted. It is assumed that Skyports is referring to the text at Annex A2.2(b)(iv) that relates to the initial call to be made by a pilot to the RMZ Controlling Authority. The term 'level' does not refer to flight levels but is a generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level (UK (EU) Reg No 923/2012 Standardised European Rules of the Air (SERA) Article 2(93)).

Stakeholder:	Skyports
Line number:	n/a
Paragraph number:	4.3 [believed to refer to the CAA's proposal document]
Comment:	Further clarification would be beneficial here. If similar to special VFR crossing for controlled airfields this could force the TMZ owner to have primary surveillance over the area, which could make the process uneconomical.
Proposed revised text:	

Justification:	
CAA Response	Noted. There is no requirement, specified or implied, in the policy statement for a TMZ Airspace Controlling Authority to deploy primary surveillance radar within a TMZ. The reference to special VFR clearances is not understood. Special VFR flight means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

Stakeholder:	Skyports
Line number:	n/a
Paragraph number:	4.3 [believed to refer to the CAA's proposal document]
Comment:	Further clarity required. TMZ requirements should apply to all airspace users including low level drone operations, however should consider different technology requirements (for example if an LTE tracker is being used), unless of course the TMZ applies >400ft AGL. The 'recognised traffic environment' could contain acceptable and interoperable levels of conspicuity at all levels. All traffic should comply with a TMZ regardless, it is an airspace requirement and unmanned aircraft should be included.
Proposed revised text:	
Justification:	
CAA Response	Noted. The text relating to 'small unmanned aircraft' reflected the content of Air Navigation Order (ANO) 2016 at the time of drafting. This Article was amended in late 2020 and the exemption for 'small unmanned aircraft' removed. Article 23(1)(c) now says that an unmanned aircraft that is not subject to certification (i.e. in the Open/Specific category) is not subject to the rest of the ANO other than those exceptions listed. In the Open category (i.e. less than 25kg), within visual line of sight (VLOS) and below 400ft, typically, such unmanned aircraft are not required to comply with the requirements of a TMZ or RMZ. However, the CAA may 're apply' requirements for Specific category operations (i.e. those that we issue an 'operational authorisation' for), if the CAA deem it necessary following a suitable risk assessment submitted by the unmanned aircraft operator. The CAA will amend the text to read: "Pursuant to Article 23(1)(c) of ANO 2016[3] and notwithstanding the provisions within ANO 2016 relating to "flight restriction zones", other than those unmanned aircraft that are subject to certification[4], unmanned aircraft are not required to comply with the requirements of a notified RMZ/TMZ. [3] ANO 2016 Article 23 describes exceptions from application of provisions of the Order for certain classes of aircraft, with paragraph (1)(c) relating to any unmanned aircraft other than those unmanned aircraft that are subject to certification. [4] ANO 2016 Schedule 1 defines "Unmanned aircraft subject to certification" as any unmanned aircraft forming part of a UAS required to be certified under Article 40(1)(a), (b) or (c) of the Unmanned Aircraft Delegated Regulation."

Stakeholder:	The Honourable Company of Air Pilots
Line number:	33
Paragraph number:	2.1.f
Comment:	In anticipation of ADS-B in+out being more broadly available/employed, 'Known traffic' could be defined in terms of pilot knowledge as well as ATCO/FISO knowledge
Proposed revised text:	Add: "When ADS-B in/out is more broadly available/employed, it is anticipated that this could be defined in terms of pilot knowledge as well as ATCO/FISO knowledge, reflecting the additional information available directly to the pilot.
Justification:	The change proposed flags up that in areas where traffic density makes it appropriate, it may be possible to designate TMZ without air traffic control, leaving separation and sequencing responsibility with the pilot (and/or UAV operator). This reinforces the notion that adopting electronic conspicuity has the potential to reduce further pilot dependency on air traffic services.
CAA Response	Not accepted. The term 'known traffic' has relevance to ATS providers as a means of internal communication between ATS personnel to convey the meaning that they are aware of both the details and intentions of the flight; this includes flight plan information whether filed as a full or an abbreviated flight plan. Electronic conspicuity will not convey this same meaning to flight crew, only the 3-D trajectory of a conflicting aircraft.

Stakeholder:	NATS
Line number:	38-46
Paragraph number:	(h) and (i)
Comment:	Will the use of EC devices with Transponder Mandatory Zones cause HF problems in the future, if the technology is rolled out across the UK? From both a pilot and a controller perspective, transponder means transponder, and everyone knows what this technology is. The use of a more generic term would be advantageous. The text in para (h) and (i) is confusing as it mentions the fact that TMZs are transponder areas but also mentions that they could also employ EC devices. Therefore, in line with other changes e.g. Radar Service has changed to Surveillance Service, would it not be better to name these areas "Surveillance Mandatory Zones (SMZ)" rather than TMZs? This will differentiate the change to all stakeholders and eliminate any potential HF risk. Imagine a future scenario where an aircraft flies from an existing TMZ towards a TMZ which now has EC capability. How will the pilot know easily what the equipage rules are for EC within the new TMZ?
Proposed revised text:	Add to the Policy "Surveillance Mandatory Zones (SMZ)" where the use of EC devices is permitted.
Justification:	HF related issues and consistent use of the term "Surveillance".
CAA Response	Partially accepted. The policy statement does not seek to alter the meaning of transponder and the CAA requirement for flight within a TMZ is clear; all flights operating in airspace designated by the competent authority as a TMZ shall carry and operate SSR Mode S Elementary

	Surveillance transponders. These aspects are enshrined in law through UK (EU) Reg No 932/2012 SERA SERA.6005. However, the revised policy statement permits ANSPs, as TMZ Controlling Authorities, to prescribe alternative provisions for that particular airspace which may include the use of alternative forms of electronic conspicuity device. In order to avoid confusion, the CAA will amend the definition of a 'recognised air traffic environment', as follows: "'Recognised air traffic environment' is the situation which results from the deployment of a transponder mandatory zone (TMZ) where all air traffic within a defined volume of airspace is conspicuous to air traffic services through the carriage and operation of a Mode S SSR transponder (unless operating in compliance with alternative provisions prescribed for that particular airspace by the TMZ Controlling authority that will achieve a cooperative electronic conspicuity environment), but where there is no requirement for air traffic to maintain continuous air-ground voice communication watch." Acknowledging the human factors associated with the use of alternative forms of electronic conspicuity data within a TMZ, the CAA is considering the next phase of development of this legislation could see us establish a clear delineation between a TMZ and a surveillance mandatory zone (SMZ) which could be linked only to other forms of electronic conspicuity data.

Stakeholder:	BGA
Line number:	48-49
Paragraph number:	3.1
Comment:	BGA challenge the wording.
Proposed revised text:	The objective of a RMZ/TMZ is to enhance the conspicuity of aircraft operating within, or in the vicinity of, **complex or otherwise busy unprotected airspace**
Justification:	If a section of airspace is not complex or busy it doesn't need protection.
CAA Response	Accepted. The CAA accepts the need to revise the wording relating to "complex, or otherwise busy unprotected airspace"'. The CAA will amend the text to read: "The objective of a RMZ/TMZ is to enhance the conspicuity of aircraft operating within, or in the vicinity of, complex, or otherwise busy unprotected airspace, in order to maintain a balance between safe, efficient operations and fair, equitable access for all airspace users."

Stakeholder:	GAA
Line number:	48-49
Paragraph number:	3.1
Comment:	GAA challenges the wording.
Proposed revised text:	Change from: The objective of a RMZ/TMZ is to enhance the conspicuity of aircraft operating within, or in 48 the vicinity of, complex, busy or otherwise

	unprotected airspace, in order to maintain a balance between safe, efficient operations and fair, equitable access for all airspace users. to: The objective of a RMZ/TMZ is to enhance the conspicuity of aircraft operating within, or in the vicinity of, complex or otherwise busy unprotected airspace, in order to maintain a balance between safe, efficient operations and fair, equitable access for as many airspace users as possible.
Justification:	If a section of airspace is not complex or busy it doesn't need protection.
CAA Response	Partially accepted. The CAA accepts the need to revise the wording relating to "complex, or otherwise busy unprotected airspace'. The CAA do not accept the insertion of the caveat "…fair, equitable access for as many airspace users as possible." The text in paragraph 3.1 is based on that contained in the CAA (Air Navigation) Directions 2017 (as amended) which states that the CAA must seek to ensure "that the needs of all airspace users is reflected on an equitable basis". The CAA consider that it would be inappropriate to caveat this text in the way proposed. The CAA will amend the text to read: "The objective of a RMZ/TMZ is to enhance the conspicuity of aircraft operating within, or in the vicinity of, complex, or otherwise busy unprotected airspace, in order to maintain a balance between safe, efficient operations and fair, equitable access for all airspace users."

Stakeholder:	The Honourable Company of Air Pilots
Line number:	56
Paragraph number:	3.1
Comment:	Similar to the comment on line 33, future safety awareness includes ADS-B-derived STCA and MSAW.
Proposed revised text:	Add a bullet point as follows: "in the future, when ADS-B in/out is more broadly available/employed, it is anticipated that enhanced conspicuity could enable on-board STCA and MSAW without reliance on an air traffic service."
Justification:	Supports the notion that adopting electronic conspicuity has the potential to reduce further pilot dependency on air traffic services.
CAA Response	Noted. Noting that paragraph 3.1 already makes reference to the contribution of conspicuity to airborne collision and/or avoidance systems, STCA and MSAW are ground-based safety nets (SKYbrary is a useful resource that has related articles) and thus do not relate to airborne systems. The value of electronic conspicuity in mitigating the risk of MAC is well understood, as is the potential role of ADS-B (through TIS-B) in improving a pilot's situational awareness of proximate traffic. Accepting the value of a terrain avoidance and warning system (TAWS) in mitigating the risk of CFIT, the CAA is unsure of the value of ADS-B in this regard.

