



DEFENCE AVIATION SAFETY AUTHORITY

SUMMARY OF RESPONSES TO NPA 04/2017 – DEFENCE AVIATION SAFETY REGULATIONS FOR UNMANNED AIRCRAFT SYSTEMS (DASR UAS)

INTRODUCTION

1. **General.** Readers should note that this Summary of Responses outlines DASA's agreed policy and intended regulation changes and finalises the public consultation process in respect of this Notice of Proposed Amendment (NPA). Only under extreme or unusual circumstances will DASA consider views or arguments opposing the views expressed in the Summary of Responses. Any member of the public having views or arguments to support an appeal against the decisions documented in this Summary of Responses may petition DASA to consider such an appeal.
2. **Background.** On 25 Oct 17, DASA released NPA 04/2017 for comment. The period for public comment on the proposals contained in this NPA closed on 15 Nov 17.
3. A large number of comments were received from a diverse group of individuals and organisations. Many of the comments:
 - a. were positive and reflected the success of DASA's consultation efforts throughout the development of the regulations
 - b. would result in immediate improvements that would benefit the UAS community
 - c. highlighted the need for an education programme, which the DASA will initiate and undertake in 2018.
4. DASA would like to thank those who took the time to respond to the NPA. The final regulation has been improved as a consequence of comments received.

ANALYSIS OF COMMENTS

5. The complete summary of comments received, corresponding DASA response and resulting disposition is at Annex A. Disposition is categorised into:
 - a. 'No action required', for instances where the issue raised has been adequately addressed with a DASA response, requiring no amendment to the regulation
 - b. 'Text amended', for instances where the issue raised has resulted in an amendment to the regulation and or AMC/GM
 - c. 'Future action', for instances where the issue raised will be addressed through future revisions of the regulation or a separate body of work by DASA.



AUTHORITY

6. The content of this Summary of Responses has been reviewed and is authorised.

Original Signed
05 December 2017

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Annex:

- A. NPA 04/2017 – List of Respondents
- B. NPA 04/2017 – Summary of Responses

NPA 04/2017 – SUMMARY OF RESPONSES

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SERIAL NO.	REFERENCE	PARA.	COMMENT / SUGGESTED CHANGE	DASA RESPONSE	DISPOSITION
GENERAL					
1	General	-	Materiel Engineering. Reference to basic Materiel Engineering processes (safe, fit for purpose, environmentally compliant) IAW existing Defence Technical Regulatory (DEFLOGMAN) and WHS policy frameworks.	The term Materiel Engineering has been deliberately not mentioned since it is not applicable to DASR UAS in its entirety. For example, DASR UAS cannot require UAS to be 'fit for purpose'. This is because DASR UAS are limited in their applicability to aviation safety ie safety of people at risk as a result of UAS operations.	No action required
UAS.10 - UAS APPROVAL AND AUTHORISATION					
2	GM UAS.10 (#2)	2	DASR SMS is not specifically required; was this a deliberate decision?	It was a deliberate decision to not make explicit references to DASR SMS to avoid unnecessary duplication of regulations and to avoid going overboard for comparatively benign operating environments. DASR SMS will be automatically invoked through other regulations as they become applicable to DASR UAS, depending on UAS category. For example, a certified category UAS will require maintenance to be conducted by a DASR 145 organisation. A 145 approval holder will have to comply with DASR SMS through their organisation approval.	No action required
3	GM UAS.10 (#3)	-	Confirm all defintions will be removed from the DASR.UAS text and placed in Glossary?	Definitions will be available in the Glossary. DASR UAS presents a complete set of regulations relevant to UAS and for convenience of reference and for the education of readers in this developing field, UAS specific definitions have been included within the GM. Keeping the definitions within DASR UAS allows their expansion to include explanatory notes, source and refer to alignment etc. with ICAO, CASA, etc	Definitions to be available in Glossary
4		-	Sparsely populated area: retain and use.	Noted. The inclusion will be considered as part of a review to improve the definition of populous area and remote area.	Future action DASR UAS update
5		1.a.	Replace UAS with RPAS. Aligns with CASA terminology (and emphasises that there is a human in control). Aligns with ICAO Circular 328 definitions and assumes aircraft are not fully autonomous.	DASA has decided to utilise the term UAS in line with EASA's use of the term, having also considered the term RPAS - which is used by CASA. Due to the wider impact on Defence, the decision was based on several factors including: RPAS is a subset of the all-encompassing term UAS, referring to a UAS that is not fully autonomous and is always 'piloted' ie the RP maintains the ability to intervene. CASA employs the term RPAS in line with ICAO vision that only RPA will be able to integrate into international civil aviation system in the foreseeable future. Defence is not obliged to follow suit and DASA has therefore chosen to use the all-encompassing UAS term that better reflects potential future capability developments where Defence may develop/acquire almost fully to fully autonomous UAS.	No action required
6		1.c.	Operator: amend to UAS Operator as there are many types of operators. Making the title more exact can only help.	Agreed.	Text amended
7		1.f.	MEP: clarifying Note repeats the defintion. Delete this sentence.	The definition has been deliberately repeated in the note. It was deemed necessary from a written communication prespective to repeat the definition to provide the complete context for the explanation in the note.	No action required
8		1.g.	GP: add (UAS context).	Agreed.	Text amended
9		1.i.	The definition of Populous Area needs to be improved. The current definition is too vague. Acknowledge that is may be difficult to state a number/area but this vagueness is leaving projects in a difficult situation. At least include examples of what is definitely a 'Remote Area', what seems to be/feels like 'in proximity of population', and what is definitely a populated area. Middle of Australia – Remote? North of Edinburgh – 'in proximity of population' or a populated area? Sydney CBD – populated area?	Agreed. The definition will be improved as national and international consensus emerges on what constitutes a populous area. At this stage, DASA has deliberately chosen to adopt the CASA definition - to promote commonality between the Australian civil and military UAS regulation.	Future action DASR UAS update

10		1.i.	XXX recommends that property is included within the definition for 'populous areas'. The definition for 'populous areas' at GM UAS.10 (#3) is based upon CASA Advisory Circular (AC) 101.10 - Remotely piloted aircraft systems - licensing and operations and removes the reference to property of people. This seems to contradict the 'suitability for flight' requirements of DASR. The DASR Glossary of Terms states that 'Suitability for flight' is defined as: Aircraft flight where the risk is eliminated or minimised so far as is reasonably practical to: a. loss of life or injury to aircrew and passengers b. loss to other personnel or property as a direct consequence of the flight c. loss of, or damage to, the aircraft.	Property has been deliberately excluded from the definition. DASR are a specialist amplification of WHS provisions and obligations for aviation specific hazards. DASR are therefore limited to safety of people at risk due to aviation specific hazards. Damage to property is not relevant to the aviation safety context of DASR unless there is a damage to critical infrastructure - which could lead to an immediate and adverse effect on health and safety of people. The term 'suitability for flight' is written for the manned aircraft context and therefore does not feature in DASR UAS definitions.	No action required
11		1.j.	Critical infrastructure; poor definition. Excludes capability hits should the loss occur. Too focused on people, which is already addressed separately.	The definition has been deliberately worded to focus on the immediate and adverse effect to health and safety of people as a result of damage to property. This is because DASR are a specialist amplification of WHS provisions and obligations for aviation specific hazards. DASR are therefore limited to safety of people at risk due to aviation specific hazards. DASR UAS bounds the definition of critical infrastructure deliberately to only include property that, if damaged, could have an immediate and adverse impact on health of safety of MEP/GP in line with the aviation safety context of DASR. DASR UAS does not intend to cater to or prevent any capability hits as a result of a loss as it only covers the aviation safety context.	No action required
12	UAS.10(a)	-	As the DASA has to issue a UASOP or equivalent, or sets the controls of others, isn't it really the DASA who are retaining risk and Command is simply leveraging off DASA approval to fly?	Aviation safety is ensured by Command as it is their obligation under the WHS legislation to ensure risks to health and safety are eliminated or otherwise minimised SFARP. DASA/Authority does not retain any risk. DASA, through DASR UAS, provides Command with a specialist amplification of WHS provisions and obligations for aviation specific hazards. Issuance of a UASOP or another instrument is an attestation of the Authority's assurance and not an indication of any risk retention by DASA/Authority.	No action required
13	AMC UAS.10(a)	4	do not capitalise Authorising/authorised. It is a verb. Applies to all AMC and GM .	Agreed.	Text amended
14	UAS.10(b)	1	use of personnel implies people who work for you. Critical implies you can destroy a person's home without worry. use the word people vice personnel. Use property vice critical infrastructure.	Agreed (people vice personnel). Property addressed at Serial No. 15	Text amended
15		1	use of personnel implies people who work for you. Critical implies you can destroy a person's home without worry. use the word people vice personnel. Use property vice critical infrastructure.	The term critical infrastructure has been deliberately employed instead of property. DASR are a specialist amplification of WHS provisions and obligations for aviation specific hazards. DASR are therefore limited to safety of people at risk due to aviation specific hazards. Damage to property is not relevant to the aviation safety context of DASR unless there is a damage to critical infrastructure - which could lead to an immediate and adverse effect on health and safety of people.	No action required
16		2	XXX suggests that para 2 of UAS.10(b), Persons Authorising, and Operators is redundant as the SFARP principal as required by the Work Health and Safety Act 2011 is to eliminate and treat risks. UAS.10.(b) states: Persons Authorising, and Operators of, a UAS are: 1. to eliminate risk to health and safety, so far as is reasonably practicable, to other air users, and to personnel and critical infrastructure on the ground or water, and 2. if it is not reasonably practicable to eliminate risk to health and safety, to minimise those risks so far as is reasonably practicable	The wording has been adopted from WHS Act 2011 Section 17 which separates the 'eliminate' and 'minimise' parts. Wording from the Act: A duty imposed on a person to ensure health and safety requires the person: (a) to eliminate risks to health and safety, so far as is reasonably practicable; and (b) if it is not reasonably practicable to eliminate risks to health and safety, to minimise those risks so far as is reasonably practicable.	No action required
17		2	no reason not to combine this into 10.b.2. merge into 10.b.2. Removes a regulation that really is a bolt on to the previous and is normally included with the one statement in other documents.	Refer to Serial No. 16	No action required

