



RECORD OF CHANGE – DASR RELEASE 30 JUL 2026

1. This document records all changes to the Defence Aviation Safety Regulation (DASR) introduced in the 30 July 2026 release. An overview of noteworthy changes is available in the Notification of Change.
2. An index of all changes, grouped by DASR part, is provided in Table 2 below. Each entry is hyperlinked to an Amendment Record in Enclosure 1 that documents the rationale for the change, previous text and revised text.
3. Each change is classified as Major, Minor or Editorial according to its impact. Table 1 below provides classification definitions and identifies the colour coding used in Table 2.
4. The DASR Change Proposal (DCP) reference number associated with each change is provided for traceability. A single DCP may introduce several changes having similar effect and may affect multiple DASR parts. Any Notices of Proposed Amendment and associated Comment Response Documents issued by DASA are available on the DASA web site and are identified by the same DCP reference number.
5. This document is intended to be accessed in electronic format using bookmarks for navigation; the page numbers applied to Amendment Records do not reflect page numbers within this compiled Record of Change.

Table 1. Change classifications and colour coding

Major	Introduces significant regulation change with a corresponding change to compliance requirements.
Minor	Improves the regulation but does not change the intent or impose new regulation.
Editorial	Applies changes such as corrections or updates to terminology.





Australian Government

Department of Defence

Defence Aviation Safety Authority



Defence Aviation Safety Authority

Capability First, Safety Always

Table 2. Index of changes

Short Title (DCP Reference)	Amendment Record	Change Classification	DASR Clause
DASR UAS – Uncrewed Aircraft Systems			
Shift A01 review and update of DASR UAS (DCP-0015)		Major	DASR Glossary DASR Acronym List DASR UAS
DASR 145 – Requirements for Maintenance Organisations			
145.A.30 - Removal of exception clause 145.A.30(f)1 and Associated AMC (DCP-0048)		Major	DASR 145.A.30(f)
DASR 147 – Aircraft Maintenance Training Organisations			
DASR 147.A.140(a).7 new AMC for PMKeys Codes in MTOE (DCP-0049)		Major	DASR AMC 147.A.140(a)7 DASR GM 147.A.140(a)7 DASR GM1 147.A.140(a)7
General			
DASP Glossary amendments – AUTHOP Definition Update (DCP-0053)		Minor	DASR Glossary

Removal of the term AMD from DASR Acronyms (DCP-0061)		Minor	DASR Acronyms
DASR 21 – Aircraft Design, Production and Certification			
DASR 21 Subpart C (DCP-0055)		Minor	DASR AMC1 21.A.14(c) DASR AMC 21.A.21(a)(1) DASR GM 21.A.73(b) DASR AMC 21.A.73(b) DASR GM 21.A.76(a) DASR AMC 21.A.76(c) DASR AMC 21.A.76(d) DASR GM 21.A.77(a) DASR GM 21.A.77(d) DASR AMC 21.A.81
DASR MED – Medical			
GM MED.10.A para 4 Medical Certificates (DCP-0080)		Minor	DASR GM MED.10.A
DASR SPA – Special Purpose Approval			
SPA.30 AMC SPA.30(b)2a.iv.d Update (DCP-0064)		Minor	DASR AMC SPA.30(b)2
DASR SPA.10.B(1) GM Amendment and Removal of term AMD from DASR Glossary (DCP-0050)		Editorial	DASR Glossary DASR GM SPA.10.B.1
DASR 139 – Aerodromes			
DASR 139 AMC1 139.50.6.b. Pavement Strength (DCP-0074)		Minor	DASR AMC1 139.50
DASR 139 AMC1 139.50.5 Terminology (DCP-0078)		Editorial	DASR AMC1 139.50

DASR AO.Gen – Air Operations General			
DASR AO.Gen.05D AMC 1e update (DCP-0063)		Editorial	DASR AMC AO.GEN.05D
DASR SMS – Safety Management System			
DASR SMS and Glossary edits (DPC-0077)		Minor	DASR Glossary DASR GM SMS.00 a. DASR SMS.00 (a) DASR SMS.05(a) DASR SMS.10(a) DASR SMS.20(a) DASR SMS.30(a) DASR SMS.40(a)

ENCLOSURE:

1. Jul 26 DASR Amendment Records



Australian Government
Department of Defence
Defence Aviation Safety Authority



Defence Aviation Safety Authority

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DASR AMENDMENT RECORD DCP - 0015

DASR CLAUSE: DASR UAS

RATIONALE FOR CHANGE

Evidence indicates that DASR Uncrewed Aircraft Systems (UAS) regulatory risk-controls are not supporting investment and speed to capability required to defend Australia's national interests in the radically changed strategic context. A rewrite of DASR UAS has been undertaken to provide ongoing assurance of Aviation Safety, while supporting investment and growth in capability

CURRENT REGULATION TEXT

Refer Feb 26 (and earlier) DASR release: DASR UAS.10, 20, 30, 35, 40, 50, 60, 70

REVISED REGULATION TEXT

Refer Annex A: DASR UAS for DASR UAS.10, 30, 35, 36, 40

Update DASR UAS.20 AMC/GM para numbering to align with rewrite

Remove DASR UAS.50, 60, 70 in toto

Annex A: DASR UAS July 26 Amendment



DRAFT DASR UAS.10 FOR JUL 26 DASR RELEASE

Contents

- [**Section 1**](#) Additions to the DASP Acronyms and Glossary.
- [**Section 2**](#) Amended DASR UAS.10 DASR Part only.
- [**Section 3**](#) Amended DASR UAS.10 DASR Part, Acceptable Means of Compliance (AMC) and Guidance Material (GM).

SECTION 1: ADDITIONS AND AMENDMENTS TO THE DASP ACRONYMS AND GLOSSARY

1. The following **new and revised** definitions and acronyms are proposed for the DASP Manual Acronyms and Glossary:

Glossary

Aircraft Captain* (UAS Context)

A suitably qualified person designated as being in command and accountable for the safe and effective conduct of the Aircraft during flight. Analogous with the civil term 'pilot-in-command'.

Approved UAS Organisation (AUO) *

A UAS Organisation assessed by DASA to be suitable to operate Defence UAS in accordance with a DASA-issued Authorisation. (A MAO with the relevant category of UAS listed on the Operations Specification is an AUO).

Beyond Visual Line Of Sight (BVLOS) * (UAS Context)

An operation of a Remotely Piloted Aircraft where the aircraft is not operated in VLOS of the Remote Pilot or Competent Spotters.

Competent Spotter * (UAS context)

A person competent to provide the Remote Pilot (RP) with visual detection of Aircraft and avoidance instructions to prevent the UA becoming a hazard to other Aircraft. A Competent Spotter maintains direct and immediate communication with the RP.

Deconfliction * (UAS context)

The act of reducing the risk of collision between aircraft and other airborne hazards by coordinating their movements in time or space. Source: Australian Defence Glossary.

Defence Controlled Ground or Water * (UAS Context)

Areas controlled by Defence where unauthorised people are prohibited from entering or where the UAS Organisation can reasonably ensure unauthorised people are absent or are not exposed to Aviation Safety hazards for the duration of UAS operations.

Critical Infrastructure is not present within the area, or the UAS does not pose a hazard to the Critical Infrastructure (eg due to the low size and speed of the UAS, or established safe margins).

Extended Visual Line of Sight (EVLOS) * (UAS Context)

Extended Visual Line of Sight operations are those where the Remote Pilot hands over responsibility for VLOS to a Competent Spotter(s).

General Public (GP) * (UAS Context)

All persons who are not directly involved with, and not reasonably informed of a UAS operation. GP are all persons who are not Mission Essential Personnel (MEP) or Informed Personnel.

Informed Personnel* (UAS Context)

Informed Personnel are personnel not directly involved in the operation of the UAS; however, they are reasonably informed of the UAS operation.

NOTE: Depending on the UAS operation, Informed Personnel may include Defence personnel, foreign military personnel, and civilians. Examples include other range users attending daily range conferences/ mass air briefs, and personnel reasonably informed by sentries or signage of the UAS operation.

Key Staff * (UAS context)

Appointments within a UAS Organisation that contribute to the UAS Organisation's safe operations.

Mission Essential Personnel (MEP) * (UAS Context)

All persons directly involved in, and essential to the operation of the UAS and conduct of its mission or tasking.

Participating Aircraft * (UAS Context)

Any Aircraft:

1. where the crew is informed of the UAS operating profile, and relevant limitations, and contingency or emergency actions that may affect other Aircraft, and complies with an appropriate Deconfliction plan to ensure Aviation Safety, and
2. operating as a State Aircraft or an Aircraft Sponsored by Defence under DASR NDR or GR.27.

UAS Organisation *

Any organisation with Operational Control of UAS, or who operates Defence UAS.

Visual Line of Sight (VLOS) * (UAS Context)

A remotely piloted aircraft operation in which the remote pilot operating the Aircraft maintains direct unaided visual contact and can orient, and navigate the Aircraft to meet their Deconfliction and collision avoidance responsibilities.

ACRONYM	EXPANSION
AUO	Approved UAS Organisation
BVLOS	Beyond Visual Line Of Sight
EVLOS	Extended Visual Line Of Sight
VLOS	Visual Line Of Sight

SECTION 2: AMENDED DASR UAS.10 PART ONLY

The following replaces DASR Part for DASR UAS.10, UAS.50, UAS.60 and UAS.70 in toto.

DASR UAS.10 Common requirements for all Defence UAS Operations

► GM

- (a) Services and Defence Groups must authorise Defence UAS operations, and ensure UAS Organisations: ► GM
 - 1. eliminate Aviation Safety risks to other Airspace users, and to people and Critical Infrastructure on the ground or water So Far As is Reasonably Practicable (SFARP), and
 - 2. if it is not reasonably practicable to eliminate Aviation Safety risks, minimise those risks SFARP.
- (b) UAS Organisations must comply with the DASR requirements of Certified, Specific or Open category and: ► GM
 - 1. report Occurrences for: ► GM
 - i. Certified category UAS IAW the relevant DASR
 - ii. Specific category Type A UAS IAW the relevant UAS Operating Permit (UASOP)
 - iii. Specific category Type B and Open category where the category requirements and UAS Organisation Risk Management fails to prevent danger to:
 - a. other Airspace users
 - b. people on the ground or water
 - c. Critical Infrastructure.
 - 2. register Defence UAS on:
 - i. the Defence Register when directed by the Authority, or
 - ii. a local register. ► AMC ► GM
 - 3. provide to DASA upon request, all data and access to support initial and ongoing compliance assurance of UAS operations
 - 4. maintain appropriate Orders, Instructions and Publications (OIP). ► AMC
- (c) If a UAS Organisation intends to conduct operations:
 - 1. where other Airspace users, Mission Essential Personnel (MEP), Informed Personnel, General Public (GP) and Critical Infrastructure are exposed to elevated Aviation Safety

risks introduced by UAS Experimentation, they must operate IAW one of the following:

▶ GM

- i. UAS.20
 - ii. UAS.30(a) IAW a DASA approved UASOP
 - iii. UAS.35(c) Standard Scenario for Test & Evaluation and high speed UAS
 - iv. UAS.36(b) Standard Scenario for operations over Defence Controlled Ground or Water.
2. using weapons integrated with Defence UAS, they must operate IAW: ▶ GM
- i. a DASA approval through UAS.30(a) or UAS.20, or ▶ GM
 - ii. UAS.35(d).
3. carrying personnel on a Defence UAS, they must operate IAW a DASA approval through UAS.30(a) or UAS.20. ▶ GM

SECTION 3: AMENDED DASR UAS.10 DASR Part, AMC and GM

The following replaces DASR Part and corresponding AMC and GM for DASR UAS.10, UAS.50, UAS.60 and UAS.70 in toto.