Stakeholder:	BGA
Line number:	66-67

Paragraph number:	4.3
Comment:	The change sponsor should be instructed to demonstrate change requirements – not just identify them.
Proposed revised text:	RMZ/TMZ should be of the minimum dimensions practicable to meet the safety requirements as demonstrated by the change sponsor.
Justification:	The change sponsor should quantitatively DEMONSTRATE safety requirements for a change…'IDENTIFYING' them is not sufficient
CAA Response	Not accepted. Paragraph 3 of the extant airspace policy statement states that "RMZ or TMZ should be of minimum practical dimensions to meet the safety requirements" but does not state the source of those safety requirements. Paragraph 4.3 of the revised policy seeks to address this by placing this requirement upon airspace change sponsors. Airspace change sponsors are required to comply with the airspace change process detailed within CAP 1616 and the 'safety requirements' are one aspect of the justification that airspace change sponsors are required to provide to support their proposal. The airspace change process has been designed to reflect modern standards for regulatory decision-making, and is fair, transparent, consistent, and proportionate. Stage 4a of the Airspace Change Process requires sponsors to submit their Final Options Appraisal which includes the safety assessment. The CAA assesses the safety case prior to reaching a decision on the proposal.

Stakeholder:	GAA
Line number:	66-67
Paragraph number:	4.3
Comment:	The change sponsor should be instructed to demonstrate change requirements – not just identify them. Although the CAP1616 process should ensure this there is no harm in stating it.
Proposed revised text:	Change from: RMZ/TMZ should be of the minimum dimensions practicable to meet the safety requirements identified by the change sponsor. To: RMZ/TMZ should be of the minimum dimensions practicable to meet the safety requirements as demonstrated by the change sponsor.
Justification:	The change sponsor should quantitatively DEMONSTRATE safety requirements for a change…'IDENTIFYING' them is not sufficient
CAA Response	Not accepted. Paragraph 3 of the extant airspace policy statement states that "RMZ or TMZ should be of minimum practical dimensions to meet the safety requirements" but does not state the source of those safety requirements. Paragraph 4.3 of the revised policy seeks to address this by placing this requirement upon airspace change sponsors. Airspace change sponsors are required to comply with the airspace change process detailed within CAP 1616 and the 'safety requirements' are one aspect of the justification that airspace change sponsors are required to provide to support their proposal. The airspace change process has been designed to reflect modern standards for regulatory decision-making, and is fair, transparent, consistent, and proportionate.

	Stage 4a of the Airspace Change Process requires sponsors to submit their Final Options Appraisal which includes the safety assessment. The CAA assesses the safety case prior to reaching a decision on the proposal.

Stakeholder:	NATS
Line number:	66-69
Paragraph number:	4.3
Comment:	There are many instances where, for the simplicity of airspace design and comprehension of the airspace users it is preferable for the RMZ/TMZ to not be the "*minimum dimensions practicable*". The introduction of numerous TMZs in the future, each with a potential different sponsor and ANSP, could result in a confusing patchwork effect over the UK. The safety implications of this and the possibility of the risk of increased infringements or required EC equipage required should be taken into account when choosing the optimal size of a TMZ.
Proposed revised text:	Remove "RMZ/TMZ should be of the minimum dimensions practicable to meet the safety requirements identified by the change sponsor."
Justification:	Simplification of design of TMZ/RMZ boundaries to aid identification by airspace users. E.g. abutting with an existing TMZ, or simplifying the boundary using "rubber-banding".
CAA Response	Not accepted. Acknowledging the importance of the simplicity of airspace design and comprehension of that airspace design by airspace users, our guiding principles in airspace design are that it is the minimum required to maintain a high standard of air safety, that the needs of UK airspace users are reflected on an equitable basis and that we comply with our international obligations. Paragraph 4.3 reflects these principles by requiring RMZ/TMZ to be of the "minimum dimensions practicable to meet the safety requirements identified by the change sponsor". These safety requirements should be expected to address issues such as design simplicity and comprehension by airspace users. "Minimum dimensions practicable" is considered by the CAA to include, amongst other things, design complexity, taking into consideration adjacent airspace structures, and risk of infringements. All stakeholders will have an opportunity to comment on a proposed design at the engagement phase of the CAP 1616 process and can highlight any issues they feel exist if these have not already been addressed in key stakeholder engagement. The ACP process requires a sponsor to respond to each of these comments, explaining why they disagree with a response if this scenario arises. These comments and responses are incorporated into the sponsor's consultation response document which is assessed by the CAA prior to a decision to approve the airspace change proposal.

Stakeholder:	GAA
Line number:	68-69
Paragraph number:	4.3

Comment:	As currently written the English is incorrect for the intended meaning. Using the existing Stansted TMZ airspace as an example it is surrounded by Class D and Class G airspace.
Proposed revised text:	Change from: it adopts the background classification of the surrounding airspace to: it adopts the background classification of the airspace that it is embedded within
Justification:	Clarity, particularly for those whose first language is not English
CAA Response	Accepted. The CAA will amend the text to read: "The existence of a RMZ/TMZ does not confer or suggest any particular airspace classification; it adopts the background classification of the airspace that it is embedded within."

Stakeholder:	GAA
Line number:	74-76
Paragraph number:	4.5
Comment:	As an unmanned aircraft of 19.9kg plus fuel can represent a significant risk to manned aircraft what is the rationale behind this paragraph?
Proposed revised text:	Without the reasons behind this paragraph being worded as it is it isn't possible to propose revised text.
Justification:	The justification for the paragraph being there has not been published.
CAA Response	Noted. The text of paragraph 4.5 reflected the content of Air Navigation Order (ANO) 2016 at the time of drafting. This Article was amended in late 2020 and the exemption for 'small unmanned aircraft' removed. Article 23(1)(c) now says that an unmanned aircraft that is not subject to certification (i.e. in the Open/Specific category) is not subject to the rest of the ANO other than those exceptions listed. In the Open category (i.e. less than 25kg), within visual line of sight (VLOS) and below 400ft, typically, such unmanned aircraft are not required to comply with the requirements of a TMZ or RMZ. However, the CAA may 're apply' requirements for Specific category operations (i.e. those that we issue an 'operational authorisation' for), if the CAA deem it necessary following a suitable risk assessment submitted by the unmanned aircraft operator. The CAA will amend the text to read: "Pursuant to Article 23(1)(c) of ANO 2016[3] and notwithstanding the provisions within ANO 2016 relating to "flight restriction zones", other than those unmanned aircraft that are subject to certification[4], unmanned aircraft are not required to comply with the requirements of a notified RMZ/TMZ. [3] ANO 2016 Article 23 describes exceptions from application of provisions of the Order for certain classes of aircraft, with paragraph (1)(c) relating to any small unmanned aircraft other than those unmanned aircraft that are subject to certification. [4] ANO 2016 Schedule 1 defines "Unmanned aircraft subject to certification" as any unmanned aircraft forming part of a UAS required to be certified under Article 40(1)(a), (b) or (c) of the Unmanned Aircraft Delegated Regulation."

Stakeholder:	NATS
Line number:	75
Paragraph number:	4.5
Comment:	NATS understand that the intent of the proposal to add ADS-B as a suitable means of compliance for TMZs. The establishment of a TMZ which permits SUAs, without the necessary EC device seems to be counter-intuitive to what the Policy is trying to achieve. Should all SUAs participating in the TMZ not have EC devices fitted.
Proposed revised text:	All SUAs should have EC devices fitted
Justification:	Flight Safety
CAA Response	Noted. The text of paragraph 4.5 reflected the content of Air Navigation Order (ANO) 2016 at the time of drafting. This Article was amended in late 2020 and the exemption for 'small unmanned aircraft' removed. Article 23(1)(c) now says that an unmanned aircraft that is not subject to certification (i.e. in the Open/Specific category) is not subject to the rest of the ANO other than those exceptions listed. In the Open category (i.e. less than 25kg), within visual line of sight (VLOS) and below 400ft, typically, such unmanned aircraft are not required to comply with the requirements of a TMZ or RMZ. However, the CAA may 're apply' requirements for Specific category operations (i.e. those that we issue an 'operational authorisation' for), if the CAA deem it necessary following a suitable risk assessment submitted by the unmanned aircraft operator. The CAA will amend the text to read: "Pursuant to Article 23(1)(c) of ANO 2016[3] and notwithstanding the provisions within ANO 2016 relating to "flight restriction zones", other than those unmanned aircraft that are subject to certification[4], unmanned aircraft are not required to comply with the requirements of a notified RMZ/TMZ. [3] ANO 2016 Article 23 describes exceptions from application of provisions of the Order for certain classes of aircraft, with paragraph (1)(c) relating to any small unmanned aircraft other than those unmanned aircraft that are subject to certification. [4] ANO 2016 Schedule 1 defines "Unmanned aircraft subject to certification" as any unmanned aircraft forming part of a UAS required to be certified under Article 40(1)(a), (b) or (c) of the Unmanned Aircraft Delegated Regulation."