18	GM UAS.10(b)	2	<p>Bottomless list of controls.</p> <p>This para touches on a broader issue of SFARP. Why is it SFARP to apply an airworthiness standard issued by an N/MAA and consider that a sufficient benchmark for Certified UAS? Does that make the airworthiness standard a list of SFARP requirements? The controls listed in DASR.UAS should be considered the minimum set of controls, even for non-Certified UAS. If you apply these controls, you will be allowed to fly by DASA. DASA as a MAA, should set the minimum they require for safe operation, without a 'get out clause' that more controls may be mandated in the future to make something SFARP. It makes it hard for future UAS projects to evaluate whether they meet the requirements for certain operations and should therefore pursue the acquisition of the UAS.</p>	<p>The regulation and associated GM aim to highlight the statutory obligations of persons authorising UAS operations and operators of UAS.</p> <p>Section 1 Chapter 2 of AAP7001.054 provides detailed guidance on airworthiness standards and their contribution to WHS obligations and can be helpful in understanding why airworthiness standards are a benchmark for Certified UAS.</p> <p>Non-certified UAS require operational controls to make up for technical/design deficiencies. This must always be contextualised for the intended operating environment, which can only be done by the UAS operator.</p> <p>The aim of the clause is to emphasise that controls in a regulation can never be comprehensive. It is not a get out clause, it emphasises that UAS operators cannot simply meet the regulations and then declare operations to be safe.</p> <p>DASA however is not leaving Command in the lurch and will soon be releasing an Advisory Circular ("Risk Controls for UAS Operations") that will provide extensive list of candidate risk controls.</p>	Future action AC release
19		2	spell out RP.	Consistent formatting to be applied when published on the internet.	No action required
20	UAS.10(c)	-	<p>use of imperative word.</p> <p>operational focused regs use must vice shall. While included in DASA Manual Rules of Interpretation, 'shall' is outdated language and was imported from EMAR and seemingly is preferred by technical DASA staff. Please use the same word already in use throughout OPAW regulations - 'must'. As this is an AIROPS regulation, it is that. This comment is applicable throughout the DASR.UAS. Refer DASA Manual Rules of Interpretation.</p>	<p>Terminology across all DASR will be harmonised in a future revision.</p> <p>This is part of wider regulation reform initiatives currently being considered by DASA Directorates.</p>	Future action DASR harmonisation
21	GM UAS.10(c.)	-	<p>Alignment with Contemporary Regulations.</p> <p>It is noted that the NPA is designed to 'partially align' with EASA and CASA regulations and to be based on 'contemporary' regulations.</p> <p>With this in mind, it is highly likely that CASA will adopt the Specific Operations Risk Assessment (SORA) process currently being developed by the Joint Authorities for Rulemaking of Unmanned Systems (JARUS).</p> <p>The SORA methodology provides a logical process to analyse the proposed mission profile and to make a risk determination in accordance with SFARP as required under extant DASR requirements. XXX recommends that Defence adopts the JARUS SORA process, once released, as AMC to provide operators and operational commanders with a contemporary tool that will assist in managing risks posed by UAS operations.</p> <p>XXX further recommends that education in the SORA process should be an essential or highly desirable requirement for personnel involved in developing MRP/RMP and those with risk retention delegations within the Operational chain of command.</p>	<p>JARUS SORA approach was studied as part of the analysis to develop AMC for standard scenarios. The approach is general in nature, potentially making it conservative for Defence purposes. The approach will be continually monitored and reviewed as it develops and is adopted by NAAs.</p> <p>Note that SORA criteria has contributed extensively to an imminent Advisory Circular, "Risk Controls for UAS Operations".</p>	No action required

22		3.b.	<p>The phrase "not certified to robust airworthiness standards" seems to imply an all or nothing situation, whereas the robustness of design can be a large sliding scale of "robustness". ADF experience with Shadow 200, Heron and upcoming Triton (and potentially Reaper) indicate that "robust" and recognised airworthiness standards are often applied for some or many aspects of design of MALE and HALE UAS.</p> <p>Perhaps a more balanced description indicating variable risk state would be "not certified to a comprehensive and recognised airworthiness code set" or "insufficient or incomplete set of airworthiness standards"?</p> <p>GM UAS.10.(c) Operation Under UAS Categories states: "3. DASR UAS does not require UAS to operate within a fixed category from acquisition. Rather, any UAS that meets all the requirements of a given category may be operated in that category under Command/Group Authorisation. Three categories of UAS operation are: a. Certified Category. Intended for UAS operations where the operator expects to operate in all airspaces and over all populous areas. Consequently, robust initial, continuing and operational airworthiness regulation and Authority oversight is required to manage the safety risk to other parties. Authority approvals for initial and continuing airworthiness and operations are analogous to manned aircraft. b. Specific Category. Intended for UAS operations where the UAS is not certified to robust airworthiness standards. Consequently, increased operational constraints and risk assessment provide justification for safe operation."</p>	<p>The guidance is aimed at defining the Specific category and delineate it from the Certified category. The suggested "not certified to a comprehensive and recognised airworthiness code" is simply another way of saying "not certified to robust airworthiness standards".</p> <p>When part of the design for a non-certified UAS does in fact meet robust standards, this is accounted for when selecting risk controls for Specific category UAS.</p>	No action required
23		4	States Open category is aligned with CASA - but in UAS.40(a) 1 the Micro category has greater restrictions imposed than by CASA. Inconsistent.	<p>Apart from the RP training requirement, Micro UAS DASR UAS Standard Operating Conditions fully align with CASA requirements for Micro UAS.</p> <p>Simply reading CASA's Standard Operating Conditions in Subpart 101.F.1 might give the impression that there are no requirements for Micro UAS. This however is not true. Several requirements applicable to Micro UAS can be found in other Subparts in Part 101. For example, refer to 101.073 (VLOS requirement) which is outside of 101.F but is applicable to all UAS including Micro UAS.</p>	No action required
24		4	if aligning to CASA, then use the CASA term vice a European term that does not reflect Australia. This is more useable.	<p>EASA terms have been deliberately adopted.</p> <p>This is aimed at future compatibility with EMAR and alignment with an emerging global convention. The categories align with EASA's approach. Alignment with CASA is only in the requirements in the Open category. Adoption of category names from two different NAAs would be confusing.</p>	No action required
UAS.20 - CERTIFIED CATEGORY UAS					
25	UAS.20(a)	3	Agree with intent, but must ensure that DASR Part 21 does not unduly increase type certification requirements beyond international UAS equivalents	<p>The requirements for Certified category are deliberately mandated to be equivalent to standards of safety of manned aircraft. Flexibility has been provided in the Specific Category where DASR 21 requirements will be determined on a case by case basis.</p> <p>DASA is mindful that there is no current UAS that has achieved type certification to manned aircraft standards. UAS unique standards are being published by reputable standards organisations. DASA is satisfied that the current approach appears in step with emerging global convention, and will continue to monitor that evolution.</p>	No action required
26		3	DASR.21 may be overly prescriptive as it is designed for manned aircraft. add some flexibility. Example is UAS.30(b)3.	Refer to Serial No. 25	No action required
27		4	may be overly prescriptive as it is designed for manned aircraft. add some flexibility. Example is UAS.30(b)3.	Refer to Serial No. 25	No action required
28		6	motherhood statement. This is not stated like this for manned aircraft. More so, DASR applies to all of Defence Aviation, so why start putting in little reminder regulations everywhere. At best, this is GM not regulation, as it is just repeating other policy.	<p>The regulation has been deliberately used to call out other Air Operations regulations.</p> <p>This is in line with the intent of DASR UAS being a complete set of standalone regulations, calling out other regulations as applicable.</p>	No action required
29		7	Use alternative wording for COMAUSFLT/COMD FORCOMD/ACAUST - the positions are not regulatory positions	No change.	No action required

30		7	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Noted. The term will be reviewed as part of a review for DASR RP.	Future action DASR RP review
31	AMC UAS.20(a)3	1	It is recommended that consideration be given to updating DASR and AAP 7001.054 to reflect RTCA DO- 365. AMC UAS.20(a)3 states: “The airworthiness of the UAS design (including through-life modifications) must be demonstrated to the satisfaction of the Authority per DASR.21. AAP 7001.054, Airworthiness Design Requirements Manual, presents design requirements for Certified category UAS.” It is noted that AAP 7001.054 states that “Circa 2015, robust and comprehensive Airworthiness Codes for UAS have not yet been developed.” In May 17, the RTCA released DO-365 Minimum Operational Performance Standards (MOPS) for Detect and Avoid (DAA) Systems.	The DASA will reassess AAP 7001.054 Section 4 content once DASR UAS are released.	Future action 054 update
32	AMC UAS.20(a)7	1	CAF did not want UAS included in the DASR.Aircrew review.	Regulations provides two options: (1) qualified military pilots, (2) qualified in accordance with requirements mandated by AC AUST... AMC provides linkage to DASR AIRCREW and other requirements when option 1 is chosen. DASA acknowledges and is mindful that this is an evolving area.	No action required
UAS.30 - SPECIFIC CATEGORY UAS					
33	UAS.30(a)	3	COMAUSFLT/COMD FORCOMD/ACAUST should be the generator of standard scenarios that the regulator approves for Specific Type B. Change 'published' to 'approved' by the authority.	Standard Scenarios are published by the Authority but can be suggested (or generated for consideration) by anyone to the Authority. The delineation between Approved and Published is deliberate. Standard Scenarios themselves are not an approval, they are simply a set of published requirements and limitations for a UAS operational scenario. Command can utilise an Authority published Scenario to authorise operations. The approval term is utilised for UASOP approvals which represent an explicit approval by the Authority.	No action required
34	GM UAS.30(a)	5	do not capitalise the word approved.	Agreed.	Text amended
35	UAS.30(b)	3	but to what extent will that be?	The extent of required compliance will be decided on a case by case basis. It is important to note that Specific Type A could entail a wide array of UAS operations ranging from Micro UAS operations to a HALE UAS. It is therefore not plausible to define the extent of required compliance for Specific Type A in DASR UAS. Associated GM provides explains this point in significant detail.	No action required
36		4	not sure what value is added by stating to the extent of the Authority, as this is not like DASR.21. simply, just say comply with DASSR .100. There is only one way to do an MAOC/OPSPEC, which is all there is to DASR.100 really. This will remove red tape of making the regulated community ask each time what DASA wants or does not want.	The extent of required compliance will be decided on a case by case basis. It is important to note that not all Specific Type A UAS operations will require to comply with MAO requirements and some might be required to comply with some aspects proportionate to the risk posed. The wide array of UAS operations in Specific Type A, ranging from Micro UAS operations to a HALE UAS, make it implausible to define the extent of required compliance for Specific Type A in DASR UAS. Associated GM provides explains this point in significant detail.	No action required
37		5	motherhood statement. This is not stated like this for manned aircraft. More so, DASR applies to all of Defence Aviation, so why start putting in little reminder regulations everywhere. At best, this is GM not regulation, as it is just repeating other policy.	Refer to Serial No. 28	No action required
38		6	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Refer to Serial No. 30	Future action DASR RP review
39		7	motherhood statement. The regulation already states must be operated under a UASOP, so clearly you have to follow whatever is in it.	The statement has been deliberately worded to highlight that there would be requirements and limitations additional to the ones required by para. 1-6.	No action required