DASR UAS.10

▼ GM

GM UAS.10 – Purpose statement and applicability (AUS)

- a. **Purpose: (Context)** Defence UAS operations involve organisations with a range of organisational size and maturity; and varied UAS Configurations, Roles, and Environment (CRE). Consequently, Risk Management (RM) must scale according to the Aviation Safety hazards associated with specific organisations and CRE. Defence characterises air and ground Aviation Safety risks for UAS as distinct components of the overall risk landscape, which enables improved application of risk controls in the absence of Aircrew on board an Aircraft. **(Hazard)** Poorly scaled and implemented RM for Defence UAS operations could compromise Aviation Safety. **(Defence)** This regulation requires UAS Organisations to implement defined RM requirements, with distinct consideration of air and ground risk, so that Aviation Safety risks are eliminated So Far As is Reasonably Practicable (SFARP), and if not reasonably practicable to eliminate, minimised SFARP.
- b. **DASR UAS applicability**
 - i. DASR UAS only applies to UAS operated by Defence:
 - (a) as State Aircraft
 - (b) up to, but not above 100km above mean sea level.
 - ii. If a UAS is used for Defence purposes and regulated by a Civil Aviation Authority (CAA):
 - (a) the requirements of [DASR UAS.10\(a\)](#) and DASR NDR apply
 - (b) Services and Defence Groups may interpret [AMC DASR NDR.05\(a\)](#) references to ‘...or equivalent document’ to include the approval granted by the CAA for the UAS operation
 - (c) UAS Organisations may not use the flexibility provision presented in [GM DASR NDR.10\(a\)](#) to operate the UAS outside the requirements and limitations (including operating areas) imposed by the CAA—unless the Sponsor:
 - (i) applies to the relevant CAA for a dispensation to their regulations, or
 - (ii) temporarily operates the UAS under DASR UAS, (If exercising this option, the CAA regulations, requirements and limitations will cease to apply for that period), or
 - (iii) approves the use of Defence Airspace where the CAA has imposed a restriction on the use of Defence Airspace in a civil approval instrument (eg Defence controlled Restricted Areas).

(d) DASR UAS.20, DASR UAS.30 and DASR UAS.40 do not apply.

- c. **DASR UAS non-applicability.** DASR UAS regulations do not apply:
 - i. where a Service or Defence Group sponsors foreign military UAS operations in Australian sovereign Airspace—in these circumstances, [DASR GR.27](#) applies
 - ii. to Defence UAS operating indoors where the Uncrewed Aircraft (UA) is physically contained within the indoor operating area; however the *Work Health and Safety Act 2011* remains applicable.
- d. **Applicability of other DASR.** DASR UAS may be interpreted as a self-contained regulation. Therefore, other DASR only apply where prescribed within DASR UAS, or at DASA's direction.
- e. **Other applicable authorities, regulations and policies.** Authorities, regulations and policies, external to DASR UAS, may relate to the safety of UAS operations. While these other elements are not Aviation Safety requirements, UAS Organisations are responsible for identifying any additional requirements relevant to the acquisition and safe use of UAS. Examples include:
 - i. the [Work Health and Safety Act 2011](#) and [Work Health and Safety Regulations 2011](#)
 - ii. the CASA Office of Airspace Regulation (OAR) operating under the [Airspace Act 2007](#) and [Airspace Regulations 2019](#)
 - iii. the Defence Test and Evaluation Manual ([DTEM](#))—as the Defence policy for T&E
 - iv. the Defence Spectrum Office ([DSO](#))—as the Defence authority for radio frequency spectrum allocation
 - v. the Defence Security Principles Framework ([DSPF](#))—for hazards relating to cyber-security
 - vi. the Directorate of Defence Radiation Safety and Assurance ([DRSA](#)) and the Defence Radiation Safety Manual ([DRSM](#))—as the ADF authority for LASER safety
 - vii. the Defence Training Area Management Manual ([DTAMM](#))—applies to the management of Defence ranges and associated Airspace
 - viii. the Explosives Safety Regulatory Framework ([ESRF](#))—regulates hazards specific to explosive materials
 - ix. carriage of Dangerous Goods or any other substance that could reasonably create a unique hazard
 - x. Autonomous Systems and Autonomous Weapons Systems Policy—guides Defence personnel in responsible development and use of autonomous systems technologies
 - xi. Service-specific policy, where applicable.
- f. **Definitions.** DASR UAS employs the following definitions in addition to the [DASR Glossary](#) and specific to characterisation of ground populations:

Quantitative Population Value (people/km ²)	Qualitative Descriptors	Area Description
N/A	Defence Controlled Ground or Water	Refer to the DASP Glossary.
N/A	Isolated environment	Areas where it is reasonably expected that people will rarely be present, such as: a. hard to reach areas (mountains, remote deserts, etc) b. large bodies of water away from expected boat traffic.
<5	Remote	Areas where people may be present, such as forests, deserts, large farm parcels, etc. Areas where there is approximately 1 small building every km².
<50	Lightly Populated	Areas of small farms. Residential areas with very large lots (approx. 16 000 m² or 4 acres).
<500	Sparsely Populated or Residential Lightly Populated	Areas comprised of homes and small businesses with large lot sizes (approx. 4 000 m ² or 1 acre).
<5000	Suburban or Low density metropolitan	Areas of single-family homes on small lots, apartment complexes, commercial buildings, etc. Can contain multi-storey buildings, but generally most should be below 3-4 stories.
<50,000	High Density Metropolitan	Areas of mostly large multi-storey buildings. The downtown area of most cities. Areas of dense skyscrapers.
>50,000	Assemblies (of people)	The highest density areas in large cities.

		Large gatherings of people such as professional sporting events, large concerts, etc.
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Table GM UAS.10–1: Definitions applicable only in DASR UAS

- g. **ICAO definitions.** DASPMAN uses definitions from [ICAO Doc 10019—Manual on RPAS](#) where applicable in order to promote international harmonisation. Consequently, DASPMAN draws the definitions for UAS, UA, UAS Organisation, Remote Pilot, Remote Pilot Station, and segregated airspace from this reference, with minor adaptation to suit the military context where necessary.
- (a) **Services and Defence Groups must authorise Defence UAS operations, and ensure UAS Organisations:** ▼ [GM](#)

GM UAS.10(a) – Service and Defence Group Authorisation (AUS)

- a. **Statutory accountabilities and responsibilities.** Persons who authorise and operate UAS hold or execute statutory accountabilities or responsibilities to eliminate Aviation Safety risks So Far As is Reasonably Practicable (SFARP), and if it is not reasonably practicable to eliminate those risks, to minimise risks SFARP (this is referred to within the DASR UAS at times in the shortened form of ‘eliminate or otherwise minimise risks SFARP’). Compliance with DASR UAS will assist in executing this responsibility. However, Services and Defence Groups are responsible for implementing the most appropriate risk controls for meeting their statutory accountabilities or responsibilities to the persons potentially affected by the activity. Additionally, the relevant Service or Defence Group may need to implement further risk controls when authorising UAS operations by Remote Pilots who may be less familiar with the broader concepts of Flight operations safety management. While RPs are not explicitly included in this regulation, they have a statutory duty to take reasonable care that their acts or omissions do not adversely affect the health and safety of other persons.
- b. **Services and Defence Groups.** Service Chiefs and Defence Group Heads are accountable for authorising all UAS operations within their respective environments (including Risk Management and retention). DASR UAS assumes that Service Chiefs and Group Heads will apply DASR UAS to their own environments through command and delegation instruments, with accountability ultimately residing with the Service Chief or Group Head. In this context, DASA expects that operating-level personnel will refer to Service or Defence Group policy provided by an informed Commander, Accountable Manager, or delegate with appropriate authorisations, to remain compliant with DASR UAS. Where there is no delegation from the Service Chief or Group Head, the Service Chief or Group Head is accountable for providing approvals to operate UAS.
- c. The accountability for ensuring the safe operation of UAS rests with Service Chiefs or Groups Heads, irrespective of whether DASA issues a discrete authorisation.
- d. Where DASA provides operating permissions through DASR UAS without the need for a discrete authorisation, Services or Defence Groups can use the [DASA Approval To Operate UAS \(ATOUS\)](#) template to issue authorisations.
1. **eliminate Aviation Safety risks to other Airspace users, and to people and Critical Infrastructure on the ground or water So Far As is Reasonably Practicable (SFARP), and**

2. if it is not reasonably practicable to eliminate Aviation Safety risks, minimise those risks SFARP.
- (b) UAS Organisations must comply with the DASR requirements of Certified, Specific or Open category, and: ▼ GM

GM UAS.10(b) – Operations compliant with DASR Certified, Specific or Open categories (AUS)

- a. The category system provides operating freedoms to suit Service and Defence Group capability requirements and Risk Management (RM) requirements contextualised to those freedoms.
- b. Certified category enables Services and Groups to operate a UAS over GP, MEP and Informed Personnel, and in all classes of Airspace for which the UAS is equipped.
- c. Specific category Type A ([DASR UAS.30\(a\)](#)) enables Services or Groups to seek a discrete DASA approval for operations when the other categories do not provide the capability sought by a Service or Defence Group.
- d. Specific category Type B ([DASR UAS.30\(b\)](#)) enables Services and Defence Groups to operate within predefined Standard Scenarios:
 - i. detailed in [DASR UAS.35](#), with notification to DASA, only as an Approved UAS Organisation
 - ii. detailed in [DASR UAS.36](#), with notification to DASA, without a requirement to gain discrete DASA Approval.
- e. Open category enables Services and Groups to operate UAS within the predefined limitations detailed in [DASR UAS.40](#), without a notification to DASA, and without a requirement to gain discrete DASA approval.
1. report Occurrences for: ▼ GM

GM UAS.10(b)1 – Occurrence reporting (AUS)

[GR.40](#) applies to Occurrence reporting for Approved Organisations. See also [DASPMAN Volume 3](#), Chapter 10.2 for expanded guidance regarding Occurrence reporting for all UAS Organisations.

- i. Certified category UAS IAW the relevant DASR
- ii. Specific category Type A UAS IAW the relevant UAS Operating Permit (UASOP)
- iii. Specific category Type B and Open category where the category requirements and UAS Organisation Risk Management fails to prevent danger to:
 - a. other Airspace users
 - b. people on the ground or water
 - c. Critical Infrastructure.

2. register Defence UAS on either:
 - i. the Defence Register when directed by the Authority, or
 - ii. a local register. ▼ AMC ▼ GM

AMC UAS.10(b)2ii – UAS registration (AUS)

- a. Services and Defence Groups should use a local register to capture the following details:
 - i. UAS serial number
 - ii. manufacturer and model
 - iii. operating organisation or unit.