Stakeholder:	The Honourable Company of Air Pilots
Line number:	75-76
Paragraph number:	4.5
Comment:	Para 4.5 states that UAV up to 20kg are not required to comply with RMZ/TMZ requirements so a non-transponding 19.9kg UAV operating within a TMZ would represent a hazard and NOT comply with the definition at para 2.1.h.
Proposed revised text:	Change entire para to: "Any UAV above 250gm operating above 400ft agl within a TMZ must comply with the requirements of the TMZ"

Justification:	To meet the definition and intended degree of safety as described in para 2.1.f
CAA Response	Noted. The text of paragraph 4.5 reflected the content of Air Navigation Order (ANO) 2016 at the time of drafting. This Article was amended in late 2020 and the exemption for 'small unmanned aircraft' removed. Article 23(1)(c) now says that an unmanned aircraft that is not subject to certification (i.e. in the Open/Specific category) is not subject to the rest of the ANO other than those exceptions listed. In the Open category (i.e. less than 25kg), within visual line of sight (VLOS) and below 400ft, typically, such unmanned aircraft are not required to comply with the requirements of a TMZ or RMZ. However, the CAA may 're apply' requirements for Specific category operations (i.e. those that we issue an 'operational authorisation' for), if the CAA deem it necessary following a suitable risk assessment submitted by the unmanned aircraft operator. The CAA will amend the text to read: "Pursuant to Article 23(1)(c) of ANO 2016[3] and notwithstanding the provisions within ANO 2016 relating to "flight restriction zones", other than those unmanned aircraft that are subject to certification[4], unmanned aircraft are not required to comply with the requirements of a notified RMZ/TMZ. [3] ANO 2016 Article 23 describes exceptions from application of provisions of the Order for certain classes of aircraft, with paragraph (1)(c) relating to any small unmanned aircraft other than those unmanned aircraft that are subject to certification. [4] ANO 2016 Schedule 1 defines "Unmanned aircraft subject to certification" as any unmanned aircraft forming part of a UAS required to be certified under Article 40(1)(a), (b) or (c) of the Unmanned Aircraft Delegated Regulation."

Stakeholder:	NATS
Line number:	77
Paragraph number:	4.6
Comment:	Infrastructure resource In terms of infrastructure resource for ANSP. Can there be a more detailed policy on the acceptable means of EC, upon which we can base a performance-based approach? Additional infrastructure, e.g. capability to capture/process ADS-B will be a significant investment.
Proposed revised text:	
Justification:	Needed for cost benefit analysis
CAA Response	Partially accepted. The CAA has adopted a risk-based approach that permits TMZ Controlling Authorities to define alternative provisions that satisfy the pressure altitude reporting requirement for a TMZ, where their use has been addressed within the airspace change safety assessment. As such, it is not possible to provide a detailed policy of the kind sought by NATS. That said, noting the linked comment from the Honourable Company of Air Pilots below, the CAA is conscious that this paragraph may be improved by providing a clear link to the CAP 1616 airspace change process. As such, the CAA will amend the text to read:

	"The Controlling Authority of a notified RMZ/TMZ should have sufficient resource in place to ensure the airspace is managed in accordance with the sponsor's safety assessment as approved by the CAA in the airspace change decision document; for example, where appropriate, suitable ATS provision for the duration of activation of the subject airspace."

Stakeholder:	The Honourable Company of Air Pilots
Line number:	80
Paragraph number:	4.6
Comment:	The policy does not state what happens if a Controlling Authority does not have the resource to guarantee full compliance. Presumably lack of resource would also indicate lack of a controlling authority's need for increased understanding of activity within that airspace.
Proposed revised text:	At the end of the paragraph add "Where it becomes apparent that a Controlling Authority lacks the resource to guarantee full compliance, the CAA will instigate airspace change to remove the RMZ/TMZ designation and review all airspace allocated to the Controlling Authority."
Justification:	This meets the principle stated at Para 1.1 i.e. "the least restrictive classifications of airspace should be the norm in UK airspace design" and that RMZ/TMZ are additional measures within a given classification. It will also reassure the many pilots who have been denied access to controlled airspace that had been expanded to meet forecast traffic levels that did not materialise.
CAA Response	Partially accepted. The CAA has reviewed paragraph 4.6 and determined that it could be improved by providing a clear link to the CAP 1616 airspace change process. As such, paragraph 4.6 will be amended to read: "The Controlling Authority of a notified RMZ/TMZ should have sufficient resource in place to ensure the airspace is managed in accordance with the sponsor's safety assessment as approved by the CAA in the airspace change decision document; for example, where appropriate, suitable ATS provision for the duration of activation of the subject airspace." The CAA is also considering how we might use information from FCS 1522 forms to inform our safety oversight of the management of airspace structures by controlling authorities.

Stakeholder:	GAA
Line number:	130-131
Paragraph number:	A 1.1
Comment:	The sentence can perpetuate the myth about the numbers of aircraft that have a radio and a pilot licenced to use it when there are literally thousands which do not
Proposed revised text:	Change from: whilst having minimal impact upon aircraft operations to: whilst minimising the impact upon suitably licensed pilots in radio equipped aircraft

Justification:	For those pilots without an RT license or those with a license but in a non-radio aircraft an RMZ represents restricted airspace, if not actually prohibited airspace
CAA Response	Partially accepted. The CAA has amended the text to read: "Radio Mandatory Zones (RMZ) are established to enhance situational awareness and therefore flight safety within a given volume of airspace, whilst minimising the impact upon suitably qualified pilots in appropriately equipped aircraft."

Stakeholder:	NATS
Line number:	138
Paragraph number:	A 2.2
Comment:	The requirement for operators to pass significant information as required in A2.2 can add to controller workload to the detriment of other tasks in higher classification of airspace, especially where the document suggests that delay (standby) should be avoided.
Proposed revised text:	It should be mandatory for an operator to file a flight plan to transit a TMZ so that the Controlling Authority has the necessary information in advance to permit the flight.
Justification:	Reduces workload and efficiency and risk of unexpected infringement.
CAA Response	Not accepted. It is a long-standing principle that, subject to the provision of the information contained in A2.2(b) (essentially, an airborne flight plan) and its acknowledgment by ATS, pilots are able to transit RMZ. We should not conflate the requirements for RMZ with that of controlled airspace.

Stakeholder:	GAA
Line number:	143-145
Paragraph number:	A 2.2a
Comment:	The 15nm/5mins requirement is sometimes problematic for soaring pilots and pilots of low speed aircraft. For example cross-country soaring pilots will routinely change potential routes and strategies very frequently. To allow for this the text needs adjusting. Equally for slow moving aircraft, e.g. those with a cruising airspeed of less than 40 knots, and assuming no headwind, 15nm gives over 20 minutes before reaching the boundary What benefit does the 15nm give over just having the 5 minutes criteria?
Proposed revised text:	Change from: Whenever practicable, pilots should seek to establish two-way communications with the RMZ Controlling Authority when 15nm or 5 minutes flying time from the RMZ boundary, whichever is the greater. to: Whenever practicable, pilots should routinely seek to establish two-way communications with the RMZ Controlling Authority when at least 5 minutes flying time from the RMZ boundary. Soaring aircraft may well use lift in an area that is within 5 minutes flying time of the boundary but not make contact.

Justification:	When 15nm from an RMZ there will be many instances where a slow moving aircraft should for safety reasons be in contact with another ATC unit. Although the sentence is caveated with 'whenever practicable' glider pilots WILL want to comply with the requirements. When cross-country soaring pilots will routinely change potential routes and strategies very frequently.
CAA Response	Not accepted. As identified, the sentence in A2.2(a) is caveated by 'whenever practicable' and the option of time or distance is there to accommodate slower-moving flights. It should also be borne in mind that the requirement to contact the RMZ controlling authority only applies to flights wishing to enter a RMZ, not to flights seeking to operate in the vicinity of RMZ.

Stakeholder:	BGA
Line number:	143-145
Paragraph number:	A2.2 a
Comment:	The 15nm/5mins requirement is sometimes problematic for glider pilots.
Proposed revised text:	Whenever practicable, pilots should routinely seek to establish two-way communications with the RMZ Controlling Authority when 15nm or 5 minutes flying time from the RMZ boundary, whichever is the greater. To ensure equitable access to cross-country gliders there will be occasions when pilots will communicate to facilitate access to the airspace with less than the distance/time guidelines above.
Justification:	Although the sentence is caveated with 'whenever practicable' glider pilots WILL want to comply with the requirements. When cross-country soaring pilots will routinely change potential routes and strategies very frequently. To allow for this the text needs adjusting.
CAA Response	Not accepted. As identified, the sentence in A2.2(a) is caveated by 'whenever practicable' and the option of time or distance is there to accommodate slower-moving flights. It should also be borne in mind that the requirement to contact the RMZ controlling authority only applies to flights wishing to enter a RMZ, not to flights seeking to operate in the vicinity of RMZ.