40	AMC UAS.30(b)	-	It is recommended that JARUS SORA methodologies are referenced and recognised as best practice, to assist applicants and indicate knowledge and skills that should be acquired? AMC UAS.30(b) - Authority Requirements for Issue of a UASOP states: "1. This AMC presents the Authority's minimum application requirements for issue of a UASOP and provides the means to assist Command/Group's risk analysis." It is acknowledged that that minimum requirements should not be overly prescriptive, however as AMC is used to guide expectations, should there also be reference made to JARUS SORA methodologies as recognised best practice?	Refer to Serial No. 21	No action required
41		-	Distinction between 'Operations in proximity of populations' and 'Operations overhead populations' is blurry. A rotary UAS is likely to fall vertically, while a fixed wing is likely to glide or follow a ballistic path some distance Merge both sections on populations to consider all operations that may result in ground fatality.	DASA has aimed to clarify the risk to people through differentiation between operations conducted in proximity of and overhead of populations. It is important to note that there is a different risk context for operations in proximity of and operations overhead of populations. DASA acknowledges and agrees that there would be differences for rotary wing and fixed wing UAS. Our aim is to make sure that the difference in risk context is understood and is evaluated.	No action required
42		3	space between U ASOP.	Agreed.	Text amended
43		5 to 13	It is recommended that this section is reviewed to consider the requirement for containment systems. This section states "For a UAS to enjoy unimpeded access to an airspace class, it should include all equipage required for the airspace and be operated by a RP with the requisite qualifications for the airspace." Prescribing equipage expectations on a per airspace case has one major shortfall - you must be able to demonstrate assurance over containment, otherwise a platform operating in a lower-class airspace with lower equipage and assurance could subsequently enter that airspace e.g. Class G abutting a Class C area.	This will be considered for the next update of AAP 7001.054 Section 4 and to DASR UAS.	Future action 054 update DASR UAS update
44		6	SFARP for airspace. The SFARP principle is not applied for airspace equipage, so why are we mandating that UAS potentially exceed the level of safety afforded by other airspace users? This section should stress that operational risk treatments should make the UAS present an 'equivalent level of safety' to other airspace users, as is expected from all users of that airspace. Again, does meeting the benchmark/equivalent level of safety for that airspace show you have gone SFARP or are we mandating more here?	The SFARP principle is already applied to airspace access through the application of reputable standards, publications, common practice, etc. The para. simply emphasises that operational risk treatments must be held to that same level of safety. Consequently we are not mandating more. Refer to AAP 7001.054 Section 1 Chapter 2 for relevant information.	No action required
45		6 - Note	the note is overkill. If in controlled airspace, then ATC clearances apply and as they do with manned aircraft in IMC replace the see and be see concept.	ATC clearances rely on aircraft equipage. If ATC clearances are to apply, as suggested, the UAS must also include that equipage. The note focuses on aircraft without correct equipage, where risk modelling is used as a substitute. The note remains appropriate (and is also a view which is not unique to Defence).	No action required
46		8	do not repeat definitions in the text, that is what the DASR Glossary is for.	Agreed.	Text amended
47		12	ATMP inclusions. The ATMP should also discuss UAS behaviour in abnormal/contingency situations.	ATMP is considered a plan for normal ops. Contingency for abnormal ops would be covered in risk controls for failures and abnormal ops.	No action required
48		17 to 25	It would seem worthwhile to indicate as GM/AMC to applicants that such a model will need to be established to estimate stand-off distances to avoid being "overhead". An expanded Note would be useful to indicate that the Authority can be consulted for endorsed safety targets to be used to inform. Para 17 addresses risk to people from "UAS operations in proximity (ie near but not over) of a population". However therein lie's a conundrum of what operations are considered "overhead". Past modelling efforts have grappled with hazard exposures cones which will very depending on failure modes, altitude and inertia. Para 22 b. (2) & (3) mentions quantitative safety targets, however, these are not explained or defined anywhere else in the Regulation, AMC or GM.	The DASA agrees that this area needs further development, but a lot of work is needed to achieve it. For example, even something as simple as the suggestion of a note regarding safety targets may be problematic (eg legal compatibility with SFARP). This is a focus area for the DASA with DASTG assistance in 2018.	Future action Further development
49		17.a.	start using sparsely populate area definition that was used under OAREG 7 vice loose terms such as sufficiently remote area, which is not defined and very open to interpretation in different ways.	Refer to Serial No. 4	Future action DASR UAS update

50	19	By using a prescriptive list, without any use or may include or should include, the AMC is closed off to additional requirements that the SME might identify. By not having 'include' there is no push to consider others. It also affords some flexibility in that those on the list that do not require attention can be ignored, reducing reporting red tape. This applies throughout the AMC for the lists in use.	Agreed. 'including the following' to be inserted into lists to indicate the need for other issues to be considered.	Text amended
51	19.b.	what is a remote area? These things need to be defined. Refer to 17.a comment.	Refer to Serial No. 4	Future action DASR UAS update
52	19.b.(4)	why is there an assumption only a 'few' MEP would be in the area. It could be a battalion has to be there, but this AMC restricts this. A few MEP reads like a test plan vice an operational employment.	Agreed. Word 'few' to be removed.	Text amended
53	21	Similar considerations for 'populous' and in 'proximity of' operations. The in 'proximity of' operations should also take into consideration shelter factor, duration of operations, and frequency of catastrophic UAS failures, just like Para 23.	Refer to Serial No. 48	Future action Further development
54	22.b(2)(3)(4)	these are all taking about the same thing. Merge it together with improved flexibility -- i.e. , conduct a risk assessment IAW DASM.	There are differences between the 3 points. (2) requires a confirmation via analysis that safety targets will not be exceeded (3) requires establishment of standoff distances (4) requires OIP for exceeding/disobeying safety targets and the bounds around when that could happen. Simply mentioning 'conduct risk assessment IAW DASM' will not adequately convey the complexity of a risk assessment for Specific category UAS operations. DASM has been written for a manned aircraft context. This is the primary reason for detailed information in AMC UAS.30(b).	No action required
55	22.b.(2)	quantities risk. How does that work? Which policy? How accurate is this given it is just a guess. Use of such a tool was unhelpful with Heron as it required excessive restrictions. The quantified risk deemed likely never happened with Heron over a million hours. How is a safety target developed. Where is this published? Who controls it?	Refer to Serial No. 48	Future action Further development
56	22.b.(6)	what is a qualitative runway assessment? Change airfield to aerodrome.	Qualitative runway assessments involve a detailed assessment of available runways at an aerodrome to determine the nature of area (presence of GP/critical infrastructure) in the approach and departure paths and how risk due to uncontrolled ground impacts could be managed by runway selection and operational restrictions (for example, low altitude approach/departure to reduce potential impact area/cone). Agreed (aerodrome vice airfield).	Text amended
57	22.b.(22)	Individual and collective risk targets. These should be published and be included in the DASR.UAS.	Refer to Serial No. 48	Future action Further development
58	24.e.	the Operator, i.e. the sensor package operator, cannot compromise safety as can a RP and should be excluded from the DASR.	The word 'operator' refers to 'UAS operator' and not a 'sensor package operator'. The word could be misleading, to be changed to UAS operator throughout.	Text amended
59	24.g.	delete the note. This is forcing unneeded DASA consultation. If retained, change 'should' to may, which implies DASA is there to offer assistance if asked, where as should means you have to ask unless good reason not to. Not asking usually means you have to explain why one did not ask. Red tape for this topic.	DASA consultation is being suggested for the complex risk context of UAS flight overhead of populations. For DASA to provide a recommendation for a UASOP intended for flight overhead of populations, extensive consultation between the applicant and DASA would need to occur to effectively characterise the risk and communicate it to Command. This approach is consistent with previous Defence UAS experience and is expected to continue for future acquisitions.	No action required
60	24.h.	delete the note. This is forcing unneeded DASA consultation. If retained, change 'should' to may, which implies DASA is there to offer assistance if asked, where as should means you have to ask	Refer to Serial No. 59	No action required
61	27	this is a regulation hiding out in AMC. Make it a reg or change the context to : OIP should define the critical infrastructure that may be impacted by UAS flight.	Noted. Wording to be improved as suggested.	Text amended
62	28	If it is not critical, it would not need documentation. If DASA doer snot care, why would the Command? Delete the para, adds no safety value as critical is already considered.	The paragraph's reference to RCC 323-99 is aimed at providing Command with a widely accepted standard which could act as an acceptable means for risk assessment of risks to critical infrastructure. The scope of RCC 323-99 is wider but it could serve other capability or internal policy requirements.	No action required