GM UAS.10(b)2ii – UAS Registration (AUS)

- a. Registration assures transparency to Airspace management authorities where necessary, and provides traceability between a UAS and its operating unit. DASA may direct a Service or Defence Group to apply for Defence Registration when DASA identifies a benefit.
 - b. Where a Service or Defence Group elects to use more than one local register, they can meet compliance with the requirement through implementing a system of management that meets the intent for transparency and traceability.
3. provide to DASA upon request, all data and access to support initial and ongoing compliance assurance of UAS operations
 4. maintain appropriate Orders, Instructions and Publications (OIP). ▼ AMC

AMC UAS.10(b)4 – Management of OIP (AUS)

- a. UAS Organisations should ensure all OIP is:
 - i. applicable, accurate and approved
 - ii. maintained in good and legible order
 - iii. accessible to personnel in a format and medium appropriate to the operational environment
 - iv. applicable to the scope and level of the operation being conducted
 - v. accurately maintained, controlled and made accessible to applicable personnel and organisations
 - vi. supported by a master document or record allowing the amendment status and document completeness to be ascertained.
- b. OIP should contain or display:
 - i. authority for use

- ii. document name
- iii. document number
- iv. date of issue and currency (amendment status)
- v. sponsor details, including their responsibility and authority.
- c. For OIP specific to aircraft type, UAS Organisations should ensure:
 - i. updates are approved by an appropriate authority
 - ii. OIP from foreign sources is appropriately approved and incorporated (eg from overseas OEM).
- d. OIP issued under this regulation should include:
 - i. a list of OIP sponsors and approval authorities
 - ii. a list of OIP Sponsor approved sources of Flight Information Documents (FID) is maintained
 - iii. defined periodic review criteria (Defence Aeronautical Information will follow the 28 day Air Information Regulation and Control (AIRAC) cycle).
 - iv. OIP distribution requirements, where relevant.
- (c) If a UAS Organisation intends to conduct operations:
 - 1. where other Airspace users, Mission Essential Personnel (MEP), Informed Personnel, General Public (GP) and Critical Infrastructure are exposed to elevated Aviation Safety risks introduced by UAS Experimentation, they must operate IAW one of the following:
 - ▼ GM

GM UAS.10(c)1 – Determination of Experimentation–related Aviation Safety risks (AUS)

- a. **Experimentation.** The [Defence Test & Evaluation Manual \(DTEM\)](#) defines what constitutes Experimentation and applies to Experimentation activities on UAS.
- b. **(Context)** UAS Experimentation Flights are an essential input to capability, and in many cases, UAS Organisations can conduct Experimentation without exposing MEP, Informed Personnel or GP to hazards beyond routine operations. However, UAS Organisations may need to conduct Experimentation Flights with additional safety risks to MEP, Informed Personnel and GP. **(Hazard)** UAS Organisations could expose MEP, Informed Personnel or GP to unnecessary Experimentation-related hazards through a lack of appropriate organisation, personnel and process controls and a poor appreciation of the UA technical risk; and compromise Aviation Safety. **(Defence)** This regulation requires UAS Organisations to implement appropriate Risk Management to ensure that Aviation Safety risks to MEP, Informed Personnel, GP and Critical Infrastructure are eliminated So Far As is Reasonably Practicable (SFARP), and if not reasonably practicable to eliminate, minimised SFARP.

- c. Where an Experimentation activity does not pose additional risks beyond the UAS Organisation's normal operating risk profiles (ie does not impact extant risk management), they may conduct Experimentation under any of the DASR UAS.36 and UAS.35 Standard Scenarios.
 - d. Examples of when Experimentation may introduce additional risks to MEP, Informed Personnel, GP and Critical Infrastructure include:
 - i. dropping logistics items in proximity to personnel for the first time
 - ii. operating a UAS from a ship's flight deck for the first time, with personnel exposed to hazards (eg personnel on deck, or within launch and recovery hazard areas)
 - iii. Flights of UAS where the UAS Organisation has not yet established reasonable confidence in the platform (eg first ever operation of a developmental UAS)
 - iv. Flights of existing and proven UAS where modifications are made to Safety Critical systems and UAS Organisations cannot exclude personnel from ground risk areas.
 - e. Defence policy may apply, including:
 - i. The [Defence Test & Evaluation Manual](#)
 - ii. Service or Group Experimentation policy.
 - i. [UAS.20](#)
 - ii. [UAS.30\(a\) IAW a DASA approval UASOP](#)
 - iii. [UAS.35\(c\) Standard Scenario for Test & Evaluation and high speed UAS](#)
 - iv. [UAS.36\(b\) Standard Scenario for operations over Defence Controlled Ground or Water.](#)
2. [using weapons integrated with Defence UAS, they must operate IAW: ▼ GM](#)

GM UAS.10(c)2 – Weaponised UAS (AUS)

- a. **Approval pathways.** This regulation provides additional safety assurance for a weaponised UAS where the weapon hazards increase the platform's inherent hazard to other Aircraft, persons on the ground and Critical Infrastructure. It provides a commander two options for weaponised UAS approvals. A commander may either pursue a DASA approval UASOP; or operate IAW a weaponised UAS Standard Scenario. The UASOP provides a greater degree of flexibility with a commensurately more rigorous assurance process. Whereas, the Standard Scenario enables Service or Defence Group self-approval without the need for a discrete DASA approval.
- b. **DASR UAS and Explosives Safety Regulatory Framework (ESRF)—applicability guidance**

- i. Under the DASR, any form of Explosive adapted, included, or attached to a Defence UAS for the purposes of applying a destructive effect to personnel and equipment, is 'weaponised'. DASA applies DASR UAS to remotely or autonomously controlled airborne weapons only where it identifies a tangible Aviation Safety benefit. Therefore, DASA will assess each platform on a case-by-case basis and determine DASR UAS applicability for any UAS that adapts, includes, or attaches Explosives on any platform where the Explosives Safety Regulatory Framework ([ESRF](#)) or Land Range Safety applies. The [ESRF](#) regulates hazards specific to explosive materials, which do not include the hazards controlled by DASR UAS. DASR UAS provides regulatory controls for the hazards posed by a UAS to other Airspace users; and personnel and Critical Infrastructure on the ground. Hence, for weaponised UAS, the [ESRF](#) regulations and DASR UAS both apply.
 - ii. The focus of Aviation Safety Risk Management for weaponised UAS is the destructive elements of the UAS that introduce hazards exceeding those of the platform itself. In the case of non-weaponised UAS, DASA only applies regulatory hazard controls that further reduce the overall risk of impact that endangers the Aviation Safety of other Airspace users, persons on the ground or water and Critical Infrastructure due to the kinetic energy imparted. The implementation of Aviation Safety hazard controls specific to the presence of Explosives may only need consideration where the weapon expands the hazard profile of the UAS (eg the weaponised component of a UAS increases the potential fatalities upon impact beyond the consequence inherent to the non-weaponised platform).
 - iii. Smoke, flares, and methods of illumination (eg used for Search and Rescue purposes) are not weapons. However, these items are pyrotechnics and hence, are Explosives—the [ESRF](#) applies. The Service or Defence Group remains responsible for ensuring that anything dropped or discharged from a UAS is risk managed SFARP. This includes ensuring the adequate safe carriage of stores to prevent unintentional release and/or discharge of those stores and any unintended consequences.
- i. [a DASA authorisation through UAS.30\(a\) or UAS.20, or ▼ GM](#)

GM UAS.10(c)2i – Certified or Specific Type A weaponised UAS approvals (AUS)

- a. Applications for the weaponisation of a UAS should consider:
 - i. any undue hazard exposure to MEP, Informed Personnel and the GP
 - ii. possible impacts to Airworthiness of the platform as a consequence of integration and subsequent weapon release and separation
 - iii. hazards identified during system start-up, launch and recovery and Flight loads of the UAS-Weapon combination
 - iv. accuracy, integrity, availability and continuity of service of the weapon system where there is an impact on Aviation Safety, including any latency of the command and control link

- v. the likely safety risk associated with the application and intended mission of the UAS
 - vi. safety requirements for the application of laser technology (eg any safety risks associated with laser technology applicable to the UAS requires additional assessment beyond weaponisation and Service or Defence Group authorisation to operate safely—normal Defence procedures for laser safety clearances apply as per the [Defence Radiation Safety Manual](#)).
 - ii. [UAS.35\(d\)](#).
3. [carrying personnel on a Defence UAS, they must operate IAW a DASA approval through UAS.30\(a\) or UAS.20.](#) ▼ [GM](#)

GM UAS.10(c)3 – Carriage of persons (AUS)

DASA defines specific assurance requirements for the carriage of people on UAS on a case-by-case basis—albeit using crewed Aircraft DASR as a benchmark for most operations. However, DASA will consult with a Service or Defence Group to refine appropriate requirements where the carriage of personnel on a UAS is critical for mission risk (eg Search and Rescue or battlefield medical evacuation).

DRAFT DASR UAS.30(a) FOR JUL 26 DASR RELEASE

Contents

Section 1: Amended DASR UAS.30(a) DASR Part only.

Section 2: Amended DASR UAS.30(a) DASR Part, Acceptable Means of Compliance (AMC) and Guidance Material (GM).

SECTION 1: AMENDED DASR UAS.30(a) PART ONLY

The following replaces the DASR Part for DASR UAS.30(a) and UAS.30(b) in toto.

DASR UAS.30(a) Specific category Type A UAS

- (a) UAS Organisations must operate Specific category Type A UAS IAW the requirements: ▶ GM
1. and limitations within a DASA approved UASOP
 2. within a DASA agreed Form 152, or equivalent document, that covers:
 - i. the UAS Configuration, Role, and Environment (CRE), as directed by DASA ▶ AMC ▶ GM
 - ii. UAS Organisation requirements, as directed by DASA ▶ AMC ▶ GM
 - iii. implementation of a Safety Management System (SMS) contextualised for the UAS CRE, as directed by DASA ▶ AMC ▶ GM
 - iv. implementation of a tailored Initial and Continuing Airworthiness system contextualised for the UAS CRE, as directed by DASA ▶ AMC ▶ GM
 - v. implementation of a Flying Management System (FMS) contextualised for the UAS CRE ▶ AMC ▶ GM
 - vi. suitable risk controls to address the risk of Deconfliction breakdown, contextualised for the UAS CRE ▶ AMC ▶ GM
 - vii. suitable risk controls to address the risk of unintended descent, contextualised for the UAS CRE ▶ AMC ▶ GM
 - viii. the methods to ensure the UA is controlled by a qualified Remote Pilot (RP) or a DASA approved system. ▶ AMC ▶ GM

SECTION 2: AMENDED DASR UAS.30(a) DASR Part, AMC and GM

The following replaces DASR UAS.30(a) and UAS.30(b) and corresponding AMC and GM in toto.

DASR UAS.30(a) Specific category Type A UAS

- (a) UAS Organisations must operate Specific category Type A UAS IAW the requirements: ▼ GM

GM UAS.30(a) – UAS Operating Permit application (AUS)

- a. This regulation identifies the accountable person for UAS operations.
- b. This regulation assumes that the UAS Operating Permit (UASOP) applicant will be the UAS Organisation. DASA acknowledges UAS Organisations may have support in developing UASOP applications from a variety of organisations including CASG and other support agencies. UAS Organisations may delegate work to other organisations that supports the development of a UASOP application. However, the overall accountability for the UASOP application and its submission rests with the UAS Organisation. Once submitted, DASA will assess the application in order to assure the safety of UAS operations before issuing a UASOP.
- c. DASA will issue a UASOP for the particular UAS and scope of UAS operations provided that risk controls proposed as part of the UASOP application eliminate or otherwise minimise risks SFARP. DASA will require the relevant UAS Organisation to demonstrate that:
 - i. it has documented the intended CRE for the UAS and provided it to DASA
 - ii. if required, is an Approved UAS Organisation, or has otherwise applied to DASA to be an Approved UAS Organisation
 - iii. if required, has submitted evidence to DASA of their Safety Management System
 - iv. if required, has submitted evidence to DASA of their Initial and Continuing Airworthiness systems
 - v. it has submitted evidence to DASA of their Flying Management System, including:
 - (a) an assessment of the risk of Deconfliction breakdown IAW the 7-step Risk Management process
 - (b) an assessment of the risk of unintended descent IAW the 7-step Risk Management process
 - (c) management of Remote Pilot (RP) qualifications, or other DASA approved system.
 - vi. it has proposed any other requirements or limitations for inclusion in the UASOP in order to eliminate or otherwise minimise risks SFARP.
- d. Risk controls will generally fall into one of three categories, as follows:
 - i. **Technical risk controls.** Technical risk controls relate to the application of rigour to the design, production and maintenance processes, such that a system's

likelihood of failure is known and controlled. This may include the application of standards, or inclusion of systems designed to support safe operation, such that the likelihood of failure is reduced.