Stakeholder:	The Honourable Company of Air Pilots
Line number:	146-158
Paragraph number:	A2.2.b
Comment:	Where a pilot has filed a flight plan and included the Controlling Authority in the addressees, it should be sufficient for the pilot to make an initial call that replaces items ii, iii, iv, v, vi, with the words, "as flight plan"
Proposed revised text:	After line 56 add, "Note, where a pilot has filed a VFR or IFR flight plan and included the Controlling Authority as an addressee, items ii, iii, iv, v, vi, may be omitted and replaced with the words, "as flight plan."
Justification:	This will reduce RT clutter and encourage pilots to file accurate flight plans and ANSPs to use the data already provided rather than need to assimilate new information 'on the fly'. Although not formally part of this consultation, improving the accuracy and use of flight data will underpin improved safety across the aviation network

CAA Response	Not accepted. The requirement for the initial call and the contents of that transmission are defined within legislation (SERA.6005(a)(2)). Consequently, it is not currently possible to adopt the proposal above. Moreover, at present, the accessibility and utilisation of flight plan data for flights in 'uncontrolled airspace' by air navigation service providers is limited and thus we would not be able to develop the RMZ/TMZ policy in the way described by The Honourable Company of Air Pilots. However, through the auspices of the Airspace Modernisation Strategy, as we begin to develop the means to manage airspace dynamically, in real-time, we believe that it may be possible to develop our thinking along these lines.

Stakeholder:	BGA
Line number:	159
Paragraph number:	A2.2 c
Comment:	There is a potential here for ATS providers to restrict traffic flow purely by instructing aircraft to 'standby'. This policy statement suggests that RMZ controlling authorities are REQUIRED 'where possible' to not unnecessarily delay RTF acknowledgements. We don't believe this is a strong enough mitigation for this risk.
Proposed revised text:	Removal of the words 'where possible'. The following additional sentence would be reasonable: Occasionally the RMZ controlling authority may broadcast an 'All Stations' call giving details of an operationally difficult situation (aircraft in emergency/sudden staff incapacitation/serious technical failure) to alert pilots to a potential delay to RMZ transit acknowledgements.
Justification:	The revised text would enable GA pilots to have better certainty of acknowledgement and consequently better surety of compliance with RMZ requirements and thus (importantly) less potential distraction risk in the cockpit. It would also ensure ATS SOP's would be written to reflect the importance of this issue.
CAA Response	Partially accepted. Understanding the intent of the BGA's comment, and taking into account comments from the BHA, GAA and the Honourable Company of Air Pilots, we intend to amend the text to read: "Where a pilot is instructed to "STANDBY", they should remain outside the RMZ until their initial call has been acknowledged by the RMZ Controlling Authority. RMZ Controlling Authorities should not unnecessarily delay RTF information transmissions by requesting pilots to 'standby'."

Stakeholder:	BHA
Line number:	159
Paragraph number:	A2.2 c
Comment:	There is a potential here for ATS providers to restrict traffic flow purely by instructing aircraft to 'standby'. This policy statement suggests that RMZ controlling authorities are REQUIRED 'where possible' to not unnecessarily delay RTF acknowledgements. We don't believe this is a strong enough mitigation for this risk.
Proposed revised text:	Removal of the words 'where possible'.

Justification:	The revised text would enable GA pilots to have better certainty of acknowledgement and consequently better surety of compliance with RMZ requirements and thus (importantly) less potential distraction risk in the cockpit. It would also ensure ATS SOP's would be written to reflect the importance of this issue.
CAA Response	Partially accepted. Understanding the intent of the BHA's comment, and taking into account comments from the BGA, GAA and the Honourable Company of Air Pilots, we intend to amend the text to read: "Where a pilot is instructed to "STANDBY", they should remain outside the RMZ until their initial call has been acknowledged by the RMZ Controlling Authority. RMZ Controlling Authorities should not unnecessarily delay RTF information transmissions by requesting pilots to 'standby'."

Stakeholder:	The Honourable Company of Air Pilots
Line number:	160-162
Paragraph number:	A 2.2 c.
Comment:	The text "where possible" is superfluous. The word "unnecessarily" already covers the case where it is not possible to avoid delay.
Proposed revised text:	Change to: "RMZ Controlling Authorities are required to not unnecessarily delay RTF information transmissions by requesting pilots to 'standby'.
Justification:	Tautology.
CAA Response	Partially accepted. Understanding the intent of the Honourable Company of Air Pilots' comment, and taking into account comments from the BHA, GAA and BGA, we intend to amend the text to read: "Where a pilot is instructed to "STANDBY", they should remain outside the RMZ until their initial call has been acknowledged by the RMZ Controlling Authority. RMZ Controlling Authorities should not unnecessarily delay RTF information transmissions by requesting pilots to 'standby'."

Stakeholder:	GAA
Line number:	160-162
Paragraph number:	A 2.2 c.
Comment:	There is a potential here for ATS providers to restrict traffic flow purely by instructing aircraft to 'standby'. This policy statement suggests that RMZ controlling authorities are REQUIRED 'where possible' to not unnecessarily delay RTF acknowledgements. We don't believe this is a strong enough mitigation for this risk.
Proposed revised text:	Change from: RMZ Controlling Authorities are required, where possible, to not unnecessarily delay RTF information transmissions by requesting pilots to 'standby'. To: RMZ Controlling Authorities are required to not unnecessarily delay RTF information transmissions by requesting pilots to 'standby'. Occasionally the RMZ controlling authority may broadcast an 'All Stations' call giving

	details of an operationally difficult situation (aircraft in emergency/sudden staff incapacitation/serious technical failure) to alert pilots to a potential delay to RMZ transit acknowledgements.
Justification:	The revised text would enable GA pilots to have better certainty of acknowledgement and consequently better surety of compliance with RMZ requirements and thus (importantly) less potential distraction risk in the cockpit. It would also ensure ATS SOP's would be written to reflect the importance of this issue.
CAA Response	Partially accepted. Understanding the intent of the GAA's comment, and taking into account comments from the BGA, BHA and the Honourable Company of Air Pilots, we intend to amend the text to read: "Where a pilot is instructed to "STANDBY", they should remain outside the RMZ until their initial call has been acknowledged by the RMZ Controlling Authority. RMZ Controlling Authorities should not unnecessarily delay RTF information transmissions by requesting pilots to 'standby'."

Stakeholder:	BHA
Line number:	181
Paragraph number:	Para A3.2
Comment:	For years helicopters have been able to land at ad hoc or registered landing sites within controlled airspace or RMZs without needing a LoA. When advising of landing the controlling authority usually advised the pilot "call again when airborne" and asked when that might be likely. When radio shielding prevented a successful take-off call, prior to lifting, it was done immediately when airborne over the HLS. Para A3.2 as worded is not clear and it could be interpreted that this practice would not be allowed and each pilot landing at the site would potentially need to view the LoA beforehand to fully understand the requirements it contained – totally impractical.
Proposed revised text:	
Justification:	
CAA Response	Partially accepted. The BHA is invited to note that the extant policy on RMZ states that: "It will be necessary for pilots of radio-equipped aircraft originating in an RMZ where radio communications are not possible prior to take-off…to agree appropriate procedures with the RMZ Controlling Authority to enable flight within the RMZ. Compliance with the agreed procedures (published as a Letter of Agreement or Memorandum of Understanding) will be required and two-way communications established where appropriate at the earliest opportunity after take-off." Note that the revised policy statement only refers to a letter of agreement because the CAA has determined that a 'memorandum of understanding' is inappropriate. Accepting the intent of the BHA's comment, the text will be amended to read: "Where aircraft are based at aerodromes or operating sites located within a RMZ and radio communications are not possible either prior to getting airborne, or at all, pilots of such flights must operate in accordance with a letter of agreement (LoA) with the RMZ Controlling Authority and two-way communications established (where appropriate) at the earliest

	opportunity after take-off. Letters of Agreement should include a clear and unambiguous set of procedures to ensure the safety of flight within the RMZ and be reviewed regularly, and at least triennially, except where analysis of air safety incidents indicates a need to undertake an immediate review."

Stakeholder:	BHA
Line number:	181
Paragraph number:	A3.2
Comment:	Helicopters often take off at private sites on an ad hoc, short notice basis. When such sites are within a RMZ it is likely that two way radio comms from the ground will not be possible, and that is why the current RMZ rule states that comms should be established as soon as possible after take off. The proposed text does not allow this essential possibility, and says a LoA should be established. Clearly this is not possible in a timely and practical way. Helicopters need to be able to take off and establish comms once airborne, as at present.
Proposed revised text:	Create a new paragraph A3.2 (a) Helicopters without a LoA, taking off from a private site within a RMZ, may do so provided they make radio contact at the first opportunity.
Justification:	Helicopters must be able to take off from private sites that do not have a LoA, as they do now. The proposed text unnecessarily restricts the utility of helicopters.
CAA Response	Partially accepted. The BHA is invited to note that the extant policy on RMZ states that: "It will be necessary for pilots of radio-equipped aircraft originating in an RMZ where radio communications are not possible prior to take-off…to agree appropriate procedures with the RMZ Controlling Authority to enable flight within the RMZ. Compliance with the agreed procedures (published as a Letter of Agreement or Memorandum of Understanding) will be required and two-way communications established where appropriate at the earliest opportunity after take-off." Note that the revised policy statement only refers to a letter of agreement because the CAA has determined that a 'memorandum of understanding' is inappropriate. Accepting the intent of the BHA's comment, the text will be amended to read: "Where aircraft are based at aerodromes or operating sites located within a RMZ and radio communications are not possible either prior to getting airborne, or at all, pilots of such flights must operate in accordance with a letter of agreement (LoA) with the RMZ Controlling Authority and two-way communications established (where appropriate) at the earliest opportunity after take-off. Letters of Agreement should include a clear and unambiguous set of procedures to ensure the safety of flight within the RMZ and be reviewed regularly, and at least triennially, except where analysis of air safety incidents indicates a need to undertake an immediate review."