63		30	Orphaned para, merge this into the main content of para 29. Likely this will be one Command RMP for all UAS as such things apply to all regardless of UAS type.	Agreed.	Text amended
64	AMC UAS.30(b)1	1	This AMC para is messy. The reg is about being Defence registered when directed, but the AMC brings in another reg, using AMC. This para opens with a should, meaning it is not mandatory. It then goes on to make a reg saying it is mandatory (regulation hidden in AMC (must)) Delete it, or amend the regulation to say all UAS must be registered, then explain the AMC as to how. If not, just stick to the Defence register as that is all the reg has in it.	Agreed. Regulation to be worded for registration (remove Defence) with further detail to be provided in AMC.	Text amended
65	AMC UAS.30(b)2	1	restrictions 1 and 2 are better managed in the UASOP. SOIU should stick to SOIU matters, IAW ARO.50. SOIU is also approved by the two star, not DASA (DG DASA endorses), whereas the UASOP is approved by DASA and will most certainly have the same information as the SOIU for these matters. So why make two documents do the job that one can. Reduce the red tape. Leave the SOIU as it is, put UAS extras in the UASOP. Airspace management is best left to the ATMP, not in a SOIU or UASOP that requires significant staff work and time to get amended. A proper command led risk based UASOP would allow this to occur. Sharing of airspace can only be assured with RA, and not all controlled airspace is RA.	Agreed. If Command elects to bound the SOIU to ARO.50 requirements, DASA will not mandate that the suggested information is also captured in the SOIU. The wording in AMC is to be amended to better reflect the suggestive nature of DASA's intent in the para.	Text amended
66		2	supports the view put forward above....UASOP is always issued, SOIU may not be. So why make it happen twice?	Refer to Serial No. 65	Text amended
67	AMC UAS.30(b)3	-	the regulation says otherwise. Just fix the reg as suggested.	The regulation states 'initial and continuing airworthiness requirements to the extent directed by the Authority'. The Regulation and AMC are consistent. The difference lies in the Certified category where the regulation is deliberately absolute.	No action required
68	AMC UAS.30(b)4	1	where is stated that DASR, other than DASR.UAS does not apply to UAS? The FMS is inherent to all flying operations, not just manned aircraft. So is OIP, and the rest. It is not just invoked because of a MAOC. The one DASR that does not apply, or will not once review is completed, is DASR.Aircrew. This is by direction of the Defence AA in a concept brief However, nothing else has been excluded, including SPA. Amend the para to reflect this.	The difference lies in what is inherent and what is a regulated requirement. The regulation provides flexibility for those UAS where Defence registration and MAOC requirements might not be required.	No action required
69		3	this is a reg as the authority is saying it has to happen. this is effectively a TOC of DASR.OPS and OPSPERS. Not required.	Agreed. The AMC wording is to be improved to emphasise that the FMS requirements from ORO.10 are an example of what the Authority might consider acceptable for organisations that are not required to operate under a MAOC. The requirements will be contextualised for each UASOP.	Text amended
70	AMC UAS.30(b)5	1	supports above statement.	Similar to Serial No. 69 - AMC wording to be improved	Text amended
71	AMC UAS.30(b)6	1	RP should be a stand alone regulation. Use the one from OAREG 7 if need be, but get the personnel qualifications out of the rest of it. Put the regulation under OPSPERS with the rest of them. Do not include under Aircrew, because by definition RP are not aircrew as they do not actually fly. They are flight crew.	Noted. DASR RP review, upon conclusion will necessitate all RP qualification requirements to be removed from DASR UAS. DASR RP is currently a separate placeholder to DASR AIRCREW under OPS PERS regulations, delineating them from AIRCREW.	Future action DASR RP review
72		1.b	Reconsider wording around: "any requirement for the Remote Pilot to hold a current aviation medical certificate in accordance with DASR.MED.10". The MED10 regulation includes outdated UAS regulation references. XXX personnel are not similar to aircrew so training comparison is moot. Regulation issue for a non-service group. Consider revision or exclusion for non-service group.	A non-service Group, when proposing RP qualifications, could choose to exclude DASR.MED.10 requirements and propose suitable alternatives. The wording is in AMC, not regulation. Regulation wording itself is outcome based, to reflect the wide range of UAS that could operate under a UASOP.	No action required
73	UAS.30(c)	1	See comment for UAS.30(a)2, COMAUSFLT/COMD FORCOMD/ACAUST should be the owner of the standard scenarios approved and published by regulator.	Refer to Serial No. 33	No action required
74		1	merge into the main regulation sentence if suggestion for UAS.30(c)2 is accepted.	Refer to Serial No. 78. Suggestion not supported	No action required

75		2	"Operations" for XXX means JOC operations, as distinct from Exercise. Use phrase 'flight operations'"	Changed to UAS operations wherever applicable.	Text amended
76		2	This is red tape. UAS.10(a) and UAS.10(b) already have discharged responsibility to Command. Recommend Remove regulation.	The regulation only mandates a notification. AMC highlights that it is only required once, before first operation. Authority acknowledgement is not required. The regulation provides complete flexibility to UAS operators. It provides required visibility to the Authority of UAS operations being conducted to allow immediate assessment of the adequacy of Command decision, and potentially only a couple of would occur before the Authority could decide on adequacy - otherwise it might be years before next routine compliance assurance assesment. It reduces risk exposure. It also follows emerging practice amongst EASA and other NAAs.	No action required
77		2	"notified to the Authority prior to commencement of operations". Clarify if notification is needed each operation, or at the first operation only and covered thereafter. Regulation issue for a non-service group. Clarification required.	AMC UAS.30(c.) Para. 3 highlights that notification is only required once unless details change.	No action required
78		2	why is this required? The scenario is set out, there is a requirement for Command to authorise any UAS operation - even after an UASOP is issued. This has potential for lots of unneeded reporting for no safety value. Delete, one less regulation that serves no real purpose.	Refer to Serial No. 76	No action required
79	GM UAS.30(c)	-	See comment for regulation. Command (as domain experts) should be able to generated standard scenarios to be approved by the Authority. This does not preclude the ability of the Authority to also generate scenarios.	Refer to Serial No. 33	No action required
80	AMC UAS.30(c)	-	See comment for reg UAS.30(c)2. Red tape. Additionally, Command should also have scope to propose amendments and/or withdraw standard scenarios.	Refer to Serial No. 76	No action required
81		1	reword to avoid being a regulation -- do not use must in AMC. Picky, but this is regulation.	Refer to Serial No. 20	Future action DASR harmonisation
82		1	AMC reads like a reg.	Noted. Wording to be improved.	Text amended
83		2	this is regulation. Amend the regulation with the words if more is needed, otherwise,	Noted. Wording to be improved.	Text amended
84		3	what safety outcome is this AMC requirement? If no ACK is required, why send it in? The Scenerios are sset, Comamdn has to comply with all aspects, so why more reporting that does not value add?	Refer to Serial No. 76	No action required
85		4	what is a non-tirvial amanedment? Use the terms major/minor as per the DASP RCP.	Agreed.	Text amended
UAS.35 - STANDARD SCENARIOS FOR UAS OPERATIONS					

86	UAS.35	-	<p>Further clarification of Standard Scenarios is required.</p> <p>UAS.30(c) states that “UAS to be operated under a Standard Scenario (Specific Type B) shall: be operated only under Standard Scenarios at DASR UAS.35”; and para 3 of GM.UAS.30(c) states “A Standard Scenario defines each of the technical and operational risk controls that, had the Command/Group presented them to the Authority, should justify Authority issue of a UASOP”.</p> <p>Within each of the Standard Scenarios discussed within UAS.35, there are number of areas where suitable risk controls are required for operation, including:</p> <ul style="list-style-type: none"> - Beyond visual line of sight - Outside of daylight hours - In cloud or reduced visibility - Above 400ft AGL - Within 30m horizontally of GP - Over populous areas - Over or in proximity of critical infrastructure - Within 3nm of the movement area of a controlled aerodrome - Over or in proximity of MEP - Over or in proximity of vessels in the exercise area <p>However, within the described Standard Scenarios, there are no defined control measures for these operations. Previously, UASOPs defined control measures for these instances.</p> <p>Are the Standard Scenarios described in UAS.35 the basis for forming a Standard Scenario with defined control measures and limitations which will be developed and published in a separate AAP? If so when will these be developed?</p> <p>Or is it a requirement of individual services or Command/Groups to define these control measures within a separate document? If so, what is the recommended document to capture these control measures? Is it an FMSE?</p>	<p>Standard Scenarios published by the Authority provide a set of requirements and limitations for defined UAS operating environments.</p> <p>The requirements for 'suitable risk controls' are outcome based. Detailed instructions for those risk controls need to be developed by each operator. Acceptable means and examples on how the outcome could be achieved are provided in the AMC.</p> <p>DASA does not recommend any particular document for capturing/documenting procedures and instructions. Each operator is responsible for achieving the required outcome through their own means.</p>	No action required
87		-	<p>Insert new SS for Small RPAS.</p> <p>The current wording of the DASA suggests that a Small RPAS can be operated under the “Open” category under standard conditions and over Defence land. This does not require a UASOP, Defence Registration, or any degree of Technical Integrity. However, if it is operated outside Standard Conditions on Defence Land, or if it is operated in civil airspace, then a UASOP is required. In addition, a Defence Registration is required for a UASOP, but AMC.UAS.30(b)1.2 indicates a RPAS with a MTOW <25kg would not be considered for Defence Registration. Suggest a SS be developed for Small RPAS which permits operations in non-standard conditions and in civil airspace with suitable risk based controls (which may include no flight in high density airspace or over areas of high population density).</p> <p>Also aligns with NASA/FAA approach to separate the treatment of sub-55 lb (25kg) RPAS from > 55 lb. This can be done post implementation of the DASR.UAS IAW GM.UAS.30(c).5 if necessary.</p> <p>This further supports future acquisition and operation of Puma UAS.</p>	<p>Noted.</p> <p>New scenarios will be considered in the next revision of DASR UAS.</p>	Future action Further development
88	UAS.35(a)	-	<p>Regulating below 100g UAS is excessive and has no international precedent. Recommend remove regulation or reserve the section for future as micro UAS hazard is better understood</p> <p>Recommend remove regulation or reserve the section for future.</p>	Refer to Serial No. 23	No action required
89		2	<p>There are Prohibited areas, particularly for XXX, overseas where they do get permission to operate in a Prohibited area.</p>	Agreed.	Text amended

90	2	Amend to: Not operate in a Prohibited Area unless approved by the authority controlling the area. Noting there are currently no Prohibited Areas (only Restricted and Danger Areas) listed in the Designated Airspace Handbook (effective 09 Nov 2017), there remains a need for military employment of UAS within Prohibited Areas (should they be stood up) for either training or operations. This aligns with the definition of Prohibited Areas as defined in AIP Australia and ADF GPA (effective 09 Nov 2017), Gen 2.2 "Prohibited Area: An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited. Designation is appropriate only for reasons of military necessity." As such, this requested amendment supports military necessity for UAS operations.	Agreed.	Text amended
91	2	too restrictive. add: unless approved by the PA's airspace control authority.	Agreed.	Text amended
92	3	incomplete terminology. the control authority for ground and infrastructure is often not the same as the airspace authority. Use the term airspace control authority (ACA) here and in all other REGS.	The term 'authority controlling the area' has been adopted from CASA. CASA commonality has been maintained wherever possible.	No action required
93	4	motherhood statement that value adds nothing given the many other regulations already in place. Less is more. Delete.	The regulation has been adopted from CASA regulations and is considered necessary to cover off on safe operation of UAS by not obstructing other aircraft who may or may not be aware or become aware of UAS operations.	No action required
94	5	incorrect terminology. A movement area includes the runway, taxiway and apron areas. Manoeuvring area is taxiway/runway only. use: do not operate within an aerodrome's airside area. Airside is defined in the DASR Glossary and is best suited for the purposes intended for this regulation.	The term 'movement area' has been adopted from CASA. CASA commonality has been maintained wherever possible.	No action required
95	5	Not operate over a runway/ movement area without approval from the relevant authority . Outside controlled airspace there is no relevant authority.	Agreed. GM added to provide reference to ERSA.	Text amended
96	6	not defined, how far out does this apply? ATC cannot work with unknowns. do not operate within 3nm without approval This provides an acceptable safety margin and removes the unknowns.	The term 'approach or departure paths' has been adopted from CASA. CASA commonality has been maintained wherever possible. Added GM to clarify extent of paths.	Text amended
97	6	It is recommended that 'approach and departure paths' are further defined with the Regulations. Para 6 states that UAS shall "Not operate in the approach or departure path of a runway, landing area or ship without approval from the relevant authority.", however no definition provided of what constitutes "approach and departure paths".	Refer to Serial No. 96	Text amended
98	7	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Refer to Serial No. 30	Future action DASR RP review
99	8	Substantial limitation is implied by micros requiring a mandatory remote pilot intervention capability. Operational limitation. Consider removing the mandatory remote pilot for microUAS which are classified as very low risk. What addition of safety is added by this inclusion?	The RP intervention requirement is deliberately mandated. RP intervention capability provides the essential operational control which is aimed at excluding fully autonomous UAS which present unique risks that require careful management - warranting a UASOP.	No action required
100	8	It is recommended that the definition of 'intervention' is clarified with the Regulation. Para 8 states "Allow remote pilot intervention during all stages of the flight.", however, the definition of intervention is not stated.	Agreed. AMC/GM to be developed.	Text amended
101	8	allow does not mean it can happen. rephrase to: ensure remote pilot intervention is possible	Deliberate wording. 'Ensure intervention' was not used because it would drive an onerous desing solution ie no possibility for any lost link. 'Allows intervention' requires the capability for intervention, but accepts that it may momentarily be lost ie not ensured.	No action required
102	9	not too keen on the fact this implies one can operate above 400 ft, noting there are no airspace restrictions in place.	The Scenario specifically provides the flexibility to operate 400' AGL. Risk is managed by employing suitable risk controls - AMC for which provides significant detail.	No action required