- ii. **Operational risk controls.** Operational risk controls relate to the application of restrictions and limitations to the operation. This may include measures such as limiting operations to segregated airspace, over a safe area of designated ground or water, or restricting flight over the GP, to a limited set of weather conditions, or to specific roles.
 - iii. **Systemic risk controls.** Systemic risk controls relate to the application of regulatory standards to organisations involved in the design, production, maintenance and operation of the system. Systemic mitigation is intended to reduce the occurrence of organisational and human errors which can contribute to the failure of a system.
- e. A DASA issued UASOP will, as a minimum identify:
- i. the UAS
 - ii. the UAS Organisation
 - iii. registration requirements for the UAS
 - iv. compliance with an approved CRE document or Statement of Operating Intent and Usage (SOIU)
 - v. whether the UAS Organisation needs to be an Approved UAS Organisation
 - vi. the implementation of a SMS contextualised for the UAS CRE, if necessary
 - vii. the implementation of a tailored Initial Airworthiness and Continuing Airworthiness system contextualised for the UAS CRE, if necessary
 - viii. compliance with an FMS
 - ix. key risk controls that must be employed to minimise the risk of Deconfliction breakdown during UAS operations
 - x. key risk controls that must be employed to minimise the risk of unintended descent during UAS operations
 - xi. the RP qualifications, or a DASA approved system, that can control the UA
 - xii. Occurrences that must be reported
 - xiii. and direct any other restrictions and limitations as necessary.
- 1. and limitations within a DASA approved UASOP
 - 2. within a DASA agreed Form 152, or equivalent document, that covers:
 - i. the UAS Configuration, Role, and Environment (CRE), as directed by DASA
▼ AMC ▼ GM

[AMC UAS.30\(a\)2.i – UAS CRE \(AUS\)](#)

- a. UAS Organisations should document the UAS CRE for their intended operations using either a:
 - i. DASA UAS CRE Document template, or equivalent document, approved by the Service or Defence Group (or delegate), or
 - ii. UAS SOIU template endorsed by DASA and approved IAW DASR ARO.50(a)
- b. UAS Organisations should reference the approved UAS CRE Document or SOIU in the DASR Form 152.
- c. Non-administrative changes to the SOIU require DASA endorsement, unless agreed by DASA.

GM UAS.30(a)2.i – UAS CRE (AUS)

- a. This regulation assures that UAS Organisations define a CRE sufficient to inform decisions about whether a UAS is, and remains, safe for operations approved under a UASOP. The defined CRE establishes context for risk management, sets a baseline to control UASOP operations, and helps identify changes that require update and reassessment of Risk Management approaches.
- b. DASA recommends the CRE document is best suited for enduring operations under a Standard Scenario, or for simple UASOP applications. An SOIU is more appropriate for complex UASOP applications or when the relevant stakeholders consider DASA endorsement is necessary.
- c. The difference between a DASA CRE Document and a UAS SOIU lies mainly in the number of stakeholders that need to be consulted, and the required approval level for each document:
 - i. CRE Documents do not usually require extensive stakeholder consultation and can be approved by the Service or Defence Group Head (or delegate). DASA endorsement of the CRE document is not required.
 - ii. SOIUs require more significant stakeholder consultation, including with DASA. While still required to be approved by a Commander or Group Head (or delegate), the SOIU may warrant a higher-level delegate approval (compare with expectation for crewed aircraft SOIUs in AMC ARO.50(a)). This aligns with the increased inherent hazards of the UAS operation, necessitating increased stakeholder consultation (due potentially to the shared nature of the risk, refer to WHS Act Section 46) to minimise the risk of the UAS operation.
- ii. UAS Organisation requirements, as directed by DASA ▼ AMC ▼ GM

AMC UAS.30(a)2.ii – UAS Organisation requirements (AUS)

- a. UAS Organisations should:
 - i. be an Approved UAS Organisation, if directed by DASA

- ii. implement any other UAS Organisation requirements detailed or referenced in the UASOP.

GM UAS.30(a)2.ii – UAS Organisation requirements (AUS)

- a. This regulation assures that UAS Organisations have the necessary maturity, experience, and systems in place to carry out the proposed UAS operations. The mechanism employed by DASA to assure this is to reserve higher risk and complex UAS operations only to Approved UAS Organisations.
 - b. Some UASOPs may not require operations as an Approved UAS Organisation. However, note that some Specific category Type B Standard Scenarios are reserved for Approved UAS Organisations only (refer to DASR UAS.30(b)).
 - c. Applying for Approved UAS Organisation status is not likely to prove burdensome for applicants, given most UAS Organisations will progress through the Specific category Type B Standard Scenarios before requesting a UASOP from DASA. Of note, MAOs are Approved UAS Organisations where the OpSpec details permission to operate the relevant category of UAS.
- iii. implementation of a Safety Management System (SMS) contextualised for the UAS CRE, as directed by DASA ▼ AMC ▼ GM

AMC UAS.30(a)2.iii – SMS (AUS)

UAS Organisations should implement SMS requirements detailed or referenced in the UASOP.

GM UAS.30(a)2.iii – SMS (AUS)

- a. DASA may not require implementation of an SMS for all UASOPs. However, in the context that UASOPs facilitate operations beyond Specific category Type B and Open category, those situations are the exception. Note that even the Specific category Type B Standard Scenarios require a range of Safety Management System implementation.
- b. UASOP applicants should consider the sliding scale of requirements implemented for the following categories:
 - i. Open category, as the category with the lowest inherent hazards, does not explicitly require an SMS. However, it does provide some embedded elements of SMS.
 - ii. The Specific category Type B Standard Scenarios for all UAS Organisations (DASR UAS.36) provide tailored SMS requirements due to increased inherent operating hazards beyond those in Open category.
 - iii. The Specific category Type B Standard Scenarios for Approved UAS Organisations only (DASR UAS.35) and Certified category, require an SMS compliant with DASR SMS due to further increased inherent operating hazards.

- iv. implementation of a tailored Initial Airworthiness and Continuing Airworthiness system contextualised for the UAS CRE, as directed by DASA ▼ AMC ▼ GM

AMC UAS.30(a)2.iv – Initial Airworthiness and Continuing Airworthiness (AUS)

- a. UAS Organisations should implement:
 - i. Initial Airworthiness requirements detailed or referenced in the UASOP
 - ii. Continuing Airworthiness requirements detailed or referenced in the UASOP.

GM UAS.30(a)2.iv – Initial Airworthiness and Continuing Airworthiness (AUS)

- a. This regulation assures that UAS Organisations apply a suitable Initial Airworthiness and Continuing Airworthiness system to support any systemic and technical risk controls proposed as part of an operation, to ensure the integrity of the risk controls through the operational life of the UAS.
- b. Initial Airworthiness and Continuing Airworthiness requirements are not necessarily relevant to all UASOPs. Examples where DASA may not impose those requirements could include operations that only involve a limited number of flights, operations with only a fleeting exposure to people and Critical Infrastructure, and low weight and speed UA that are unlikely to cause injury upon impact.
- c. DASA will only impose Initial Airworthiness and Continuing Airworthiness requirements on UAS where they make a tangible contribution to the safety of other airspace users, or people and Critical Infrastructure on the ground or water. This is generally the case where a larger UAS, typically one that exceeds the weight limitations of Open category, is expected to operate in close proximity to people and Critical Infrastructure on the ground, and other Airspace users. UAS Organisations should implement measures, where practicable, to reduce the likelihood and consequence of critical component failure (eg positioning equipment when relied upon for separation from crewed Aircraft ADS-B Out, independent Flight Termination Systems, etc.). This could also include increased rigour in engineering and maintenance support, and reporting of issues encountered.
- d. Ultimately, DASA's decision on Initial Airworthiness and Continuing Airworthiness requirements within a UASOP will be based on whether the UAS operation is relying on any key systemic or technical risk controls, and whether those risk controls require a suitable Initial Airworthiness and Continuing Airworthiness system to ensure their proper function.
- e. The direct application of Airworthiness DASRs (i.e. DSR 21, M, 145, 66, and 147) to UAS outside of the Certified category is usually not practicable. Each of these regulations inherently assume the UAS will have a standards-based design, a Military Type Certificate, and subsequent Certificates of Airworthiness for each UA, which is generally not the case with UAS outside of the Certified category. Instead, where necessary, DASA will generally pursue an alternative approach by identifying the underlying 'safety intent' that the Airworthiness DASRs aim to achieve, and prescribing these principles as broad outcome-based requirements to be achieved. The UAS Organisation may therefore have latitude in how to meet these requirements.

- f. A UAS Organisation is likely to have the most comprehensive understanding of their proposed CRE and available risk controls. Therefore, the onus is on the UAS Organisation to propose, if necessary, Initial Airworthiness and Continuing Airworthiness requirements to DASA for agreement and inclusion in the approved UASOP. Additional Initial Airworthiness and Continuing Airworthiness guidance is available in [UAS.30\(b\)](#).
- v. implementation of a Flying Management System (FMS) contextualised for the UAS CRE ▼ AMC ▼ GM

AMC UAS.30(a)2v – FMS (AUS)

UAS Organisations should implement FMS requirements detailed or referenced in the UASOP.

GM UAS.30(a)2v – FMS (AUS)

- a. This regulation assures that UAS Organisations implement a suitable Flying Management System (FMS) for their proposed UAS operations.
- b. Applicants should consider the following range of FMS within DASR UAS, and the possible application to their own CRE, when determining UASOP application proposals:
 - i. Open category does not require a formal FMS to manage the constrained inherent operating hazards in this category. However, note that [DASR UAS.10\(a\)](#) and [DASR UAS.10\(b\)](#) do mandate basic management requirements.
 - ii. Specific category Type B category provides permissions for increased inherent operating hazards. Therefore, UAS Organisations operating Specific category Type B UAS must implement a basic Flying Management System IAW [DASR UAS.30\(b\)3](#).
 - iii. Certified category, as the category that most closely resembles the hazards inherent with crewed Aircraft operations, requires full compliance with [DASR ORO.10](#).
- c. In reality, the requirement for an FMS will not prove burdensome to applicants, as most UAS Organisations would have already progressed through the Specific category Type B Standard Scenarios before requesting a UASOP from DASA.
- vi. suitable risk controls to address the risk of Deconfliction breakdown, contextualised for the UAS CRE ▼ AMC ▼ GM

AMC UAS.30(a)2vi – Risk controls for Deconfliction breakdown (AUS)

- a. UAS Organisations should implement:
 - i. risk controls detailed or referenced in the UASOP that address Deconfliction breakdown
 - ii. additional risk controls, beyond those identified in the UASOP, if needed to eliminate or otherwise minimise risks SFARP of Deconfliction breakdown for a particular UAS Operation.

GM UAS.30(a)2vi – Risk controls for Deconfliction breakdown (AUS)

- a. Deconfliction breakdown refers to the point where the safety margins between the UA and other Airspace users begin to reduce and compromise Aviation Safety.
- b. DASR UAS addresses the risks associated with integrating Specific and Open Categories into existing Airspace (both controlled and non-controlled) primarily due to:
 - i. equipage shortfalls
 - ii. inability to comply with the Air Traffic Control instructions (eg meet standard rates of climb)
 - iii. the inability to comply with rules of the air (eg the absence of capability to 'see and avoid' other aircraft).
- c. Where UAS segregation from other Aircraft is not a practicable option for UAS Organisations, operations in a variety of Airspace may be conducted under a UASOP if the UAS Organisation demonstrates to DASA that they eliminate or otherwise minimise risks SFARP to other airspace users.
- d. A UAS Organisation eliminates or otherwise minimises risks SFARP to Airspace users through risk controls specifically targeted to the risk of Deconfliction breakdown. Note that risk controls proposed may result in secondary considerations, for example Initial Airworthiness and Continuing Airworthiness requirements for technical risk controls such as ADS-B Out.
- e. The Airspace integration management and *due regard* prescription in [DASR UAS.30\(b\)](#) may provide UAS Organisations with a useful basis for applications under Specific category Type A.
- vii. suitable risk controls to address the risk of unintended descent, contextualised for the UAS CRE ▼ AMC ▼ GM

AMC UAS.30(a)2vii – Risk controls for unintended descent (AUS)

- a. UAS Organisations should implement:
 - i. risk controls detailed or referenced in the UASOP that address unintended descent
 - ii. additional risk controls, beyond those identified in the UASOP, if necessary to eliminate or otherwise minimise risks SFARP the risk of unintended descent for a particular UAS Operation.