Stakeholder:	GAA
Line number:	181-184
Paragraph number:	A3.2
Comment:	The requirement for an LoA is impractical for flights taking off from sites that are not of a fixed nature, e.g. helicopters, microlights, paramotors, etc. that can operate from unprepared locations.
Proposed revised text:	Change from: Where flights originate from aerodromes or operating sites located within a RMZ and radio communications are not possible either prior to getting airborne, or at all, pilots of such flights must operate in accordance with a letter of agreement (LoA) with the RMZ Controlling Authority. To: Where flights originate from aerodromes or operating sites located within a RMZ and radio communications are not possible either prior to getting airborne, or at all, pilots of such flights must operate in accordance with a letter of agreement (LoA) with the RMZ Controlling Authority. For a site used on an ad-hoc basis, and so an LoA is inappropriate, where there is no radio coverage a flight's initial contact maybe made by telephone, where part of that call will be an agreement to establish two radio communications before moving further than a certain distance and height from the site. If telephone contact is not possible then the pilot will make contact by radio as soon as it is technically possible whilst remaining in the vicinity of the take-off location.
Justification:	The creation of an RMZ where there is no radio coverage effectively creates restricted, or even prohibited, airspace. As is currently the case flights can originate where there is also no telephone availability. Therefore, custom and practice has evolved to produce the proven safe procedure whereby helicopters take off and establish radio communications as soon as it is technically possible. Without this amendment flights from non-permanent sites within RMZs where no pre-takeoff radio contact is possible would effectively be rendered illegal
CAA Response	Partially accepted. The GAA is invited to note that the extant policy on RMZ states that: "It will be necessary for pilots of radio-equipped aircraft originating in an RMZ where radio communications are not possible prior to take-off…to agree appropriate procedures with the RMZ Controlling Authority to enable flight within the RMZ. Compliance with the agreed procedures (published as a Letter of Agreement or Memorandum of Understanding) will be required and two-way communications established where appropriate at the earliest opportunity after take-off." Note that the revised policy statement only refers to a letter of agreement because the CAA has determined that a 'memorandum of understanding' is inappropriate. Accepting the intent of the GAA's comment, the text will be amended to read: "Where aircraft are based at aerodromes or operating sites located within a RMZ and radio communications are not possible either prior to getting airborne, or at all, pilots of such flights must operate in accordance with a letter of agreement (LoA) with the RMZ Controlling Authority and two-way communications established (where appropriate) at the earliest opportunity after take-off. Letters of Agreement should include a clear

	and unambiguous set of procedures to ensure the safety of flight within the RMZ and be reviewed regularly, and at least triennially, except where analysis of air safety incidents indicates a need to undertake an immediate review."

Stakeholder:	The Honourable Company of Air Pilots
Line number:	231-234
Paragraph number:	B1.1
Comment:	We fully agree and hope this remains a fundamental part of this policy.
Proposed revised text:	At the end of para 1.1 add: "Airspace change sponsors should note that TMZ status is unlikely to be granted unless ADS-B is included as an acceptable means of compliance."
Justification:	UK formal recognition of ADS-B as an electronic conspicuity system will improve both equipage rates and pilot awareness of other traffic in airspace not covered by air traffic services. Also, ADS-B is increasingly being deployed to support safe beyond visual line of sight (BLVOS) operation within the unmanned sector, such as in support of Search and Rescue missions. A TMZ solution that does not work for ADS-B equipped air vehicles will rapidly become inaccessible to those vehicles.
CAA Response	Not accepted. Airspace change sponsors are required to comply with the airspace change process detailed within CAP 1616 and the 'safety requirements' are one aspect of the justification that airspace change sponsors are required to provide to support their proposal. These safety requirements will identify the type(s) of electronic conspicuity data that the ANSP considers necessary. The airspace change process has been designed to reflect modern standards for regulatory decision-making, and is fair, transparent, consistent and proportionate. Stage 4a of the Airspace Change Process requires sponsors to submit their Final Options Appraisal which includes the safety assessment. The CAA assesses the safety case prior to reaching a decision on the proposal.

Stakeholder:	NATS
Line number:	234
Paragraph number:	B1.1
Comment:	What is the process whereby non-SSR Electronic Conspicuity is deemed 'suitable appropriate and proportionate'? To whom does this proportionality and appropriateness extend – the pilot or the ANSP or both? (subsequently I note at Line 248 that the ANSP has to approve the EC that is used)
Proposed revised text:	Clarify the stakeholders….proportionate to flight crew and to the airspace controlling authority as determined by… (an appropriate forum) and approved by the ANSP.
Justification:	Needed to clarify ATC role as a key stakeholder
CAA Response	Noted. As detailed within paragraph 4.1, "RMZ/TMZ are established in accordance with the requirements of the CAA's Airspace Change Process (CAP 1616)". This process requires airspace change sponsors to take "into account the impacts of any change on those affected and designs its proposal accordingly", and engage with "relevant stakeholders on the underlying design principles, drawing up a

	comprehensive list of options, appraisal of the impacts of those options, and formal consultation on the chosen option(s). In this way the change sponsor can collect the evidence necessary to develop a proposal which both meets its own needs while ensuring a proportionate impact on those affected." Determining whether alternate types of electronic conspicuity systems are suitable, appropriate, and proportionate will be achieved through the CAP 1616 process.

Stakeholder:	BGA
Line number:	246-251 and 26-30
Paragraph number:	B2.2 and 2.1 d.
Comment:	The BGA challenge the restriction to only consider alternatives to transponders that comply with the EU Reg 923/2012 (as detailed in footnotes 4 and 5 at the bottom of page B-1) and ICAO Doc 4444 PANS-ATM mentioned in the definitions on Page 1
Proposed revised text:	…unless in compliance with alternative provisions prescribed for that particular airspace by the air navigation service provider (ANSP). Such alternative provisions may include the use of alternate forms of electronic conspicuity which satisfy the pressure altitude reporting requirement for a TMZ, where their use has been addressed within the airspace change safety assessment. (**no footnotes**)
Justification:	Whilst not necessarily compliant with the regulations mentioned the BGA have already established a highly effective anti-collision system (FLARM) that is almost universally used by cross-country gliders operating in UK airspace. It has been successful in significantly reducing MAC risk. This has now been augmented with a number of freely available and user-friendly web-based 'surveillance' sites. In some TMZ's this, albeit with appropriate safeguards, should be considered as a qualifying conspicuity device. Currently many transponders and ADS-B devices are prohibitively expensive and/or have prohibitively restrictive power requirements (see also Free Text Comment 1)
CAA Response	Not accepted. Regulation (EU) No 923/2012 Standardised European Rules of the Air (SERA) is retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018. Moreover, the Civil Aviation Authority (Chicago Convention) Directions 2007 requires the CAA to ensure that it acts consistently with the obligations placed on the UK under the Chicago Convention. It is a requirement in UK law (through SERA.6005) that electronic conspicuity devices used within TMZ satisfy the pressure altitude reporting requirement. In turn, this requirement is based on that detailed within ICAO Doc 4444 PANS-ATM 8.5.5.1.2 that "geometric height information shall not be used [by ATS] to determine if altitude differences exist". As such, the policy needs to highlight the basis for, and source of the provisions contained therein. The purpose of a TMZ is to ensure that all air traffic within a defined volume of airspace is conspicuous to air traffic services, for the purpose of providing ATS. Whereas, the electronic information provided by devices such as FLARM is meant only to interact with other FLARM devices and does not cooperate with ATS surveillance systems nor ACAS II; accepting that PFLARM can cooperate with ACAS II.

	The CAA is considering the next phase of development of this legislation could see us establish a clear delineation between a TMZ and a surveillance mandatory zone (SMZ) which could be linked only to other forms of electronic conspicuity data.

Stakeholder:	GAA
Line number:	246-251 and 26-30
Paragraph number:	B2.2 and 2.1 d.
Comment:	The GAA challenges the restriction to only consider alternatives to transponders that comply with the EU Reg 923/2012 (as detailed in footnotes 4 and 5 at the bottom of page B-1) and ICAO Doc 4444 PANS-ATM mentioned in the definitions on Page 1
Proposed revised text:	Change from: , unless in compliance with alternative provisions prescribed for that particular airspace by the air navigation service provider (ANSP). Such alternative provisions may include the use of alternate forms of electronic conspicuity which satisfy the pressure altitude reporting requirement for a TMZ, where their use has been addressed within the airspace change safety assessment. To: , unless in compliance with alternative provisions prescribed for that particular airspace by the air navigation service provider (ANSP). Such alternative provisions may include the use of alternate forms of electronic conspicuity which satisfy the pressure altitude reporting requirement for a TMZ, where their use has been addressed within the airspace change safety assessment. Remove footnotes 4 and 5
Justification:	Whilst not necessarily compliant with the regulations mentioned the BGA have already established a highly effective anti-collision system (FLARM) that is almost universally used by cross-country gliders operating in UK airspace and has been adopted in its PFLARM format by many powered aircraft. It has been successful in significantly reducing MAC risk. This has now been augmented with a number of freely available and user-friendly web-based 'surveillance' sites. In some TMZ's this, albeit with appropriate safeguards, should be considered as a qualifying conspicuity device. Currently many transponders and ADS-B devices are prohibitively expensive and/or have prohibitively restrictive power requirements (see also Free Text Comments)
CAA Response	Not accepted. Regulation (EU) No 923/2012 Standardised European Rules of the Air (SERA) is retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018. Moreover, the Civil Aviation Authority (Chicago Convention) Directions 2007 requires the CAA to ensure that it acts consistently with the obligations placed on the UK under the Chicago Convention. It is a requirement in UK law (through SERA.6005) that electronic conspicuity devices used within TMZ satisfy the pressure altitude reporting requirement. In turn, this requirement is based on that detailed within ICAO Doc 4444 PANS-ATM 8.5.5.1.2 that "geometric height information shall not be used [by ATS] to determine if altitude differences exist". As such, the policy needs to highlight the basis for, and source of the provisions contained therein.