103		9	Employ suitable risk controls when operating... Change 'controls for operating' to 'controls when operating'	Agreed.	Text amended
104	GM UAS.35(a)6	-	See comment for UAS.35(a) and UAS.40(a)1. Standard Scenario for Micro should not be required. Remove or reserve.	Refer to Serial No. 23	No action required
105		5	Request ref in GM to Enroute Supplement Aust (ERSA) (which contains contact details for aerodrome operators) for relevant authority for ops over movement area/runway.	Agreed.	Text amended
106	AMC UAS.35(a)9	-	See comment for UAS.35(a) and UAS.40(a)1. Standard Scenario for Micro should not be required. Remove or reserve	Refer to Serial No. 23	No action required
107		2	Replace "should" with "could" or remove specific technical risk controls. The XXX is about to procure a Micro RPAS (XXX) which cannot meet the technical risk controls described in the AMC. Therefore, either an exemption would need to be sought or the XXX operated under a UASOP, which is not reasonable, given the low risk that the system poses to both personnel on the ground and other aircraft. Recommend that the technical controls should be selected as appropriate based on a risk assessment, instead of having specific controls prescribed.	Use of 'should' is common practice for DASR AMC. AMC is not regulation and therefore not the only means to show compliance with the regulation ie adhering to the AMC is not mandated by the Authority. Advice from DASA can be sought for alternate means of compliance to the regulation. The current AMC has been developed from a detailed assessment conducted by the Authority for each scenario. If AMC requirements cannot be met and there are no alternate means of compliance with the regulation, a UASOP would be required.	No action required
108		2.a.	"Autonomous flight actions". Suggest replace autonomous with automatic to match intent. Modification suggestion. "Autonomous" implies substantially more self reliance that is likely intended by the containment process that implements. "Automatic" – ie pre-defined agreed action - is more appropriate.	Agreed.	Text amended
109	UAS.35(b)	2	There are Prohibited areas, particularly for XXX, overseas where they do get permission to operate in a Prohibited area.	Agreed.	Text amended
110		2	Amend to: Not operate in a Prohibited Area unless approved by the authority controlling the area. Noting there are currently no Prohibited Areas (only Restricted and Danger Areas) listed in the Designated Airspace Handbook (effective 09 Nov 2017), there remains a need for military employment of UAS within Prohibited Areas (should they be stood up) for either training or operations. This aligns with the definition of Prohibited Areas as defined in AIP Australia and ADF GPA (effective 09 Nov 2017), Gen 2.2 "Prohibited Area: An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited. Designation is appropriate only for reasons of military necessity." As such, this requested amendment supports military necessity for UAS operations.	Agreed.	Text amended
111		2	too restrictive. add: unless approved by the PA's airspace control authority.	Agreed.	Text amended
112		2, 3	Woomera is a prohibited area. Recommend combine 2 and 3. Change to 'Not operate in a Prohibited or Restricted Area unless approved by the authority controlling the area.'	Agreed.	Text amended
113		3	incomplete terminology. the control authority for ground and infrastructure is often not the same as the airspace authority. Use the term airspace control authority (ACA) here and in all other REGS.	Refer to Serial No. 92	No action required
114		4	should be included under micro UAS as well.	Keeping in line with CASA regulations, Micro UAS are not subject to this regulation due to the comparatively lower risk posed as a result of the weight limitation. This is likely to change in the future as CASA updates its regulations.	No action required
115		5	motherhood statement that value adds nothing given the many other regulations already in place. Less is more. Delete.	Refer to Serial No. 93	No action required

116	6	Incorrect airspace application. Airspace classes range from A to G in Australia. Regardless of flight category, within Class C, which is airspace relevant to UAS, an aircraft cannot take off without an ATC clearance. Hence, this regulation is incorrect as it implies an ATC clearance is not required to take off in Class C, let alone to 400ft. If there is a desire to use controlled airspace, a flight categorisation is required or a statement is made that all UAS must operate as VFR or IFR IOT apply standard rules of the air for Airspace classification. Or, amend to say: other than Class C airspace, not operate above For Class C, just follow rules of the air, as do all other aircraft	Deliberate wording. Intent is to allow operations below 400' in controlled airspace. GM added to 'advise ATC' of operations.	Text amended
117	6	The current writing gives the impression that operators can operate their UAS in controlled airspace without approval as long as they maintain less than 400ft AGL. Part 101 currently restricts UAS operations to outside 5.5km/3nm.	Deliberate wording. Below 400', >3nm of an aerodrome - no restriction (regardless of controlled or uncontrolled airspace), this is consistent with CASA. The 3nm restriction is imposed in UAS.35(b)12(8), with enough flexibility to allow operators to choose suitable risk controls.	No action required
118	6	You need approval to operate in controlled airspace, regardless of altitude. Remove 'higher than 400'AGL'.	The regulation is in line with CASA regulation for Very Small UAS. Below 400', >3nm of an aerodrome - there is no restriction, regardless of controlled or uncontrolled airspace.	No action required
119	7	incorrect terminology. A movement area includes the runway, taxiway and apron areas. Manoeuvring area is taxiway/runway only. use: do not operate within an aerodrome's airside area. Airside is defined in the DASR Glossary and is best suited for the purposes intended for this regulation.	Refer to Serial No. 94	No action required
120	7	Not operate over a runway/ movement area without approval from the relevant authority . Outside controlled airspace there is no relevant authority.	Refer to Serial No. 95	Text amended
121	8	not defined, how far out does this apply? ATC cannot work with unknowns. do not operate within 3nm without approval This provides an acceptable safety margin and removes the unknowns.	Refer to Serial No. 96	Text amended
122	9	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Refer to Serial No. 30	Future action DASR RP review
123	10	Substantial limitation – 1 UAS per remote pilot. Operational limitation. Consider removing the numerical limit. Swarming development is expected to become common place and this control will prevent that technology from becoming viable in service group and within exercise demonstrations.	Swarming has already been considered and is allowed under UAS.35(a) and UAS.35(e). The decision to not allow swarming in other scenarios was deliberate because it presents unique risks that require careful management - warranting a UASOP. Risk controls within UAS.35(a) and UAS.35(e) are considered adequate for swarming applications and provide adequate flexibility not to hamper capability development.	No action required
124	10	Remove. It is highly likely that swarming UAS in this class will be procured or developed in the near term. Operations with multiple air vehicles per remote pilot should be permitted with suitable risk controls. The operation of multiple air vehicles in this class by a single remote pilot does not substantially increase the overall risk.	Refer to Serial No. 123	No action required
125	10	precludes use of swarming technology. delete, or make AMC under UAS.35(a)9.	Refer to Serial No. 123	No action required
126	11	allow does not mean it can happen. rephrase to: ensure remote pilot intervention is possible	Refer to Serial No. 101	No action required
127	12	Add: (9) multiple air vehicles per dedicated remote pilot. It is highly likely that swarming UAS in this class will be procured or developed in the near term. Operations with multiple air vehicles per remote pilot should be permitted with suitable risk controls. The operation of multiple air vehicles in this class by a single remote pilot does not substantially increase the overall risk.	Refer to Serial No. 123	No action required
128	12	Employ suitable risk controls when operating... Change 'controls for operating' to 'controls when operating'	Agreed.	Text amended

129		12	Not clear if risk controls need to be approved by Command and/or the Authority. Clarify ambiguity in regulation.	Operations under a Standard Scenario do not require an explicit approval from the Authority as long as requirements and limitations of the scenario are adhered to. One of the requirements of each scenario is to employ suitable risk controls for certain operations. It is the responsibility of Command/Group authorising the operations to employ those risk controls. The Authority has provided AMC - which is a means to complying with the regulation but not the only means. The Authority can provide advice, but will not 'approve' risk controls - which remain a Command/Group responsibility.	No action required
130		12.(5)	spell out GP.	Consistent formatting to be applied when published on the internet.	No action required
131		12.(6)	the definition of a populous area is too constrained as it implies one person. One person is at best sparsely populated, which is defined in DASR Glossary. Change populous area definition to reflect something more than sparsely populated. The previous, now deleted, populated areas definition would resolve this.	Refer to Serial No. 9	Future action DASR UAS update
132		12.(8)	Use KM vice miles for this measurement due to being a metric country. This measurement is not the same as flying to final, where use of miles is still common practise. 1. Define the Aerodrome Reference Point (ARP) as the geographical centre of the aerodrome. ARP is already a required data point under OFA.15 as well as other DASR.ADR. There is no definition in DASR Glossary, perhaps make one. 2. Use the ARP as the start point to measure the 5km boundary.	Agree to keep both units - nm and km.	Text amended
133	GM UAS.35(b)8	-	Request ref in GM to Enroute Supplement Aust (ERSA) (which contains contact details for aerodrome operators) for relevant authority for ops over movement area/runway.	Agreed.	Text amended
134	AMC UAS.35(b)12	2	Replace "should" with "could" or remove specific technical risk controls. The XXX has procured a Very Small RPAS (XXX) which cannot meet the technical risk controls described in the AMC. Therefore, either an exemption would need to be sought or the XXX operated under a UASOP, which is not Reasonable, given the low risk that the system poses to both personnel on the ground and other aircraft. Recommend that the technical controls should be selected as appropriate based on a risk assessment, instead of having specific controls prescribed.	Refer to Serial No. 107	No action required
135		2.a.(1)	"Autonomous flight actions". Suggest replace autonomous with automatic to match intent. Modification suggestion. "Autonomous" implies substantially more self reliance that is likely intended by the containment process that implements. "Automatic" – ie pre-defined agreed action - is more appropriate.	Refer to Serial No. 108	Text amended
136		3.d.	Planning should look at all obstacles (terrain, transmission lines, masts/antennas etc) rather than just critical infrastructure. Change 'critical infrastructure' to 'critical infrastructure and other obstacles'.	The planning risk control deliberately only refers to risk to people and critical infrastructure, in line with the aviation safety context of DASR which do not intend to prevent capability hits ie UAS damage that does not create a hazard to people.	No action required
137		3.e.	Consider adding additional words around when these operations could be conducted ie only in exceptional circumstances	Agreed. AMC wording to include words "essential for mission/training requirements".	Text amended
138	UAS.35(c)	-	Option to have UAS operating under SpecB (35.c., 35.d, 35.e.) on Def register as per SpecA.	Decision to not require Defence registration of UAS operating under a Standard Scenario.	No action required
139		-	It is recommended that consideration is given to RTCA DO- 362, Command and Control (C2) Data Link Minimum Operational Performance Standards (MOPS) (Terrestrial). Although UAS operating in Restricted airspace will have risk mitigation for the possibility of other aircraft entering the area of operations, a loss of containment may result in a 150kg platform presenting a hazard to other airspace users outside of the Restricted area. JARUS is iterating towards tighter expectations over containment for aircraft in much smaller Kinetic Energy categories and has expectations for "Technical Mitigations", including design features for triggering autonomous flight actions upon loss of datalink, and positive containment within pre-programmed parameters that bound the airspace volume.	Refer to Serial No. 31	Future action 054 update