GM UAS.30(a)2vii – Risk controls for unintended descent (AUS)

- a. This regulation assures that UAS Organisations implement suitable risk controls to eliminate or otherwise minimise risks SFARP of an unintended departure from a Flight path that leads to compromised safety of people and Critical Infrastructure on the ground. DASA refers to this as 'unintended descent', and is the point where control of the UA is lost and safety margins for people on the ground and Critical Infrastructure begin to diminish. Unintended descent also includes controlled flight into terrain.

- b. Operations near or over people and Critical Infrastructure can be conducted under a UASOP if a UAS Organisation demonstrates to DASA that they eliminate or otherwise minimise risks SFARP to people and Critical Infrastructure.
- c. UAS Organisations achieve risk minimisation through implementing risk controls specifically aimed at addressing the risk of unintended descent. Note that proposed risk controls may result in secondary considerations, for example Initial Airworthiness and Continuing Airworthiness requirements for technical risk controls such as independent flight termination systems.
- viii. the methods to ensure the UA is controlled by a qualified Remote Pilot (RP) or a DASA approved system ▼ AMC ▼ GM

AMC UAS.30(a)2viii – RP qualification and DASA approved systems (AUS)

- a. UAS Organisations should ensure UAs are controlled by:
 - i. RPs that meet qualification requirements detailed or referenced in the UASOP, or
 - ii. a DASA approved system detailed or referenced in the UASOP.

GM UAS.30(a)2viii – RP qualification and DASA approved systems (AUS)

- a. This regulation assures that:
 - i. UAS Organisations define suitable qualification requirements for their RPs and implement systems to ensure only qualified RPs control UA.
 - ii. only DASA approved systems control a UA where no RP ability to intervene is proposed.
- b. When proposing a new or updated UASOP to DASA, the UAS Organisation should define:
 - i. the required RP qualification and training requirements, given the expected UAS CRE
 - ii. any requirement for the RP to maintain a specified medical standard in accordance with DASR.MED.10
 - iii. any requirement for the RP to maintain Currency and Recency.
- c. Applicants should consider the range of requirements for the following categories when determining a UASOP proposal:
 - i. Open category provides RP qualifications contextualised for the most limited UAS operations hazard profile in DASR UAS.
 - ii. Specific category Type B category provides more prescriptive RP qualification requirements contextualised to increased inherent operating hazards.

- iii. Certified category provides the most stringent RP qualification requirements due to operating permissions equivalent to crewed Aircraft.
- d. **DASA approved system.** The provision for a DASA approved system is to account for the spectrum of possibilities presented by Autonomous Aircraft, increasing levels of autonomous functionality in UAS, and associated with Artificial Intelligence technologies.
- e. If proposing to DASA a system to control a UA, the UAS Organisation should:
 - i. define the level of control the system will have over the UA
 - ii. identify the functions, failure conditions, and failure modes that are impacted by the removal (partial or complete) of the RP
 - iii. analyses the relevant functions, failure conditions, and failure modes that are impacted by the removal (partial or complete) of the RP
 - iv. justify to DASA why the Risk Management approach for the proposed system is appropriate.

DRAFT DASR UAS.30(b) FOR JUL 26 DASR RELEASE

Contents

Section 1: New DASR UAS.30(b) DASR Part only.

Section 2: New DASR UAS.30(b) DASR Part, Acceptable Means of Compliance (AMC) and Guidance Material (GM).

SECTION 1: AMENDED DASR UAS.30(b) PART ONLY

The following is new DASR Part for DASR UAS.30(b) and replaces the extant UAS.30(c) in toto.

DASR UAS.30(b) Common requirements for Standard Scenarios

- (b) UAS Organisations must operate Specific category Type B UAS IAW: ▶ GM
1. the requirements of either:
 - i. UAS.35 Standard Scenarios as an Approved UAS Organisation (AUO) ▶ GM
 - ii. UAS.36 Standard Scenarios. ▶ GM
 2. Initial Airworthiness and Continuing Airworthiness management contextualised for the UAS Configuration, Role and Environment (CRE), for: ▶ GM
 - i. UAS safety and reliability ▶ AMC ▶ GM
 - ii. UAS configuration management ▶ AMC ▶ GM
 - iii. maintenance requirements and instructions ▶ AMC
 3. a Flying Management System (FMS), including: ▶ GM
 - i. approved UAS CRE documents of the UAS operated within each Standard Scenario ▶ AMC ▶ GM
 - ii. a Safety Management System (SMS) for:
 - a. AUO IAW DASR SMS
 - b. UAS Organisations using UAS.36 ▶ AMC ▶ GM
 - iii. appointment of Key Staff to manage the FMS ▶ AMC ▶ GM
 - iv. Flying Supervision ▶ AMC ▶ GM
 - v. UAS Crew training, experience, Currency, competency and medical requirements ▶ AMC ▶ GM
 - vi. operating standards and limitations, including management of: ▶ AMC ▶ GM
 - a. UAS operations integration into the relevant Airspace and with due regard for the safety of civil air navigation ▶ AMC1 ▶ AMC2 ▶ GM
 - b. minimum safe distances from people on the ground and water, and Critical Infrastructure in the relevant areas. ▶ AMC ▶ GM
 4. a valid DASR Form 150 submitted to DASA prior to commencement of UAS operation.

SECTION 2: AMENDED DASR UAS.30(b) DASR Part, AMC and GM

The following is new DASR Part and corresponding AMC and GM for UAS.30(b), replacing the extant UAS.30(c) and corresponding AMC and GM in toto.

DASR UAS.30(b) Common requirements for the Standard Scenarios

- (b) UAS Organisations must operate Specific category Type B UAS IAW: ▼ GM

GM UAS.30(b) – Purpose statement (AUS)

Purpose. (Context) Standard Scenarios facilitate a range of Defence UAS operations without the need for a bespoke DASA approval for every usage, by providing defined hazard controls. **(Hazard)** Inadequate risk controls for UAS organisations may compromise Aviation Safety and lead to a breach of Defence’s WHS obligations. **(Defence)** This regulation requires a UAS Organisation to implement organisation risk controls to eliminate Aviation Safety risks SFARP, or if it is not reasonably practicable to eliminate those risks, to otherwise minimise Aviation Safety risks SFARP.

1. the requirements of either:

- i. UAS.35 Standard Scenarios as an Approved UAS Organisation ▼ GM

GM UAS.30 (b)1i – UAS.35 Standard Scenario applicability (AUS)

- a. DASA provides the DASR UAS.35 Standard Scenarios exclusively to DASA Approved UAS Organisations, to assure hazard controls associated with increased permissions in these Standard Scenarios. A DASA Approval assures that Approved UAS Organisations implement appropriate Initial Airworthiness (IA) and Continuing Airworthiness (CA), Flying Management Systems (FMS), and Safety Management Systems (SMS) to ensure Aviation Safety.
 - b. MAOs are Approved UAS Organisations where the OpSpec details permission to operate Certified, Specific Type A, and Specific Type B UAS.
 - c. Other organisations can apply to DASA for organisational approval provided they can demonstrate that they have implemented effective IA, CA, FMS, and SMS requirements.

- ii. UAS.36 Standard Scenarios. ▼ GM

GM UAS.30(b)1ii – UAS.36 Standard Scenarios (AUS)

The UAS.36 Standard Scenarios provide all UAS Organisations with predefined permissions and limitations without a requirement for a DASA approval.

2. Initial Airworthiness and Continuing Airworthiness management contextualised for the UAS Configuration, Role and Environment (CRE), for: ▼ GM

GM UAS.30(b)2 – Initial Airworthiness and Continuing Airworthiness (AUS)

- a. Initial Airworthiness, in the context of Standard Scenarios, is to assure that UAS Organisations implement suitable arrangements to identify and remedy deficiencies in the UAS design, where reasonably practicable. The design system safety and reliability requirements drawn from initial and continued airworthiness principles, can then be applied where they make a tangible contribution to safety in the context of operations under the Standard Scenarios.
- b. Continuing Airworthiness, in the context of Standard Scenarios, is to assure that UAS Organisations implement suitable and ongoing arrangements to maintain the UAS in a condition for safe operation.
- i. **UAS safety and reliability ▼ AMC ▼ GM**

AMC UAS.30(b)2i – Safety and reliability (AUS)

- a. The UAS Organisation should establish a system to collect, investigate and analyse information on in-service failures, malfunctions and defects to detect and rectify unsafe conditions and to inform safety risk management review.
- b. Where reasonably practicable, the UAS Organisation should establish agreements with the OEM and other relevant design service providers to provide design solutions to correct unsafe conditions identified in the extant UAS design.

GM UAS.30(b)2i – Technical risk controls (AUS)

- a. UAS Organisations should consider implementing all reasonably practicable technical risk controls, including:
 - i. appropriate automatic Flight actions upon Command and Control Lost Link agreed with the relevant authority or Air Traffic Control agency (eg autonomous recovery systems, or independent Flight termination (when it is safe to terminate independently))
 - ii. limiting the Uncrewed Aircraft over the operational area and the Airspace designated for the activity (eg geo-fencing, programmable maximum and minimum altitude)
 - iii. the capability for the Remote Pilot to monitor:
 - (a) Command and Control link performance through the control interface
 - (b) externally provided services that affect flight critical systems and voice communication systems (eg mobile or satellite networks)
 - iv. prior testing of functionality to enable manual termination of Flight by the RP
 - v. considerations for the safe recovery from human error (eg, functional tests, mechanical interlocks/safety pins, use of acknowledgment features, fuel or energy consumption monitoring functions).
- b. Where the UAS Organisation identifies risk controls that are not reasonably practicable to implement, they remain responsible for the safety and

reliability of the UAS and for ensuring appropriate Risk Management for unsafe design conditions.

ii. **UAS configuration management** ▼ **AMC** ▼ **GM**

AMC UAS.30(b)2ii – UAS configuration management (AUS)

- a. The UAS Organisation should establish a system to:
 - i. manage the configuration of the UAS
 - ii. approve design changes, cognisant of the extant UAS CRE, and assess the compatibility of the extant UAS design to proposed changes to the UAS role and operating environment and extant Risk Management.

GM UAS.30(b)2ii – UAS configuration management (AUS)

The UAS Organisation should consider establishing a system to manage the configuration of the UAS design, including authorised design changes and repairs cognisant of the UAS CRE, including through a technical log.

iii. **maintenance requirements and instructions** ▼ **AMC**

AMC UAS.30(b)2iii – Maintenance requirements and instructions (AUS)

- a. The UAS Organisation should ensure maintenance:
 - i. requirements and instructions are defined (within Original Equipment Manufacturer issued documentation or within unit level Orders, Instructions and Publications), authorised, and available to relevant personnel in the latest amendment
 - ii. is carried out IAW approved maintenance requirements and instructions.

3. **a Flying Management System (FMS), including:** ▼ **GM**

GM UAS.30(b)3 – FMS (AUS)

This requirement assures that UAS Organisations implement an adequate Flight operations framework of authority and requirements, appropriately contextualised to the UAS CRE. **GM UAS.30(a)2v** contains additional guidance that contextualises UAS.30(b) UAS Organisation requirements.