	The purpose of a TMZ is to ensure that all air traffic within a defined volume of airspace is conspicuous to air traffic services, for the purpose of providing ATS. Whereas, the electronic information provided by devices such as FLARM is meant only to interact with other FLARM devices and does not cooperate with ATS surveillance systems nor ACAS II; accepting that PFLARM can cooperate with ACAS II. The CAA is considering the next phase of development of this legislation could see us establish a clear delineation between a TMZ and a surveillance mandatory zone (SMZ) which could be linked only to other forms of electronic conspicuity data.

Stakeholder:	The Honourable Company of Air Pilots
Line number:	249
Paragraph number:	B2.2
Comment:	Needs to reflect the sentiment expressed at lines 231-234
Proposed revised text:	After “conspicuity” and before “which satisfy” add, “including ADS-B Out”
Justification:	UK formal recognition of ADS-B as an electronic conspicuity system will help to improve both equipage rates and pilot awareness of other traffic in airspace not covered by air traffic services.
CAA Response	Partially accepted. Text has been amended to read: “Such alternative provisions may include the use of alternate forms of electronic conspicuity data, such as ADS-B, and that satisfies the pressure altitude reporting requirement for a TMZ, where their use has been addressed within the airspace change safety assessment.”

Stakeholder:	NATS
Line number:	283
Paragraph number:	B 3.2 and B 3.3
Comment:	Operators can still access the areas without serviceable transponders or required radio communications, provided this is conveyed to the authority beforehand. This infers additional workload for supervisory staff with associated training requirement.
Proposed revised text:	It should be mandatory for an operator to file a flight plan to transit a TMZ so that the Controlling Authority has the necessary information in advance to permit the flight.
Justification:	Reduces workload and efficiency and risk of unexpected infringement.
CAA Response	Not accepted. It is a long-standing principle that, subject to the provision of the information contained in A2.2(b) (essentially, an airborne flight plan) and its acknowledgment by ATS, pilots are able to transit RMZ. We should not conflate the requirements for RMZ with that of controlled airspace.

Stakeholder:	The Honourable Company of Air Pilots
Line number:	302-330
Paragraph number:	Appendix 1 to Annex B

Comment:	The list of issues is appropriate but does not reflect the sentiment expressed at lines 231-234
Proposed revised text:	After line 325 add a top-level bullet as follow: "ANSPs should recognise that the CAA is providing funding support for Mode S SSR alternatives. Accordingly, it would be reasonable to expect increased ADS-B deployment within the UK GA aircraft fleet that should be considered when evaluating acceptable electronic conspicuity alternatives. See also para B1.1."
Justification:	Future-proofing airspace requirements by highlighting the need to ANSPs to have ADS-B – compatible ground equipment in the future.
CAA Response	Not accepted. The CAA does not believe that it is necessary to re-iterate the need to consider ADS-B in this part of the document. As indicated, the point is already made in paragraph B1.1 and the principle regarding the future use of ADS-B is better made in documentation relating to a CAA strategy for surveillance.

Stakeholder:	NATS
Line number:	317
Paragraph number:	1B.1
Comment:	Does a policy on a more detailed performance/specification that would be acceptable exist such that we can form a baseline requirement for EC?
Proposed revised text:	
Justification:	EC Policy needed for cost benefit analysis
CAA Response	Noted. Accepting that it is the responsibility of the CAA to develop and define performance specifications for electronic conspicuity data, it must be noted that the policy provides ANSPs with the ability to prescribe alternative provisions for that particular airspace which may include the use of alternative forms of electronic conspicuity device. Determining whether alternate types of electronic conspicuity data are suitable, appropriate, and proportionate will be achieved by the ANSP through the CAP 1616 process. That said the CAA will this year begin the process of developing its CAP1391 standard to increase its suitability for detection and useability on the ground. We encourage input from all interested stakeholders in developing this standard.

Stakeholder:	Defence Airspace and Air Traffic Management
Free text comment:	The MOD have reviewed the documentation and proposed amendments to the RMZ/TMZ Airspace Policy. The MoD accept the proposed amendments with no comments.
CAA Response	Noted.

Stakeholder:	BHA
Free text comment:	The vast majority of BHA members operate helicopters that are both Mode S IFF and radio equipped. This proposal will not create any problems to them except if the number or size of the proscribed areas

	increase significantly. ATC staff in the 'control' of the RMZ areas should be sufficient as to not cause delays to traffic wishing to enter the area.
CAA Response	Noted. As described previously, the text relating to airspace management and having "sufficient resource" has been amended to read: "The Controlling Authority of a notified RMZ/TMZ should have sufficient resource in place to ensure the airspace is managed in accordance with the sponsors safety assessment as approved by the CAA in the airspace change decision document; for example, where appropriate, suitable ATS provision for the duration of activation of the subject airspace."

Stakeholder:	Skyports
Free text comment:	This proposal is welcomed as it will reduce air risk. More consideration is/will be required for low level drone operations wrt to technology capabilities and the fact that TMZ not RMZ are likely to be sufficient at low levels once rules of the air/TMZ are developed for these systems.
CAA Response	Noted

Stakeholder:	BGA
Free text comment:	1. In responding to this consultation, the BGA recognises that the AMS and associated future lower airspace development can only be truly modernised where supported by modernised airspace policies. Policies are required that facilitate proportionate and risk-based deployment of EC technologies within modernised airspace constructs, including future 'conspicuity zones'. 2. For some TMZ's (in areas attractive to cross-country gliding) perhaps there could be a modification to the TMZ requirements that, whilst a/c carrying transponders will NOT require to contact the controlling authority, gliders that are using FLARM for their conspicuity access WILL be required to contact the controlling authority (and receive an acknowledgement) – rather like the procedures for an RMZ. 3. In the Policy statement introduction, there is the following statement: Initiative 11 focuses on electronic conspicuity and the utilisation of cost-effective electronic surveillance information with the objective of better integrating commercial and non-commercial operations in 'uncontrolled' airspace such that the airspace user can sense all others and be seen by all others. This seems like a fundamental shift in direction that the BGA would be interested to learn more about. 4. Most ICAO requirements predate modernised airspace needs. We note that the use of 'Z' indicates an RMZ/TMZ construct is a 'zone' and therefore can only apply from the surface, which would be a significant and unhelpful limitation. An RMA/TMA concept will be a helpful development. 5. The CAA consultation repeatedly notes that alternative means of compliance should be set up to allow non-equipped aircraft to enter an RMZ/TMZ. But the consultation does not identify how, which suggests an intent to leave individual ANSP's to creates rules for non-compliant entry.

	That issue needs to be discussed and subsequently addressed in a CAA RMZ/TMZ policy.
CAA Response	Noted. Taking each of the BGA's points in turn: 1. Noted 2. The policy proposals require the controlling authority to make provision for aircraft that are unable to comply with the notified requirements for flight in a RMZ/TMZ to gain access to that airspace. In doing so, TMZ controlling authorities are required to consider, develop, and promulgate procedures to facilitate that access. Paragraph B3.2 specifically states that "Pilots of aircraft without serviceable SSR transponder equipment or alternative forms of electronic conspicuity that meet the equipment type/s prescribed by the TMZ Controlling Authority must communicate their wish to enter the TMZ to the TMZ Controlling Authority before entry, and obtain specific permission to enter and transit the TMZ." Accepting the role that FLARM can play in mitigating the risk of MAC between similarly equipped aircraft, it is not a fully cooperative collision warning system. 3. Regarding the consultation proposal document, the text cited by the BGA is sourced (near verbatim) from the Airspace Modernisation Strategy (CAP 1711) paragraph 4.33 (11). 4. Not accepted. It is interesting to note that whilst the use of the terms 'zone' and 'area' have specific meaning in relation to the surface of the earth in the context of CTR and CTA, this relationship does not extend to other airspace structures such as danger areas, restricted areas, prohibited areas, TMZ and RMZ. In the context of RMZ and TMZ, they are defined as a volume of "airspace of defined dimensions" which means that they can either extend upwards from the surface of the earth or, can extend upwards from a specified limit above the earth. 5. The intent of the revised policy is that the controlling authority is responsible for making provision for aircraft that are unable to comply with the notified requirements for flight in a RMZ/TMZ to gain access to that airspace. In accordance with CAP 1616, change sponsors will be required to consider the requirements for and the development of procedures and conditions that are designed to mitigate the safety risks associated with the operation of aircraft which cannot meet the equipment carriage and operation requirements of a TMZ. By forming part of the airspace change process, we ensure that the development of these procedures is visible to and undertaken in consultation with stakeholders. The CAA considers this to be an appropriate, proportionate, and risk-based approach.