140	1	regulation contains GM. RA, by definition, provides exclusive use of airspace. There is no need to repeat the definition of RA within the regulation. Regulation need only state: Operate only in Restricted airspace. Put this into GM: Restricted airspace may only be entered with approval of the relevant authority. Provide GM about use of correct RA Status (RA1, 2 or 3).	Agreed.	Text amended
141	2	spell out GP.	Consistent formatting to be applied when published on the internet.	No action required
142	2	Amend to: Not operate in a Prohibited Area unless approved by the authority controlling the area. Noting there are currently no Prohibited Areas (only Restricted and Danger Areas) listed in the	Agreed.	Text amended
143	3	Amend to: No MTOW limitation. The risk posed by a 25 kg to 150 kg UA to aircraft or personnel on the ground is not substantially different to a RPAS with a much larger mass: both would lead to catastrophic outcomes in the event of a collision, and the likelihood of a collision is very similar. The 150kg threshold is not supported by research, and hence should not serve as a differentiator by itself – weight and size should be considered as part of the overall risk assessment. Risk is reduced by flying over areas with low population density and through airspace with low airspace density, which is found on a military range. Therefore recommend that Large UA should also be able to operate under this SS. Such an amendment will also support the introduction into service of new, larger UAS types following trial under UAS.35(e) and permit identification of development from Specific Type B to Specific Type A should the need for a UASOP be identified. This will permit a more well developed UASOP which can be developed without significant time pressure as capability can still be provided within the scope of UAS.35(c) in the interim period.	Weight restrictions are deliberate. Apart from Trials and Experiments Standard Scenario, a weight limitation is an essential risk control for the risk presented by the flexibility provided in the Scenarios. Trials and Experiments Scenario has additional risk controls in lieu of the weight limitation to completely exclude people and other aircraft from the UAS area of operation. 150kg was chosen based on the global convention beyond which N/MAAs start mandating specific requirements for safe operation of UAS. This is in line with NATO STANAG (4671 requirements for UAS>150kg, EASA (type certificate for UAS>150kg) and CASA (included category above 150kg). The generic risk assessment conducted for Standard Scenarios is not considered suitable for UAS with MTOW>150kg. Beyond 150kg, DASA would need to assess the contextualised risk controls for the intended operational environment of a specific UAS. This will be done through the UASOP process.	No action required
144	4	provides no flexibility, and this is for within a RA after all. add 'unless approved otherwise by the Authority.	Refer to Serial No. 112	Text amended
145	4	There are Prohibited areas, particularly for XXX, overseas where they do get permission to operate in a Prohibited area.	Refer to Serial No. 112	Text amended
146	4	Woomera is a prohibited area. Change to 'Not operate in a Prohibited or Restricted Area unless approved by the authority controlling the area.'	Refer to Serial No. 112	Text amended
147	4	stating the obvious, as the reg is only for RA, which is not a PA. This is basic airspace knowledge. Amend the reg to say: Operate only in active Prohibited Area or Restricted Airspace.	Refer to Serial No. 112	Text amended
148	5	Given RA is controlled access already, the ACA would be managing this. So really, what is the point of this other than to make the list longer than need be.	The regulation has been adopted from CASA and is considered necessary to cover off on safe operation of UAS by not creating a hazard to emergency operations. The restricted airspace access could have been already granted before the beginning of an emergency operation.	No action required
149	6	motherhood statement that value adds nothing given the many other regulations already in place. Less is more.	Refer to Serial No. 93	No action required
150	7	incorrect terminology. A movement area includes the runway, taxiway and apron areas. Manoeuvring area is taxiway/runway only. use: do not operate within an aerodrome's airside area. Airside is defined in the DASR Glossary and is best suited for the purposes intended for this regulation.	Refer to Serial No. 94	No action required
151	8	Not operate in the approach or departure path of a runway, landing area or ship without approval from the relevant authority.	No change.	No action required
152	8	not defined, how far out does this apply? ATC cannot work with unknowns. do not operate within 3nm without approval This provides an acceptable safety margin and removes the unknowns.	Refer to Serial No. 96	Text amended
153	9	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Refer to Serial No. 30	Future action DASR RP review

154		10	Substantial limitation – 1 UAS per remote pilot Operational limitation. Consider removing the numerical limit. Swarming development is expected to become common place and this control will prevent that technology from becoming viable in service group and within exercise demonstrations.	Refer to Serial No. 123	No action required
155		10	precludes use of swarming technology. delete, or make AMC under UAS.35(a)9.	Refer to Serial No. 123	No action required
156		11	allow does not mean it can happen. rephrase to: ensure remote pilot intervention is possible	Refer to Serial No. 101	No action required
157		12	Employ suitable risk controls when operating... Change 'controls for operating' to 'controls when operating'	Agreed.	Text amended
158		12	Not clear if risk controls need to be approved by Command and/or the Authority. Clarify ambiguity in regulation.	Refer to Serial No. 129	No action required
159		12.(5)	spell out MEP.	Consistent formatting to be applied when published on the internet.	No action required
160	GM UAS.35(c)1	2	use airspace control authority vice range control/safety officer.	Agreed.	Text amended
161	GM UAS.35(c)8	-	Request ref in GM to Enroute Supplement Aust (ERSA) (which contains contact details for aerodrome operators) for relevant authority for ops over movement area/runway.	Agreed.	Text amended
162		-	Consider extending scenario to include use on operations within segregated airspace? (eg - XXX in XXX) Otherwise this SC will be of limited utility for units with operational UAS capabilities.	The scenario will preclude overseas operations of the UAS mentioned in the comment on several fronts: -MTOW no greater than 150kg -Restricted airspace -Defence controlled land The scenario is therefore currently not intended to allow such operations and pursuing a UASOP is the only avenue available.	No action required
163	AMC UAS.35(c).12	2	Remove specific technical risk controls. Recommend that the technical controls should be selected as appropriate based on a risk assessment, instead of having specific controls prescribed.	Refer to Serial No. 86 and 129. The regulation has been deliberately worded to be outcome based and requires suitable risk controls. Technical risk controls suggested as AMC are not the only means to achieving compliance with the regulations.	No action required
164		2.a.(1)	“Autonomous flight actions”. Suggest replace autonomous with automatic to match intent. Modification suggestion. “Autonomous” implies substantially more self reliance that is likely intended by the containment process that implements. “Automatic” – ie pre-defined agreed action - is more appropriate.	Refer to Serial No. 108	Text amended
165		3.f.	Consider adding additional words around when these operations could be conducted ie only in exceptional circumstances	Refer to Serial No. 137	Text amended
166	UAS.35(d)	-	Option to have UAS operating under SpecB (35.c., 35.d, 35.e.) on Def register as per SpecA.	Refer to Serial No. 138	No action required
167		-	It is recommended that consideration is given to RTCA DO- 362, Command and Control (C2) Data Link Minimum Operational Performance Standards (MOPS) (Terrestrial). Although UAS operating in Restricted airspace will have risk mitigation for the possibility of other aircraft entering the area of operations, a loss of containment may result in a 150kg platform presenting a hazard to other airspace users outside of the Restricted area. JARUS is iterating towards tighter expectations over containment for aircraft in much smaller Kinetic Energy categories and has expectations for “Technical Mitigations”, including design features for triggering autonomous flight actions upon loss of datalink, and positive containment within pre-programmed parameters that bound the airspace volume. As above the general assumption is the risk is low 12NM out, but what is the assurance over containment to stay outside 12nm. Containment depends on Software, GPS, link etc. A 150 Kg UAV can fly a long way and 12NM isn't far.	Refer to Serial No. 31	Future action 054 update
168		1	two instructions provided for the same reason. delete the last words ;is permitted', given the regulation starts with no closer....	Agreed.	Text amended

169	2	too restrictive, weight should not be an issue given the restrictions in place under UAS.35(d)1. use coastline vice land, as it will exclude islands 100 nm out to sea, etc. (unless Navy likes this of course). Add the word 'known' before permanent human	Refer to Serial No. 143	No action required
170	2	Amend to: No MTOW limitation. The risk posed by a 25 kg to 150 kg UA to aircraft or personnel on the ground is not substantially different to a RPAS with a much larger mass: both would lead to catastrophic outcomes in the event of a collision, and the likelihood of a collision is very similar. The 150kg threshold is not supported by research, and hence should not serve as a differentiator by itself – weight and size should be considered as part of the overall risk assessment. Risk is reduced by flying over areas with low population density and through airspace with low airspace density, which is found on the high seas. Therefore recommend that Large UA should also be able to operate under this SS. Such an amendment will also support the introduction into service of new, larger UAS types following trial under UAS.35(e) and permit identification of development from Specific Type B to Specific Type A should the need for a UASOP be identified. This will permit a more well developed UASOP which can be developed without significant time pressure as capability can still be provided within the scope of UAS.35(d) in the interim period.	Refer to Serial No. 143	No action required
171	3	There are Prohibited areas, particularly for XXX, overseas where they do get permission to operate in a Prohibited area.	Agreed.	Text amended
172	3	Amend to: Not operate in a Prohibited Area unless approved by the authority controlling the area. Noting there are currently no Prohibited Areas (only Restricted and Danger Areas) listed in the	Agreed.	Text amended
173	3	too restrictive. add: unless approved by the PA's airspace control authority.	Agreed.	Text amended
174	3, 4	Combine 3 & 4. Change to 'Not operate in a Prohibited or Restricted Area unless approved by the authority	Agreed.	Text amended
175	4	incomplete terminology. the control authority for ground and infrastructure is often not the same as the airspace authority. Use the term airspace control authority (ACA) here and in all other REGS.	Refer to Serial No. 92	No action required
176	5	Do fire, police conduct pulic safety / emergency operations in high seas (>12NM offshore)? This restriction is not necessary if not.	The limitation was included for cases where a safety operation might be conducted near/on oil rigs and islands. The aim is to cover situations which are unlikely but possible.	No action required
177	5	Cannot se this ever happening given the restriction placed in d.1. delete to simplify length of regulation.	Refer to Serial No. 176	No action required
178	6	motherhood statement that value adds nothing given the many other regulations already in place. Less is more.	Refer to Serial No. 93	No action required
179	7	You need approval to operate in controlled airspace, regardless of altitude. Remove 'higher than 400'AMSL'.	Agreed.	Text amended
180	7	there is no controlled airspace outside of 12nm, only tactical airspace that does not fall under DASA (or CASA for that matter) remit. Delete.	No change considered necessary; wording deliberate to not cause an obstruction to another aircraft. Eg P-8, Coastwatch, transiting civilian, fish spotter etc.	No action required
181	8	Not operate in the approach or departure path of a ship's runway/landing area without approval from the relevant authority.	No change.	No action required
182	8	not defined, how far out does this apply? ATC cannot work with unknowns. do not operate within 3nm without approval This provides an acceptable safety margin and removes the unknowns.	Refer to Serial No. 96	Text amended