- i. **approved UAS CRE documents for UAS operated within each Standard Scenario** ▼ **AMC** ▼ **GM**

AMC UAS.30(b)3i – CRE (AUS)

- a. The UAS Organisation should use the DASA UAS CRE document template or equivalent document for defining the UAS CRE, or a Statement of Operating Intent and Usage (SOIU) IAW **DASR ARO.50(a)** where relevant. A Commander (or delegate) may approve a UAS CRE document.

- b. The UAS Organisation should reference the approved UAS CRE document or SOIU in the relevant [DASR Form 150](#).

GM UAS.30(b)3i – CRE (AUS)

- a. A CRE informs decisions about whether an Aircraft design remains safe for operations in the defined roles and environments. It establishes the context for Risk Management, and sets a baseline to control activities and assist Services and Groups in identifying changes that require update and reassessment of Risk Management.
- b. Significant changes to the CRE should result in an update to the UAS CRE document or SOIU and re-submission of an updated DASR Form 150 referencing the updated document.
- c. A CRE document should include the extent to which the UA is required to operate near or over people and Critical Infrastructure including the duration of exposure and expected population density, amplifying:
 - i. population distributions of Mission Essential Personnel, Informed Personnel and General Public exposed to UA hazards
 - ii. Airspace environments in which the UA may operate, including the extent of shared Airspace usage
 - iii. the extent to which the UA is required to operate in the proximity of Aerodromes and vessels
 - iv. the extent to which the UA is required to operate near Critical Infrastructure.
- ii. **a Safety Management System (SMS) for:**
 - a. AUO IAW DASR SMS
 - b. UAS Organisations using UAS.36 ▼ [AMC](#) ▼ [GM](#)

AMC UAS.30(b)3ii.b – SMS implementation (AUS)

A UAS Organisation should implement an SMS commensurate with the scope and complexity of the relevant UAS operations.

GM UAS.30(b)3ii.b – SMS implementation (AUS)

- a. UAS Organisations conducting operations IAW UAS.36 should consider implementing an SMS with:
 - i. defined policy and objectives, including:
 - (a) a statement of management commitment to safety
 - (b) safety accountabilities and responsibilities
 - (c) coordination of emergency response planning
 - (d) SMS documentation.

- ii. Aviation Safety Risk Management artefacts documenting:
 - (a) hazard identification processes
 - (b) safety risk assessment and mitigation.
 - iii. safety assurance using artefacts to document:
 - (a) safety performance monitoring and measurement, including monitoring and investigation of Occurrences, and implement changes to OIP where necessary
 - (b) the management of change
 - (c) continuous improvement of the SMS, including routine auditing to confirm compliance with DASR UAS.
 - iv. safety promotion using artefacts to document:
 - (a) training and education
 - (b) safety communication (eg notices, bulletins, briefings, posters).
- iii. appointment of Key Staff to manage the FMS ▼ AMC ▼ GM

AMC UAS.30(b)3iii – Key Staff (AUS)

UAS Organisations should formally appoint Key Staff who are competent, qualified and appropriately trained, with responsibilities commensurate to the scope and complexity of the relevant UAS operations.

GM UAS.30(b)3iii – Key Staff (AUS)

- a. Key Staff are personnel appointed by a UAS Organisation to ensure the appropriate assignment of accountabilities for Aviation Safety. Some low-complexity operations may not justify assigning individual personnel against all positions; in those cases, the UAS Organisation may combine accountabilities into one or more personnel.
- b. UAS Organisation Key Staff requirements should generally include:
 - i. defined initial and continuing position eligibility requirements
 - ii. defined authority delegations and limitations
 - iii. roles for managing, as a minimum:
 - (a) the Safety Management System
 - (b) IA and CA, where relevant
 - (c) Flying operations standardisation
 - (d) Flying Supervision

(e) Flying instruction, when the organisation conducts training.

c. The following describe Key Staff and their general functions:

- i. **Aviation Safety Officer.** An Aviation Safety Officer is responsible for the management and maintenance of UAS Aviation Safety within the operating organisation. Such duties might include:
 - (a) identifying, reporting and tracking of hazards; and implementation of hazards controls
 - (b) the conduct of Aviation Safety training for members of the UAS Organisation
 - (c) ensuring crew duty limits are enforced
 - (d) incident investigation
 - (e) correction of identified deficiencies.
- ii. **IA and CA management.** Personnel managing IA and CA are responsible for implementing and monitoring appropriate IA and CA risk controls commensurate to the inherent technical hazards of a given UAS. The extent of technical risk controls will vary significantly depending on the operational context. Therefore, the level of qualifications, training and experience required for managing IA and CA is set accordingly.
- iii. **Standardisation Officers (STANDO).** A STANDO is responsible to the Accountable Manager (eg operating unit CO) for monitoring and reporting on operational staff compliance with OIP, and providing guidance for standardisation of UAS Organisation operations.
- iv. **Flight Authorisation Officers (FLTAUTHO).** FLTAUTHOs are personnel of any appropriate rank or position appointed to provide Flight Authorisation of all UAS operations conducted by the UAS Organisation.
- v. **UAS instructors.** A UAS instructor is an RP authorised by the UAS Organisation as competent to provide UAS flying instruction and assessments. The UAS instructor is responsible for providing instruction and assessment to unit personnel IAW the relevant Learning Management Package and OIP. UAS Instructors may also be OEM authorised personnel responsible for initial training on the relevant UAS.

iv. **Flying Supervision** ▼ **AMC** ▼ **GM**

AMC UAS.30(b)3iv – Flying Supervision and Flight Authorisation (AUS)

- a. A UAS Organisation Flying Supervision system should:
 - i. define Flight Authorisation (FLTAUTH) requirements, including:
 - (a) a requirement for the Aircraft Captain to brief the Flight Authorisation Officer (FLTAUTHO) prior to Flights

- (b) requirement for the FLTAUTHO to approve Flights.
- ii. define FLTAUTHO requirements, including:
 - (a) qualifications, training, experience and rank commensurate to the risk context
 - (b) UAS Flight Authorisation authority and limitations, commensurate to the risk context
 - (c) responsibilities
 - (d) self-authorisation limitations when the FLTAUTHO is the Aircraft Captain
 - (e) a requirement for the FLTAUTHO to hold either:
 - (i) a qualification on the UAS types for which they will provide FLTAUTH
 - (ii) relevant aviation experience, endorsed by the UAS Organisation, where the FLTAUTHO does not hold the relevant UAS qualification.
 - (f) additional supervision requirements for Flights of a more hazardous nature, where relevant
 - (g) review periods for qualifications and personnel.
- iii. not use personnel from outside the UAS Organisation as FLTAUTHOs, unless appropriately FLTAUTHO qualified, and either:
 - (a) operationally essential
 - (b) solely for Test and Evaluation.
- iv. ensure FLTAUTH is conducted for all UAS Flights.

GM UAS.30(b)3iv – Flying Supervision and Flight Authorisation (AUS)

- a. For UAS operations with increased complexity, UAS Organisations should consider, based on the UAS CRE, whether to qualify FLTAUTHOs through either a Service-endorsed Flying Supervisors course or unit-level training. Unit-level training should usually cover:
 - i. Non-Technical Skills and fatigue management
 - ii. the Defence Aviation Safety Program and Regulations
 - iii. Aviation Safety Hazards
 - iv. contemporary risk management
 - v. study of Occurrence Reporting, and accident and incident reports from other global operators, of relevant UAS types

- vi. FLTAUTHO roles and responsibilities
- vii. supervision of Crew.
- b. Flight Authorisation should:
 - i. provide unambiguous instructions and guidance to allow the Aircraft Captain to make well-balanced decisions, while avoiding unnecessary interference with the Aircraft Captain's legitimate decision-making responsibilities
 - ii. ensure operations occur IAW:
 - (a) the Standard Scenario requirements
 - (b) the organisation's approved OIP for:
 - (i) CRE or SOIU
 - (ii) Airspace management and Deconfliction
 - (iii) planning requirements for safe distances from people on the ground and CI
 - (iv) Continuing Airworthiness requirements and limitations when relevant
 - (v) operation of the UAS
 - (vi) mission planning
 - (vii) crewing requirements (eg qualifications, experience, medical fitness)
 - (viii) Risk Management.
 - iii. ensure FLTAUTH records:
 - (a) include:
 - (i) date, time and expected duration
 - (ii) UAS type and serial number
 - (iii) callsign (if used)
 - (iv) UAS Crew composition (eg Aircraft Captain, Remote Crew, Mission Crew)
 - (v) planned mission details
 - (vi) any specific limitations that apply to Flights
 - (vii) identifiable acknowledgements by the FLTAUTHO and the Aircraft Captain

- iv. be retained as a permanent record and archived when the UAS Organisation no longer requires those records (eg IAW Commonwealth records management policy issued under the *Archives Act 1983*).
- v. UAS Crew training, experience, Currency, competency and medical requirements ▼ AMC ▼ GM

AMC UAS.30(b)3v – UAS Crew qualification, training, experience and medical standards (AUS)

- a. UAS Organisations should implement UAS Crew training and management risk controls, including:
 - i. training that prepares the Remote Crew (and Mission Crew if relevant) to:
 - (a) perform flight planning
 - (b) perform the required actions and tasks for programming and employing risk controls
 - (c) perform the required pre-flight, in-flight and post-flight checks
 - (d) perform the required actions to load/unload payloads and stores, where relevant
 - (e) identify and perform emergency procedures
 - (f) perform emergency response actions (eg unit emergency response plan)
 - (g) operate IAW approved OIP
 - (h) operate in the full range of approved environmental conditions
 - (i) operate in multi-crewed environments, where relevant
 - (j) operate the UA in a way that eliminates or otherwise minimises risk SFARP to GP, MEP, critical infrastructure, and other Airspace users
 - (k) identify and manage risks unique to the UA role and operating environment.
 - ii. a UAS Crew qualification system that defines the requirements for training, experience and Recency
 - iii. UAS Crew Currency and Recency requirements (eg Category system)
 - iv. Aircraft Captaincy requirements to ensure:
 - (a) operations eliminates or otherwise minimise risks SFARP to GP, MEP, Critical Infrastructure, and other Airspace users

- (b) adequate mission planning, including collection of sufficient pre-Flight information and conduct of Flight Planning to ensure safe execution of the Flight (eg UAS configuration, crew suitability, mission details, weather and operating environment)
 - (c) the conduct of an adequate pre-Flight briefing
 - (d) the UAS and any ancillary equipment is serviceable, maintenance released (where relevant) and accepted for the Flight
 - (e) effective management of multi-crew operations, where these are conducted
 - (f) effective management of the Remote Pilot Station environment (eg sterile cockpit)
 - (g) compliance with all OIP relevant to Flight
 - (h) occurrences outside the scope of the Flight Authorisation are recorded and managed in accordance with the OIP
 - (i) in-Flight Aircraft Captain handover procedures, where relevant
 - (j) Aircraft Captains use all the resources at their disposal to ensure the safe execution of Flights, including credible emergency scenarios
 - (k) Aircraft Captains contact the FLTAUTHO for advice and guidance when it is necessary to deviate from the briefed Flight Authorisation, as soon as circumstances allow
 - (l) conduct a post-Flight UAS crew debrief
 - (m) the FLTAUTHO is notified of any unusual occurrences or deviations from the briefed Flight Authorisation, and these are recorded
 - (n) comply with post-Flight documentation requirements.
- v. requirements for Synthetic Training Devices (STD) (where these are used as a component of UAS Crew qualifications, training and management) covering:
- (a) approval for use by the UAS Organisation
 - (b) identification and Risk Management of any negative training, and the defined the scope of training permitted using the STD (eg procedural only, or full Flight modelling)
 - (c) restrictions on the mix of STD and live Flight experience to maintain UAS Crew qualifications, training and experience, including RP logbook recording requirements

- (d) how the organisation will maintain the ongoing STD fidelity for the scope of required training benefit.
- vi. Remote Crew (and Mission Crew if relevant) medical fitness requirements.