Stakeholder:	ARPAS-UK
Free text comment:	ARPAS UK fully supports the proposed amendments to the RM / TMZ SARG airspace policy, as set out in the October 2020 consultation paper. However please also note that in lines 74, 75, 76, and notes 2 and 3 there is reference to the ANO 2016 for the definition of "small unmanned aircraft". The ANO is currently being updated and we understand it will be published in the next week or so. The Open Category will refer to SUAS having an MTOW of less than 25kg not 20 kg. This will be consistent with the EASA Implementing regulation which applies from 31st December 2020. The draft RMZ / TMZ policy should therefore use the number 25kg.

CAA Response	Accepted. The text relating to 'small unmanned aircraft' reflected the content of Air Navigation Order (ANO) 2016 at the time of drafting. This Article was amended in late 2020 and the exemption for 'small unmanned aircraft' removed. Article 23(1)(c) now says that an unmanned aircraft that is not subject to certification (i.e. in the Open/Specific category) is not subject to the rest of the ANO other than those exceptions listed. In the Open category (i.e. less than 25kg), within visual line of sight (VLOS) and below 400ft, typically, such unmanned aircraft are not required to comply with the requirements of a TMZ or RMZ. However, the CAA may 're apply' requirements for Specific category operations (i.e. those that we issue an 'operational authorisation' for), if the CAA deem it necessary following a suitable risk assessment submitted by the unmanned aircraft operator. The CAA will amend the text to read: "Pursuant to Article 23(1)(c) of ANO 2016[3] and notwithstanding the provisions within ANO 2016 relating to "flight restriction zones", other than those unmanned aircraft that are subject to certification[4], unmanned aircraft are not required to comply with the requirements of a notified RMZ/TMZ. [3] ANO 2016 Article 23 describes exceptions from application of provisions of the Order for certain classes of aircraft, with paragraph (1)(c) relating to any unmanned aircraft other than those unmanned aircraft that are subject to certification. [4] ANO 2016 Schedule 1 defines "Unmanned aircraft subject to certification" as any unmanned aircraft forming part of a UAS required to be certified under Article 40(1)(a), (b) or (c) of the Unmanned Aircraft Delegated Regulation."

Stakeholder:	NATS
Free text comment:	From the text in can be inferred that ANSPs will be part of the approval process for new TMZs in this policy. As stated in previous comments, NATS' current surveillance network is unable to detect EC devices and with no clear CAA Policy on standardisation of this technology, it can be open to interpretation. Before an ANSP were to invest in new technology, there needs to be a clear cost-benefit analysis. It is unclear in this paper how an ANSP would recoup the expense of upgrading its systems in order to provide this service which would include surveillance and potential increased staffing costs. In addition, the ANSP may be using 3rd party equipment to provide an ATS e.g. at an Airport. Therefore, there would need to be a discussion with many stakeholders when investing in a surveillance system capable of detecting EC; who should pay and how will that cost be recovered in a fair and equitable manner by all Airspace users. The interaction of other forms of Conspicuity other than Mode S (e.g., ADS B) needs to be clearly understood in relation to NATS' safety net systems e.g. CAIT and STCA The CAA would also need to issue a clear EC Policy so that ANSPs and other new entrants to the Aviation sector (including UTM) invest in the same technological standard. Failure to set a standard would lead to significant risk in any investment and the associated cost benefit analysis. It should be recognised that many NATS Units do not operate in an RMZ/TMZ environment. Therefore, there needs to be a recognition that

	significant controller training/briefing may be required to understand the controller's responsibilities. A clear Policy from the CAA [is required] on a future EC standard to be used in the UK
CAA Response	Noted. It is important first to highlight that the policy does not infer that ANSPs will be involved in the process of approving RMZ and/or TMZ. RMZ/TMZ are established in accordance with the requirements of the CAA's Airspace Change Process (CAP 1616) and approved solely by the CAA. Accepting that it is the responsibility of the CAA to develop and define performance specifications for electronic conspicuity data, it must be noted that the policy provides ANSPs with the ability to prescribe alternative provisions for that particular airspace which may include the use of alternative forms of electronic conspicuity device. Determining whether alternate types of electronic conspicuity data are suitable, appropriate, and proportionate will be achieved by the ANSP through the CAP 1616 process. Moreover, the CAA would anticipate that an ANSP would consider how these types of data might interact with existing systems including ground-based safety nets. This same process will also allow the ANSP to determine whether additional staff training is required to support implementation, and to deliver such training in a timely manner. That said the CAA will this year begin the process of developing its CAP1391 (carry on Electronic Conspicuity) standard to increase its suitability for detection and useability on the ground. We encourage input from all interested stakeholders in developing this standard.

Stakeholder:	GATCO
Free text comment:	GATCO agrees with the changes proposed for the airspace policy statement and has provided detail to the questions you have raised. **Does GATCO manage an RMZ or TMZ?** Not directly, we are a professional organisation that has members throughout the United Kingdom who operate as civil and military air traffic controllers. Many of these controllers already work in airspace that has TMZ/RMZ classifications. **How will the proposed changes to the RMZ/TMZ airspace Policy Statement affect your operations?** We have thoroughly read through the proposed changes and see little that would impact controllers working TMZ/RMZ airspace under the new proposals. We particularly like the phraseology around 'recognised' and 'known' air traffic pictures as a way to describe the rationale for any airspace changes. It enables all users to identify the reasoning and the benefit of such a change. **Are there any consequences of the proposed changes of which you feel the CAA should be made aware?** We believe the requirement to report flight rules will have a negligible impact on controller workload but could increase RT usage at first when controllers have to query pilots who omit this information. If the pilot makes a late entry request this could result in delaying action being required. **What period of time does your organisation need to enable you to adapt to the revised requirements?**

	There will be no requirement to adapt however we have a publication for our members which we can utilise to ensure all our members are aware of the changes before becoming effective.
CAA Response	Noted.

Stakeholder:	The Honourable Company of Air Pilots
Free text comment:	1. The policy is slanted strongly toward ensuring ATC can work with a known or recognised air traffic environment. However, it does not address how pilots operating within those environments will be made aware of the non-radio or non-EC traffic. A mention of how and when information on non-compliant aircraft will be broadcast so all pilots can comprehend the complete air traffic environment would be helpful. 2. We welcome elements of this policy and the increased recognition of the benefits of electronic conspicuity. However, it may prove more effective to conduct an over-arching review of UK airspace, establishing the top-level requirements then looking at the best **simple** way to achieve all the essentials and to best meet desirables. Many of our members fly GA in the USA as well as UK and invariably find the USA airspace divisions and Radio/Transponder Rules far superior to those in UK. Even if such a comprehensive revision is not possible, it is essential that airspace arrangements are reviewed periodically to sustain the principle at para 1.1. 3. We also believe, as reflected in comments above, that any revision to TMZ arrangements must recognise that so many aircraft will soon carry EC equipment (following the 50% rebate on portable ADS-B in+out). 4. A number of aircraft, especially those without any electrical system, continue to operate without radio or EC. While these may be upgraded by portable radios and EC devices, the latter are unable to meet SIL-1 standard. Therefore, some recourse for these aircraft to continue to operate is required. Nonetheless, as ADS-B in+out equipment becomes widespread across the UK GA fleet, a portable (and affordable) SIL-1 EC solution will be necessary to afford all aircraft operating in the 'open FIR' a 'recognised air traffic environment or at least effective STCA.
CAA Response	Noted. Taking each of The Honourable Company of Air Pilots' points in turn: 1. The intention of the policy is not to duplicate provisions relating to the provision of ATS. Traffic information on all flights will be passed according to the requirements detailed in SERA.6001 and its associated Appendix 4. 2. Noted. The Department for Transport and the CAA are committed to working with relevant stakeholders and those tasked with delivery to ensure airspace modernisation happens in a coherent and consistent way. We intend to achieve this through the Airspace Modernisation Strategy. 3. Noted. 4. Note that paragraph 4.4 of the policy requires RMZ and TMZ controlling authorities to make provision for aircraft that are unable to

	comply with the notified requirements for flight in a RMZ/TMZ to gain access, where a demonstrable requirement exists.

Stakeholder:	BALPA
Free text comment:	This response is being produced by the Air Traffic Services Study Group, part of the Flight Safety structure of BALPA. The Association represents thousands of UK-based pilots in both Industrial and Flight safety matters. BALPA agrees with the proposed changes whilst adding a couple of questions to be considered as part of the wider re-organisation. To answer the questions posed, please see below. **Does BALPA manage and RMZ/TMZ?** No, but we do have members who will be users of the proposed RMZ/TMZ structure including commercial fixed wing and helicopter, Flight Instructors and Search and Rescue pilots. As such, we welcome the improvement in flight safety that conspicuity will bring. **How will the proposed changes to the RMZ/TMZ airspace Policy Statement affect your operations ?** Whilst the changes may affect the operation within these areas, we don't believe that pilot workload would be adversely affected and again welcome the perceptible benefits to flight safety. **Are there any consequences of the proposed changes which you feel that the CAA should be made aware ?** There will be an increase in R/T workload but again it should be manageable and familiar with practice. We note a requirement to call 15nm or 5 mins whichever earlier which may be difficult to achieve in more complex environments. **What period of time does your organisation need to enable you to adapt to the revised requirements ?** No substantial amount of time would be needed except to publicise and educate pilots before the introduction of these Zones. We note that you have made arrangements to accommodate aircraft and airfields that may have problems with meeting these requirements. We welcome the flexibility to help all air users and develop 'work-arounds'. WE note the definition of 'known' and 'recognised' airspace. Perhaps, 'recognised' airspace could be known as 'conspicuous' airspace which would be more aligned with the methods of conspicuity to be permitted? WE note that it isn't clear whether these are permanent Zones or whether they will be promulgated for certain operating hours. Many other types of airspace are developing a flexible use policy and we wonder whether these areas are included? Thank you for allowing us the opportunity to provide feedback to the proposals.
CAA Response	Noted. Taking the last three of BALPA's points that require response in turn: 1. Acknowledging that the complexity of the surrounding airspace, amongst other issues, may mean that it is impractical for pilots to "seek to establish two-way communications with the RMZ Controlling Authority when 15 nm or 5 minutes flying time from the RMZ boundary, whichever is the greater", the CAA has been careful to caveat the requirement by stating that this should be achieved "when practicable".