183		9	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Refer to Serial No. 30	Future action DASR RP review
184		10	precludes use of swarming technology. delete, or make AMC under UAS.35(a)9.	Refer to Serial No. 123	No action required
185		11	allow does not mean it can happen. rephrase to: ensure remote pilot intervention is possible	Refer to Serial No. 101	No action required
186		12	Employ suitable risk controls when operating... Change 'controls for operating' to 'controls when operating'	Agreed.	Text amended
187		12	Not clear if risk controls need to be approved by Command and/or the Authority. Clarify ambiguity in regulation.	Refer to Serial No. 129	No action required
188		12.(5)	spell out MEP.	Consistent formatting to be applied when published on the internet.	No action required
189		12.(5)	define proximity.	The use of the word proximity, without a definition, is deliberate. There is no single definition that can be applied as the definition is context dependant on UA size and type. This is highlighted in the Note below para. 3.f, referring to detailed guidance in AMC UAS.30(b). The applicable definition/associated stand-off distance would have to be derived/defined by Command when implementing specific risk controls for intended UAS operations.	No action required
190	GM UAS.35(d)8	-	Request ref in GM to Enroute Supplement Aust (ERSA) (which contains contact details for aerodrome operators) for relevant authority for ops over movement area/runway.	Agreed.	Text amended
191	AMC UAS.35(d)12	-	Defer to Navy - but scenario does not seem to adequately address maritime operations, particularly ship-based launch and recover. For example, autonomous recovery to a ship may increase risk to MEP and critical infrastructure - may be better to terminate into the sea. Further development of scenario by Navy (COMFAA).	Agree that autonomous recovery to a ship may increase risk to MEP and critical infrastructure. AMC UAS.30(d)12 Para. 3.g. highlights the need for controls specific to unique risks due to embarked operations. Navy has reviewed the scenario and has not raised any objections.	No action required
192		2	Remove specific technical risk controls. Recommend that the technical controls should be selected as appropriate based on a risk assessment, instead of having specific controls prescribed.	Refer to Serial No. 163	No action required
193		3.f.	Consider adding additional words around when these operations could be conducted ie only in exceptional circumstances	Refer to Serial No. 137	Text amended
194	UAS.35(e)	-	Option to have UAS operating under SpecB (35.c., 35.d, 35.e.) on Def register as per SpecA.	Refer to Serial No. 138	No action required
195		1	the regulation is defining what an RA. RA also have various classes. In this case you may prefer RA2 or RA3 perhaps? RA STATUS LEGEND: Conditional RA 1: Pilots may flight plan through the Restricted Area and under normal circumstances expect a clearance from ATC. Conditional RA 2: Pilots must not flight plan through the Restricted Area unless on a route specified in ERSa GEN FPR or under agreement. with the Department of Defence, however a clearance from ATC is not assured. Other tracking may be offered through the Restricted Area on a tactical basis. Conditional RA 3: Pilots must not flight plan through the Restricted Area and clearances will not be available. change to: operate only in a RA. Add GM to remind that the RA status should be RA2 or RA3 for test flights.	Regulation updated to specifically refer to exclusion of civilian and military aircraft.	Text amended
196		2	Confirm that visitors to experiements can be considered mission essential personnel as opposed to general public. Clarification required. It is a common requirement to have visitors to observe trials. If they are classed as general public there will be significant disruption. Please confirm they can be MEP by inclusion of a briefing.	Visitors to experimets can be considered as MEP if they are briefed as part of the UAS mission. Suitable risk controls would need to be implemented for remaining clear of MEP as indicated in AMC UAS.35(e)12 Para. 3.d.(2).	No action required

197	2	The definition of "Defence Controlled Land" is unnecessarily caveated in experimental standard scenario. Clarification required. There is potential for over regulation of over land operations in experiemental standard scenarios. 35e2 uses defined term "Defence Controlled Land" then adds additional/redundant text "that excludes GP from entering the UAS area of operation". Is the additional need to specifically exclude GP required for any reason when Defence Controlled Land by definition controls access to ensure segregation from GP?	Agreed. The definition explains the requirement and does not need to be repeated. The regulation however has been updated to highlight that GP must be precluded from the area of operation.	Text amended
198	2	There are insufficient definition or various use of the terms used including "over water controlled by Defence." Clarification required. There is confusion around over water operations as applied in experimental standard scenario (35e2) and open category (40a3_1). DST needs to be sure that over water operations can effectively occur in both categories, however the lack of definition and variation in use creates uncertainty. 35e2 Operate over water where the UAS is not in the proximity of, or overhead, GP. 40a3_1 operate over water controlled by Defence We propose standardising the terminology between both as follows: "only operate water where Defence can ensure that the UAS is not in proximity of, or overhead of GP"	"Water controlled by Defence" is deliberately worded differently in Open category to UAS.35(e) Standard Scenario for Trials and Experimentation. In the Open category, "water controlled by Defence" is water in an exclusion zone immediately surrounding a naval vessel. Refer to GM UAS.40(a) Para. 4.a. In Standard Scenario for Trials and Experimentation, "water where the UAS is not in the proximity of, or overhead, GP" is water where this requirement can be met - ie where there are no GP.	No action required
199	2	GP is too wide and can include one person, which is beyond SFARP if operating at Woomera for example. Use terms populous area and sparsely populated area.	The wording to exclude GP is deliberate. Since there is no weight restriction, exclusion of GP is an essential risk control for this scenario. The scenario provides much required flexibility but not at the expense of essential risk controls.	No action required
200	2	Amend to: Not operate in a Prohibited Area unless approved by the authority controlling the area. Noting there are currently no Prohibited Areas (only Restricted and Danger Areas) listed in the	Agreed.	Text amended
201	3	There are Prohibited areas, particularly for XXX, overseas where they do get permission to operate in a Prohibited area.	Agreed.	Text amended
202	3	too restrictive. add: unless approved by the PA's airspace control authority.	Agreed.	Text amended
203	3, 4	Combine 3 & 4. Change to 'Not operate in a Prohibited or Restricted Area unless approved by the authority	Agreed.	Text amended
204	4	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Refer to Serial No. 30	Future action DASR RP review
205	4, 5	May be too excessive - what about autonomous systems that do not require a remote pilot or permit intervention during flight? Consider inclusion for autonomous UAS which do not require an RP during flight.	Deliberate inclusion of limitation. Fully autonomous UAS which do not allow RP intervention during all stages for flight would require a bespoke risk assessment and a DASA assessment of that bespoke risk assessment through the UASOP process. The unique risk context cannot be adequately considered and managed through generic risk controls presented in the scenario.	No action required
206	5	allow does not mean it can happen. rephrase to: ensure remote pilot intervention is possible	Refer to Serial No. 101	No action required
207	6	Employ suitable risk controls when operating... Change 'controls for operating' to 'controls when operating'	Agreed.	Text amended
208	6	Not clear if risk controls need to be approved by Command and/or the Authority. Clarify ambiguity in regulation.	Refer to Serial No. 129	No action required
209	6.(5)	spell out MEP.	Consistent formatting to be applied when published on the internet.	No action required
210	6.(5), (6)	Inconsistency in terms of exluding GP completely and then allowing operations over or in proximity of MEP and critical infrastructure. Recommend not allowing operations over/near MEP, critical infrastructure.	Agreed. Inadvertently included. The major risk control for this Standard Scenario (which includes experimental aircraft and is without a weight limit) is to keep operations clear of people.	Text amended
211	6.(6)	define proximity.	Refer to Serial No. 189	No action required