GM UAS.30(b)3v – UAS Crew qualification, training, experience and medical standards (AUS)

- a. UAS Organisations should implement UAS Crew qualification systems
 - i. commensurate with:
 - (a) the UAS operated by the UAS Organisation
 - (b) the role and operating environment (eg Visual Line of Sight vs Beyond Visual Line of Sight operations, Visual Meteorological Conditions vs reduced visibility, day vs night operations, operations with Participating Aircraft).
 - ii. including additional qualifications for UAS Crews where relevant to a Standard Scenario (eg for Test & Evaluation, BVLOS, night operations, competent spotters)
 - iii. for instructor qualifications where relevant (including STD management), and requirements for routine competency assessments
- b. UAS Crew Currency and Recency requirements should usually include:
 - (a) a method of recording UAS Crew competency, experience and recency (eg logbooks and electronic Currency/Recency tracking)
 - (b) methods to regain Currency and Recency
 - (c) circumstances for appropriate extensions or waivers to Currency and Recency.
- c. Remote Crew (and Mission Crew where relevant) medical fitness requirements should usually include:
 - i. a medical fitness system that defines:
 - (a) minimum medical standards required to operate the UAS (eg aligned to Service requirements)
 - (b) drug (including prescription and non-prescription medication) and alcohol use (eg limitations, notification requirements, mandatory no-fly requirements)
 - (c) fatigue management (eg duty day, continuous rest between duty days, maximum accumulative Flight times per day)
 - (d) self-assessment of medical fitness prior to, and during Flight operations

- (e) return to flying following Temporary Medically Unfit for Flying, where relevant.
 - ii. training that enables the UAS Crew to understand the Aviation Safety risks associated with medical fitness in order to conduct an appropriate self-assessment.
- vi. operating standards and limitations, including management of: ▼ AMC ▼ GM

AMC UAS.30(b)3vi – Operating standards and limitations (AUS)

- a. A UAS Organisation should document and maintain operating standards and limitations appropriate to the risk context, through OEM or UAS Organisation OIP (eg an operations manual) that includes:
 - i. approved UA limitations
 - ii. pre-Flight checks (including independent verification of Safety Critical data) that confirm the correct configuration and serviceability of the UAS
 - iii. requirements to maintain and operate UAS IAW approved OEM and UAS Organisation OIP
 - iv. the responsibilities of:
 - (a) Aircraft Captains
 - (b) Remote Crews
 - (c) FLTAUTHOs
 - (d) instructors, where relevant
 - (e) maintenance personnel (if necessary to ensure Aviation Safety).
 - v. Risk Management procedures
 - vi. Flight planning requirements
 - vii. contingency and inflight emergency requirements, where relevant
 - viii. fatigue management requirements (eg Flight time and duty period limitations, Risk Management and waivers)
 - ix. medical standards
 - x. Non-Technical Skills requirements, where relevant
 - xi. version management of all Aeronautical Data used
 - xii. UAS Crew logbook requirements.

GM UAS.30(b)3vi – Operating standards and limitations (AUS)

- a. DASA provides the [Approval to Operate UAS](#) template (analogous to an operations manual) to capture operating standards and limitations for UAS Organisations. UAS Organisations using the template should retain the structure as far as practicable for the Aviation Safety benefit to standardisation across Defence UAS operations. However, UAS Organisations need only provide detail to the extent that it supports Aviation Safety.
- b. Approved UA limitations should include:
 - i. performance limitations (eg operations ceiling, maximum commanded airspeed)
 - ii. datalink limitations (eg range, antennae elevation limitations)
 - iii. environmental limitations of the UA (eg Radio Frequency (RF) conditions, weather and dust limits)
 - iv. technical risk controls limitations (eg autonomous recovery system, geo-fencing, altitude and range limiter and on-board cameras)
 - v. any other design feature that may contribute to Aviation Safety.
- c. Pre-Flight checks (including independent verification of Safety Critical data) should confirm the configuration and serviceability of:
 - i. the UA airframe, control surfaces and propellers/rotor blades
 - ii. the UA navigation system
 - iii. technical risk controls (eg autonomous recovery systems, geo-fencing, altitude and range limiter and on-board camera)
 - iv. payloads, including payload mounting and release mechanisms
 - v. other systems that contribute to Aviation Safety.
- d. Flight planning procedures should include:
 - i. minimum safe lateral and vertical distances from GP, Informed Personnel, MEP and Critical Infrastructure (where potential exposure exists)
 - ii. launch and recovery, and route/area planning to ensure avoidance of obstacles, people and Critical Infrastructure (eg required performance and minimum altitudes for launch, recovery and in-Flight)
 - iii. minimum fuel or battery states for planned routes, and reserves
 - iv. UAS hardware and software configuration, and minimum performance (eg standard configurations, weight and balance requirements, allowable module or payload combinations, minimum engine performance and power margins)

- v. Lost Link procedures that ensure safe routing and altitudes, compliant with specific Standard Scenario requirements, and accepted by the relevant authority or Air Traffic Control agency
 - vi. Role Equipment, dropping of items, use of lasers and any other hazard-sources that may project hazards beyond the UAS, where relevant
 - vii. minimum UAS Crewing (eg minimum qualifications for specific missions, Mission Crew)
 - viii. minimum quick reference documentation for the RPS
 - ix. RF spectrum approvals and ongoing usage, including any environmental limitations, where relevant
 - x. requirements for the use of externally provided services, where relevant (eg mobile telephone or satellite networks).
- e. Contingency and in-Flight emergency procedures should be implemented and tested, and include:
- i. Flight termination (including criteria and Flight termination sites)
 - ii. management of Airspace or ground incursions (eg non-compliant Airspace users, or GP)
 - iii. UA escape from the operational area/assigned Airspace (eg alerting GP, MEP, other airspace users and ATC)
 - iv. malfunction of technical risk controls
 - v. loss of positive control
 - vi. unintended UA ground impact
 - vii. hung or inadvertently released stores
 - viii. management of battery or fuel hazards
 - ix. management of Dangerous Goods cargo.
- f. UAS Organisations should implement procedures, limitations and requirements:
- i. for Extended Visual Line of Sight, Beyond Visual Line of Sight, reduced visibility, night and Instrument Meteorological Conditions (IMC) operations, where the UAS Organisation conducts operations under these conditions
 - ii. that enable the RP to operate the UAS within its weather limitations (eg obtaining weather forecasts and monitoring weather radars)

- iii. for managing the Remote Pilot Station (RPS) environment, where relevant (eg sterile cockpit)
- iv. for handover procedures that enable the RP and/or crew to perform a handover to another RP and/or crew, where relevant (eg checklists, crew coordination and monitoring during handover)
- v. for avoidance of spectrum conflict and electromagnetic interference (eg coordinating with the Defence Spectrum Office and conducting a survey for high intensity emitters)
- vi. where relevant, multi-crew operations, including:
 - (a) standard RPS duty allocations
 - (b) standardised phraseology for critical phases of flight.
- vii. to manage human-machine-interface (HMI) deficiencies, where relevant
- g. UAS Organisations should implement in-Flight monitoring of:
 - i. command, control and communication data-links performance to ensure safe conduct of Flight
 - ii. cyber risks that may affect Aviation Safety
 - iii. RF spectrum that eliminates or otherwise minimises SFARP, interference to a UAS.
- h. UAS Organisations should define requirements for Flight recording and locating equipment (where practicable) to ensure retention of altitude, speed and track data until the UA is recovered without incident.
- a. UAS operations integration into the relevant Airspace and with due regard for the safety of civil air navigation ▼ AMC1 ▼ AMC2 ▼ GM

AMC1 UAS.30(b)3vi.a Airspace integration (AUS)

- a. **Airspace management.** UAS Organisations should document and implement Airspace Deconfliction methods:
 - i. compliant with the Airspace requirements of the Standard Scenarios in use by the UAS Organisation
 - ii. detailing the type of coordination and Deconfliction in use to ensure the UA does not pose a hazard to other Aircraft (eg segregation, a [Manual of Air Traffic Standards \(MATS\)](#) Separation standard approved and applied by Air Traffic Control, if applicable, and any local Deconfliction with Participating Aircraft)
 - iii. that incorporate safe margins from Airspace boundaries and Deconfliction with Participating Aircraft.

b. **Airspace user consultation and awareness.** For all operations, UAS Organisations should:

- i. consult with the relevant Airspace users for operations within:
 - (a) three (3) nm of a non-controlled Aerodrome, including permanent or temporary landing areas in Defence training areas (also see [GM UAS.40\(a\)5viii](#) for relevant guidance)
 - (b) three (3) nm of a certified or registered HLS, including permanent or temporary landing areas in Defence training areas
 - (c) Aerodrome approach and departure paths (see [GM UAS.30\(b\)3vi.a](#) for the definition of approach and departure paths)
 - (d) Instrument Approach Procedures (IAP), including above Lowest Safe Altitudes and Minimum Safe Altitudes, and Instrument Flight Rules and Visual Flight Rules routes in non-controlled Airspace
 - (e) Airspace over water in use as an Aerodrome (eg for seaplanes)
 - (f) coastal regions out to two (2) nm from the coastline
 - (g) Approach and departure paths for aviation capable ships
 - (h) areas used for gliding, balloon operations etc. (including competitions usually notified by Notice to Airmen (NOTAM))
 - (i) areas of regular aerial work activity (eg agricultural spraying, mustering, low-level survey and inspection)
 - (j) areas regularly involving scenic flying.
- ii. consider:
 - (a) promulgating a NOTAM
 - (b) use of lighting, paint schemes and electronic means to improve detection of the UAS by other air users
 - (c) air band communication monitoring or broadcasts on the relevant frequency.

AMC2 UAS.30(b)3vi.a Due regard (AUS)

- a. UAS Organisations comply with the requirement to have due regard for the safety of civil air navigation through conducting operations:

- i. in Visual Meteorological Conditions (VMC) and within VLOS, where the RP can visually detect Aircraft entering the UAS operating Airspace and land immediately or take safe actions to avoid a breakdown in Deconfliction
- ii. in VMC and within EVLOS where the RP, with the assistance of Competent Spotters, can visually detect Aircraft entering the UAS operating Airspace and land immediately or take safe actions to avoid a breakdown in Deconfliction, and:
 - (a) Competent Spotters:
 - (i) receive a handover of VLOS responsibility and can maintain VLOS until further handover
 - (ii) maintain direct verbal communications with the RP.
- iii. where the RP maintains unaided visual contact with the UA operating area:
 - (a) and visibility of no less than five (5) km from the RP
 - (b) where the UA remains within one and a half (1.5) km electronic line of sight of the RPS
 - (c) only over:
 - (i) Defence Controlled Ground or Water
 - (ii) Isolated environments, or
 - (iii) Remote areas.
- iv. in a Restricted Area (RA), Military Operating Area (MOA) or restricted operating zone and with Participating Aircraft only
- v. under continual surveillance, where the facility providing surveillance can:
 - (a) ascertain the position of UAS and has the capability to maintain continuous surveillance of the surrounding relevant Airspace to detect Aircraft entering the UAS operating Airspace
 - (b) maintain communication with the RP.
- vi. where the UAS:
 - (a) provides position, altitude, heading, track, airspeed, groundspeed and rate of climb or descent
 - (b) meets the integrity, accuracy, availability and continuity of service requirements of a DASA-approved standard