	2. The terms ‘known’ and ‘recognised’ are not meant to act as airspace descriptors but as terms for use within air traffic management to describe the air traffic environment that exists within a given volume of airspace. As such, we wouldn’t anticipate these terms being adopted into common parlance within the airspace user community. 3. The CAA believes it likely that RMZ and TMZ could be promulgated for certain operating hours and we would anticipate this to be one aspect of an airspace change sponsor’s proposed design.

Stakeholder:	GAA
Free text comment:	1. There are a number of issues with this “consultation” some of them to the extent that they mean that it fails to reach the standards expected by Better Regulation: 1.1. It would appear that it has only been sent to those on the NATMAC distribution list, it certainly does not appear on the https://consultations.caa.co.uk/ web page, and so has disenfranchised other potentially affected parties. 1.2. As it is a “consultation on proposals to amend the Policy for RMZ and TMZ” it should have been accompanied by a Regulatory Impact Assessment, 1.3. At under 8 weeks long it is shorter than the expected 12 weeks without any explanation as to why this is the case, 1.4. The previous August 2015 Policy wasn’t consulted upon either, 1.5. Having a closing date/time of midnight on a Friday is strange in that what work will be carried out over the weekend? Mid-night on a Sunday would make more sense. 2. With the current active DfT/CAA encouragement of Electronic Conspicuity that isn’t limited to Mode S transponders we believe that it is incumbent upon the CAA to produce frameworks by which non-Mode S EC can be used to access a TMZ. 3. In order to align the terminology with Control Zones (CTRs) and Control Areas (CTAs) there should be RMRs as well as RMZs, similarly TMRs and TMZs The following points all relate to the “Consultation on revised SARG Airspace Policy Statement” document 4. In paragraph 1.1 there is the following statement: Initiative 11 focuses on electronic conspicuity and the utilisation of cost effective electronic surveillance information with the objective of better integrating commercial and non-commercial operations in ‘uncontrolled’ airspace such that the airspace user can sense all others and be seen by all others. This seems like a fundamental shift in the CAA’s direction that the GAA would be interested to have more information about. 5. In paragraph 2.3 it states: The purpose of the RMZ/TMZ Airspace Policy Statement is to detail UK policy and guidance for the establishment of, and operations within RMZs and TMZs in accordance with Reg (EU) No 923/2012 Standardised European Rules of the Air (SERA)1, and to place the content of SERA.6005 ‘Requirements for communications and SSR transponder’ into a UK context. Surely with Brexit this Policy should be unfettered by EU Regulations?

	6. In paragraph 5.2.1 it states: The consultation period runs for 8-weeks from 26 October 2020 to 18 December 2020 8 weeks would be 26Oct2020 to 21Dec2020. 7. In paragraph 5.2.2 it states: Respondents should indicate whether they support or object to the proposals and comment accordingly Unless all the points made in this response are suitably addressed the GAA objects. 8. Paragraph 5.3.1 question: Do you, or the organisation that you represent, fly within RMZ and/or TMZ, or 'manage' a RMZ and/or TMZ? Pilots represented by the GAA regularly fly in airspace that is, or could well soon become, TMZ/RMZ airspace 9. Paragraph 5.3.1 question: If yes, how will the proposed changes to the RMZ/TMZ Airspace Policy Statement affect your operations? The potential negative effects are detailed in the points made in this response 10. Paragraph 5.3.1 question: Are there any consequences of the proposed changes of which you feel the CAA should be made aware? In addition to the points made in this response the CAA should be aware of and acknowledge the considerable number of pilots to whom TMZ/RMZs do not represent the "controlled airspace lite" that some in the CAA and ANSPs appear to believe it to be. 11. Paragraph 5.3.1 question: What period of time do you or your organisation consider would be sufficient to enable you to adapt to the revised requirements (i.e. after publication of the finalised Airspace Policy Statement and before it becomes effective)? For some there currently isn't the technology available, for others they are ready now.
CAA Response	Noted. Taking the GAA's points in turn: 1.1 The Government requires that the CAA consider the full range of people, business and voluntary bodies affected by the policy, and whether representative groups exist. The purpose of the NATMAC is to "assist SARG in the development of airspace policies, configurations and procedures in order that due attention is given to the diverse requirements of all users of United Kingdom airspace, civil and military". The membership of the NATMAC "covers the whole spectrum of the UK aviation community". As such, the CAA considers the NATMAC to be the appropriate body for us to consult with upon changes to an airspace policy statement. Taking advice from our Unmanned Aircraft Systems (UAS) Unit, we also extended the consultation to a number of key UAS stakeholders that were not fully represented on the NATMAC. We have subsequently tested our approach with our Airspace Engagement Group (comprising representatives from CAA SARG, BGA, AOPA, A4A and PPL/IR Europe). They concurred that NATMAC was an appropriate forum, making a number of proposals that could make such engagement more effective. The CAA has agreed to incorporate these proposals, wherever possible, into our engagement with NATMAC in the future.

	1.2 The CAA is only required to develop and submit a Regulatory Impact Assessment when undertaking legislative change. 1.3 The Government requires that we judge the length of the consultation taking into account the nature and impact of the proposal. Following internal discussions, it was agreed that a consultation period of 8-weeks was sufficient, and this was briefed to NATMAC on 15 Oct 2020. No objections were raised at that point and no stakeholders requested an extension to the consultation deadline. As such, the CAA considered that a period of 8-weeks was proportionate and agreeable to the members of NATMAC. That said, in testing our consultation approach with the members of the Airspace Engagement Group, they highlighted the challenges that can occur in obtaining and collating the views of their members within a period of 8-weeks, proposing that materials might be circulated in advance of NATMAC. In proposing new or amended airspace policies to the NATMAC, the CAA has agreed to take these challenges into consideration when determining the length of consultation periods and will consider whether it is appropriate to circulate materials in advance. 2. The legislation (SERA.6005(b)(1)) (coupled with Paragraphs (4)(d) and (5)(b) of the table in ANO 2016 Schedule 6 Part 2 (Scale E2 refers)), is clear that the requirement is for carriage of a Mode S SSR transponder within a TMZ. However, the CAA has adopted a risk-based approach that permits TMZ Controlling Authorities to define alternative provisions that satisfy the pressure altitude reporting requirement for a TMZ, where their use has been addressed within the airspace change safety assessment. Determining whether alternate types of electronic conspicuity data are suitable, appropriate, and proportionate will be achieved by the ANSP through the CAP 1616 process. 3. Not accepted. It is interesting to note that whilst the use of the terms ‘zone’ and ‘area’ have specific meaning in relation to the surface of the earth in the context of CTR and CTA, this relationship does not extend to other airspace structures such as danger areas, restricted areas, prohibited areas, TMZ and RMZ. In the context of RMZ and TMZ, they are defined as a volume of “airspace of defined dimensions” which means that they can either extend upwards from the surface of the earth or, can extend upwards from a specified limit above the earth. 4. The text cited by the GAA is sourced (near verbatim) from the Airspace Modernisation Strategy (CAP 1711) paragraph 4.33 (11). 5. Note that the draft policy was developed before 31 December 2020 (i.e. the end of the EU Exit transition period) and was written in the context of still being part of the EASA system. Moreover, the aviation law that was made by the EU and that was applicable in law at 2300 on 31 December 2020 has been retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018. In the specific context of this policy, the Standardised European Rules of the Air (SERA) is now referred to as UK (EU) Reg No 923/2012 SERA. 6. Noted. We opted for dates based on working weeks. Acknowledging an earlier point that the CAA would not, routinely, begin to respond to comments over a weekend, if NATMAC members wish to have the flexibility to respond over the weekend, then the CAA will take note of this for the future. 7. Noted. 8. Noted. 9. Noted.

	10. Noted. Both the extant RMZ/TMZ policy statement and the proposed policy state that RMZ/TMZ status does not confer or suggest a change to airspace classification. Paragraph 4.3 of the proposed policy explicitly states that RMZ/TMZ adopt the background classification of the airspace that they are embedded within. It is also worth highlighting that the UK's arrangements for RMZ/TMZ offer greater flexibility than some of our European neighbours (for example France) in explicitly requiring ANSPs to make provision for aircraft to gain access to RMZ/TMZ where the aircraft is unable to comply with the notified requirements for flight. 11. Noted.