212		6.(7)	this risk control should replace the one RP per UA in all the other regs.	Refer to Serial No. 123	No action required
213	GM UAS.35(e)	-	Expect some of these features (eg, more than one UA per pilot) to extend to other SC and/or regs as technology matures.	Refer to Serial No. 123	No action required
214	AMC UAS.35(e)6	-	See comment for reg UAS.35(e) 4-5 - inclusion of autonomous system (ie, no remote pilot in control). Defer to DSTG on requirement for this.	Refer to Serial No. 205	No action required
215		2	Remove specific technical risk controls. Recommend that the technical controls should be selected as appropriate based on a risk	Refer to Serial No. 163	No action required
216		2.a.	"Autonomous flight actions". Suggest replace autonomous with automatic to match intent. Modification suggestion. "Autonomous" implies substantially more self reliance that is likely intended by the containment process that implements. "Automatic" – ie pre-defined agreed action - is more appropriate.	Refer to Serial No. 108	Text amended
UAS.40 - OPEN CATEGORY UAS					
217	UAS.40(a)	-	CASA has released Instrument number CASA 96/17 to introduce some changes which are applicable to certain UA operations; the changes affect DASR Open category and must be assessed.	An assessment was conducted to assess the impact - CASA's Instrument has implications on Open category Micro UAS operations but the resulting impact is considered minor. DASA has decided to wait until CASA updates its regulations following a conclusion of the currently ongoing large scale review rather than react to individual instruments. In cases where a CASA Instrument has major impact on DASR UAS, changes might be adopted immediately.	Future action
218		-	Not consistent with CASR 101.237 – standard operating conditions do not apply to Micro. Rationale is that the collision energy of a Micro UAS is so small that they pose no threat to other aircraft, GP or infrastructure. Remove, Reserve or Micro UAS (<0.1 kg) are Open Category UAS (Some restrictions may be appropriate).	Refer to Serial No. 23	No action required
219		-	a bit long, no entity is actually regulated. Change: Micro, Very Small and Small UAS shall only be eligible for operation under Open Category if they comply with the requirements and limitations contained in the following Standard Operating Conditions: To: A UAS Operator must ensure compliance with the following Standard Operating Conditions to operate a Micro, Very Small or Small UAS under the Open Category:	UAS.10 serves as the regulation for entities. UAS.20 - UAS.40 are consistent in providing requirements and limitations for each category.	No action required
220		1.(2)	too limiting, needs flexibility. add: unless authorised by the Airspace Control Authority.	DASR UAS Open category aligns with CASA Excluded category which is where the regulation comes from. The flexibility to operate outside this requirement is provided in Standard Scenarios.	No action required
221		1.(3)	may not support warfighting.	DASR UAS Open category aligns with CASA Excluded category which is where the regulation comes from. The flexibility to operate outside this requirement is provided in Standard Scenarios. If the Standard Scenario or the Standard Operating Conditions do not support warfighting, a UASOP is pursued - which can be tailored to the actual risk context.	No action required
222		1.(4)	motherhood statement that value adds nothing given the many other regulations already in place. Less is more.	The regulation has been adopted from CASA and is considered necessary to cover off on safe operation of UAS by not creating a hazard to another aircraft, person or critical infrastructure.	No action required
223		1.(5)	these are separate sub-regulations everywhere previous to this one. Standardise by splitting them.	Agreed. Instead of separating this regulation into two, similar regulations elsewhere DASR UAS will be merged.	No action required
224		1.(5)	too restrictive. add: unless approved by the PA's airspace control authority. incomplete terminology. the control authority for ground and infrastructure is often not the same as the airspace authority. Use the term airspace control authority (ACA) here and in all other REGS.	Refer to Serial No. 92	No action required

225		1.(6)	not defined, how far out does this apply? ATC cannot work with unknowns. do not operate within 3nm without approval This provides an acceptable safety margin and removes the unknowns.	The approval to operate in movement area and approval to operate within 3nm of an aerodrome are two separate requirements. The risk presented by operations in movement area are significantly higher than operations within 3nm which could be well away from any aircraft movement areas. For Micro UAS, only approval to operate in a movement area is required. For Very Small UAS, both approvals will be required (could be in the same approval).	No action required
226		1.(7)	motherhood statement that value adds nothing given the many other regulations already in place. Less is more. Delete.	Refer to Serial No. 93	No action required
227		1.(8)	the word controlled does not imply that the pilot is the person actually operating (flying) the UAS. change the word controlled to piloted.	Refer to Serial No. 30	Future action DASR RP review
228		1.(9)	allow does not mean it can happen. rephrase to: ensure remote pilot intervention is possible	Refer to Serial No. 101	No action required
229		2.(2)	the definition of a populous area is too constrained as it implies one person. One person is at best sparsely populated, which is defined in DASR Glossary. Change populous area definition to reflect something more than sparsely populated. The previous, now deleted, populated areas definition would resolve this.	Agreed. The definition will be improved as national and international consensus emerges on what constitutes a populous area. At this stage, DASA has deliberately chosen to adopt the CASA definition - to promote commonality between the Australian civil and military UAS regulation.	Future action
230		2.(5)	precludes use of swarming technology. delete, or make AMC under UAS.35(a)9.	DASR UAS Open category aligns with CASA Excluded category which is where the regulation comes from. The flexibility to operate outside this requirement is provided in Standard Scenarios. In addition to that, explicit approval can be obtained from the Authority via a UASOP.	No action required
231		3.(1)	There are insufficient definition or various use of the terms used including "over water controlled by Defence. Clarification required. There is confusion around over water operations as applied in experimental standard scenario (35e2) and open category (40a3_1). DST needs to be sure that over water operations can effectively occur in both categories, however the lack of definition and variation in use creates uncertainty. 35e2 Operate over water where the UAS is not in the proximity of, or overhead, GP. 40a3_1 operate over water controlled by Defence We propose standardising the terminology between both as follows: "only operate water where Defence can ensure that the UAS is not in proximity of, or overhead of GP"	Refer to Serial No. 198	No action required
232		3.(1)	why bother havin them if this is the limitation. Just use seagrated airspace.	DASR UAS Open category aligns with CASA Excluded category and the regulation comes from CASA's landowner requirement for Small UAS operation. CASA's requirement has been modified for Defence context/equivalence in that Small UAS can only be operated over land controlled by Defence.	No action required
233		3.(2)	this applies to all aircraft. delete, there are enough airspace rules throughout already. The overall regulation has becoem one big repeat, over and over.	DASR UAS Open category aligns with CASA Excluded category which is where the regulation comes from. The regulation is considered necessary as it is only applicable to Small UAS. It is not applicable to Very Small which could be operated in controlled airspace >3nm from an aerodrome and not applicable to Micro UAS which could be operated in controlled airspace outside of movement areas.	No action required
234	GM UAS.40(a)	-	No mention of why departed from CASA regulations for Micro category UAS, which are not subject to Standard Operating Conditions. Highlights inconsistency.	Apart from the RP training requirement, Micro UAS DASR UAS Standard Operating Conditions fully align with CASA requirements for Micro UAS. Simply reading CASA's Standard Operating Conditions in Subpart 101.F.1 might give the impression that there are no requirements for Micro UAS. This however is not true. Several requirements applicable to Micro UAS can be found in other Subparts in Part 101. For example, refer to 101.073 (VLOS requirement) which is outside of 101.F but is applicable to all UAS including Micro UAS.	No action required

235	AMC UAS.40(a)	-	Add commentary that technical risk barriers & controls as appropriate are to be implemented, based on a safety assessment. There are currently no technical risk controls for Open category. However, when operating these RPAS in non-standard conditions, they need risk controls. Recommend that for both Open class and Specific class that technical controls are selected based on a risk assessment of the RPAS.	Technical risk controls are not mandated due to the stringent operational limitations applied to Open category UAS. Technical risk controls are however considered suitable and are suggested in AMC for Standard Scenarios due to the operational flexibility provided as a result of removal of certain operational limitations. For example, BVLOS operations are not allowed under Open category but if operating BVLOS under a Standard Scenario, technical risk controls which trigger autonomous action upon loss of datalink and positively contain the UA within a pre-programmed volume are suggested in AMC for meeting the regulated requirement of employing suitable risk controls.	No action required
UAS.50 - WEAPONISATION AND CARRIAGE OF PASSENGERS					
236	UAS.50(a)		make it active. Change integration to carriage, as the two are vastly different. Simply being fit for purpose (integration) does not imply being fitted. The Authority must approve carriage of weapons on Defence UAS.	Deliberately worded 'integration', the intent is to require Authority approval even for 'fitted for but not with' cases. The wording is consistent with all other regulations for consistency: Defence UAS shall... All Defence UAS shall... UAS operations under the XXX UAS Standard Scenario shall... Integration of weapons onto Defence UAS shall... Carriage of persons on Defence UAS shall...	No action required
237	GM UAS.50(a)		DASA Rule of Interpretations: include also means but not limited to. So no need to state this outright, as it applies throughout the DASR.	Agree. However, it was considered important to mention "but are not limited to" in this particular instance to specifically highlight the non-exhaustive nature of the list.	No action required
238	UAS.50(b)		make it active tense. The Authority must approve carriage of people on Defence UAS.	Refer to Serial No. 236	No action required
UAS.60 - OCCURRENCE REPORTING					
239	UAS.60(a)	-	Occurrence reporting. Problematic for a non-service group. No current connection exists to access airworthiness occurrence reporting system from XXX.	The AMC provides adequate flexibility to not to hamper occurrence reporting. Defence Groups can comply with the regulation through a local procedure requiring occurrence reporting as per AMC UAS.60(a), utilising DASR Form 44 (available on the website).	No action required
240		-	DASM already provides this policy. Delete.	DASM is written for manned aircraft context, a future amendment of the DASM could adequately address UAS specific occurrence reporting requirements and render UAS.60 redundant. Alternatively, DASM could refer to DASR UAS for UAS occurrence reporting. In the meantime, DASR UAS is required to meet the DASM's intent.	No action required
241	AMC UAS.60(a)	8.a.(1)	"Autonomous flight actions". Suggest replace autonomous with automatic to match intent. Modification suggestion. "Autonomous" implies substantially more self reliance that is likely intended by the containment process that implements. "Automatic" – ie pre-defined agreed action - is more appropriate.	Refer to Serial No. 108	Text amended
UAS.70 - SUPPORT FOR AUTHORITY COMPLIANCE ASSURANCE					
242	UAS.70(a)		this is not required. The command chain ensures this occurs already. Reg therefore serves no purpose other than to make another reg. delete.	The regulation serves the key purpose of requiring the regulated community to provide the Authority with data and access for compliance assurance. The regulation follows regulatory practice adopted in DASR for Initial and Continuing Airworthiness.	No action required
UAS.80 - FOREIGN UAS OPERATIONS					
243	UAS.80(a)	-	no entity on the hook for the outcome. DASR.NDR.15 already covers this topic. What is missing is more precise UAS criteria that links to NDR. Delete, or use: The Sponsor of a foreign military UAS must comply with DASR.NDR.15.	The regulation clearly places the responsibility for authorisation of foreign military UAS operations on an organisation within Defence. Link to DASR NDR.15 has been deliberately avoided due to it having been written for the manned aircraft context - which is evident from references to "recognised MAA" which "has a system in place for type certification and continuing airworthiness management of the foreign military aircraft and whether the system might provide the required assurances for the intended operations" in AMC to NDR.15.A. Due to the developing and disparate nature of UAS approvals amongst MAAs around the globe, such references are not applicable. A future update of DASR NDR catering to and adequately addressing the UAS context might result in UAS.80 being rendered redundant.	No action required

244	UAS.80(b)	-	<p>essentially a repeat of DASR.NDR.15. Not required. Suggest:</p> <p>The Sponsor of a foreign military UAS must:</p> <p>(1) determine a DASR.UAS category that correctly supports the intended UAS operation</p> <p>(2) ensure the foreign UAS has equivalent safety provisions as the determined DASR.UAS category</p> <p>(3) if the UAS safety provisions are not equivalent, apply conditions to the UAS operation that will achieve an equivalent outcome before authorising UAS flight to occur.</p>	<p>DASR NDR.15 refers to "suitability of flight" which does not adequately address the unique risk context of UAS operations.</p> <p>The Sponsor is required to eliminate or otherwise minimise risk SFARP - it can do so by determining an equivalent DASR UAS category and using the requirements and limitations in that category as a suitable benchmark. This has already been specified in GM UAS.80(a).</p>	No action required
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