- (c) receives surveillance system data to provide situational awareness of the surrounding airspace to the RP, which enables Deconfliction with other Aircraft.
- vii. with a Detect and Avoid (DAA) system authorised by DASA sufficient to avoid other Aircraft
- viii. only if unable to comply with AMC2 UAS.30(b)3vi.a paragraphs i-vii, over Australian territorial land or water, and:
 - (a) in non-controlled Airspace
 - (b) either:
 - (i) below 400 ft AGL or Lowest Safe Altitude (LSALT) by night, or
 - (ii) for UAS operations conducted by a MAO, above 400 ft AGL following consultation with an appropriate Airspace SME.
 - (c) Deconflicted with Defence and civilian Aircraft, including those conducting Low Flying (eg through Airspace Control Plan, promulgated NOTAMs)
 - (d) IAW a Notice To Airmen (NOTAM) that provides all relevant Flight operating details and contact information for the RP or controlling unit
 - (e) making broadcasts compliant with [General Planning Australia](#) (GPA) on the relevant air band frequency with a transceiver range that exceeds the relevant UA operating area by an appropriate safety margin
 - (f) using any other reasonably practicable risk controls.
- ix. only if unable to comply with AMC2 UAS.30(b)3vi.a paragraphs i-vii, over non-territorial waters, and:
 - (a) in non-controlled Airspace
 - (b) unless there is a compelling operational imperative, IAW a NOTAM (eg for the Flight Information Region or other relevant area) and Notice to Mariners (NOTMAR) that provides all relevant Flight operating details and contact information for the RP or controlling unit
 - (c) unless there is a compelling operational imperative, making broadcasts compliant with [General Planning Australia](#) (GPA) on the relevant air band frequency with a transceiver range that exceeds the relevant UA operating area by an appropriate safety margin

- (d) where relevant, making appropriate broadcasts on a marine radio when vessels in proximity may have embarked aviation
 - (e) only following any relevant stakeholder consultation where reasonably practicable (eg oil rig aviation operations, border patrol operations)
 - (f) using any other reasonably practicable risk controls.
- b. **Flexibility Provision** – *in extremis circumstances*. Commanders faced with compelling operational imperatives to conduct operations, which do not meet the requirements of paragraph a., must seek approval in accordance with either (as applicable):
- i. single-service risk retention instructions
 - ii. joint planning indicative risk tolerance descriptions and endorsing authority's doctrine.
- c. **Ongoing deviations**. For ongoing deviations from paragraph a., UAS Organisations should seek a UASOP under UAS.30(a) based on:
- i. DASR compliant risk management
 - ii. demonstration of operational necessity.

GM UAS.30(b)3vi.a – Due regard and Airspace integration (AUS)

- a. Defence has an obligation under international law (Chicago Convention Article 3d refers), 'when issuing regulations for their state aircraft...' to '...have due regard for the safety of navigation of civil aircraft'. For the purposes of the Standard Scenarios, Defence applies 'due regard' to include operations which do not comply fully with IFR, nor VFR and in which the Aircraft Captain assumes responsibility for Deconflicting with civilian air traffic.
- b. *Due regard* operations for UAS involve implementing risk controls to ensure the safety of civilian Aircraft. UAS Organisations must not conduct *due regard* operations such that the primary control against the hazard of a collision is the 'see and avoid' capability of a third party. Similarly, reliance on operating in historically low density Airspace, either solely or in conjunction with relying on the see and avoid capability of a third party, does not satisfy the requirements for *due regard* operations.
- c. The options provided in [AMC UAS.30\(b\)3vi.a](#) for territorial and non-territorial areas refer to the United Nations Convention on the Law of the Sea (UNCLOS) definition of territorial and non-territorial seas.
- d. [ANP 3300](#) defines RAN policy for Defence UAS operations in vicinity of Australian and foreign warships, including definition of approach and departure paths for air-capable ships.

- e. Figure GM UAS.30(b)3vi.a-1 depicts the straight-in approach and departure paths at non-controlled Aerodromes.

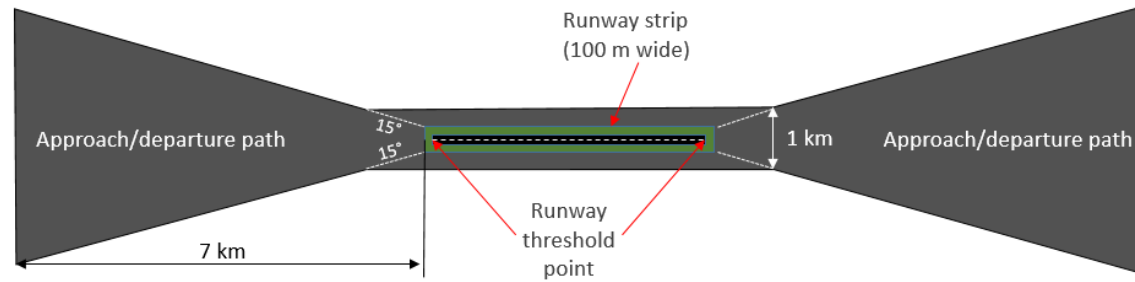


Figure GM UAS.30(b)3vi.a-1: Approach and departure paths at a non-controlled Aerodrome.

- f. Where a UAS Organisation is using Lowest Safe Altitude (LSALT) by night as the ceiling for an operation, those operations are subject to the requirements of the RAAF AIS [General Planning Australia](#) for calculation of the appropriate LSALT.
- g. **Approval authorities for specific Airspace.** A range of authorities control the various types of Airspace volumes, listed in En Route Supplement Australia ([ERSA](#)) and the Designated Airspace Handbook ([DAH](#)) and as listed below. UAS operations may only occur within the following Airspace where the relevant authority first provides permission for:
- i. Flights within the no-fly zone of a controlled Aerodrome, which is (see also figure GM UAS.30(b)3vi.a-2):
 - (a) within 3 nm, in any direction, from the runway threshold of any runway of a controlled aerodrome
 - (b) within the areas shaded dark grey less than 7 km from the runway threshold, and above 300 ft AGL beyond 7 km from the runway threshold
 - (c) for UAS <250 g Take-Off-Weight only, above 150 ft AGL within the light grey shaded area
 - (d) cumulative for Aerodromes with multiple runways.

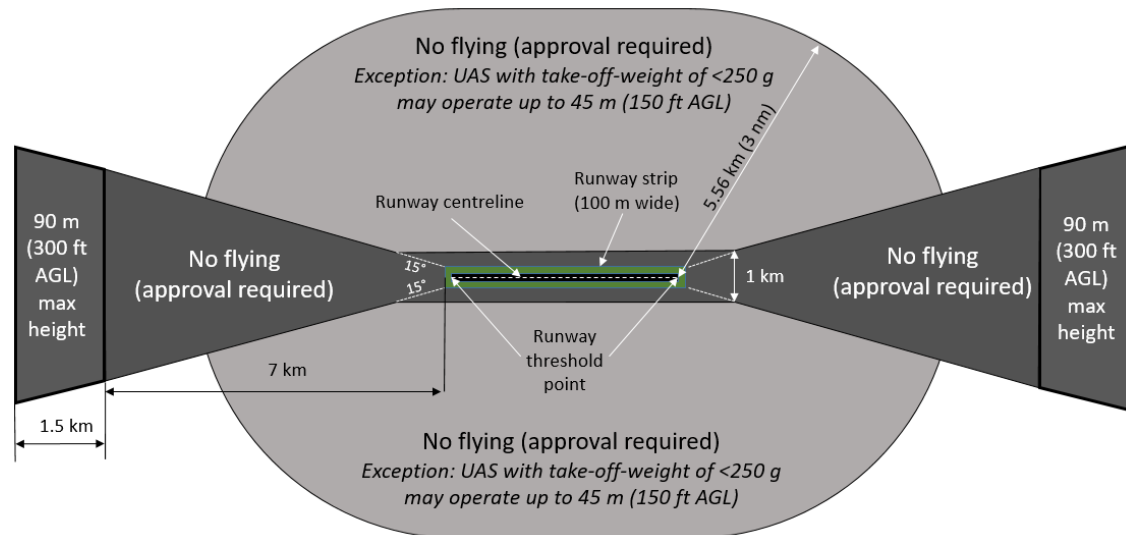


Figure GM UAS.30(b)3vi.a-2: Controlled aerodrome no-fly zones.

- i. controlled Airspace above 400 ft AGL when operating outside a controlled Aerodrome no-fly zone
 - ii. the Airspace surrounding vessels capable of launching and recovering Aircraft—contact Royal Australian Navy Headquarters Fleet Air Arm for advice regarding approvals for RAN and foreign warships
 - iii. areas where a fire, police or other public safety or emergency operation is being conducted—refer to local authorities.
- h. **Airspace management OIP.** UAS Organisations should consider implementing:
- i. defined requirements:
 - (a) to seek approval from Airspace controlling authorities or Airspace control agencies to enter Airspace as detailed in [ERSA](#) (eg Airservices Australia or Airspace controlling authorities)
 - (b) for communications with Participating Aircraft
 - (c) to notify other Airspace users of the intended UA activity
 - (d) for safe margins from Airspace boundaries and Participating Aircraft based on:
 - (i) credible failure modes of the UAS
 - (ii) maximum airspeed
 - (iii) turn radius at maximum airspeed
 - (iv) command and control latency

- (v) navigation system redundancy and accuracy (Global Navigation Satellite Systems, altimeters)
 - (vi) technical risk controls (eg geo-fencing)
 - (vii) risk recovery controls (eg parachutes, air brakes, autonomous recovery system, etc)
 - (viii) Lost Link and emergency routing
 - (ix) Flight termination systems and designated Flight termination sites
 - (x) adjacent area activity that may affect UAS behaviour, such as Radio Frequency emitters
 - (xi) adjacent area activity such as high-density Airspace.
- ii. documentation to inform (eg via the [DASA ATMP template](#)) relevant external stakeholders of the Aviation Safety hazards, relevant limitations and Risk Management associated with planned UAS operations, including:
 - (a) UAS description, including equipment and navigational capabilities (eg GPS and altimeter accuracy, size of UA, operating ceiling, relevant launch/recover and manoeuvring capabilities)
 - (b) type or volume of Airspace for intended operations
 - (c) segregation or separation methods (eg RA, MOAs, Manual of Air Traffic Standards-compliant methods approved by the responsible Air Traffic Control agency, Lost Link procedures)
 - (d) limitations (eg RP operating limits, lack of see and avoid capability, non-certified equipment, communications transceiver range limits, any prohibition of Flight above other Aircraft)
 - (e) a formal operations liaison POC (eg Operations Officer).
- i. **Documentation consultation and endorsement.** UAS Organisations may seek advice through DASA (DD UAS OPS) for implementation of Airspace Risk Management where they identify that they lack the necessary expertise or assess that further oversight will benefit Aviation Safety (eg DASA endorsement of an Air Traffic Management Plan).
- b. minimum safe distances from people on the ground and water, and Critical Infrastructure in the relevant areas. ▼ [AMC](#) ▼ [GM](#)

AMC UAS.30(b)3vi.b – Ground risk planning (AUS)

- a. **Process.** UAS Organisations must determine population at risk compliant with the limits and definitions in each Standard Scenario for normal and emergency UAS conditions. This process includes:
 - i. determining the green, orange and red areas at risk for the operation
 - ii. evaluating population density, GP and Critical Infrastructure locations within the green, orange and red areas at risk and ensuring compliance with Standard Scenario limitations
 - iii. determining the adjacent area at risk and ensuring compliance with Standard Scenario limitations
 - iv. implementing both technical and operational risk controls to eliminate or otherwise minimise risks SFARP to people through:
 - (a) Airspace or time-based restrictions (eg operate only by night, avoid loitering in vicinity of identified GP)
 - (b) avoiding areas of elevated risk (eg no operation within predetermined safe distances from known GP or Critical Infrastructure locations)
 - (c) ground or air observation through visual or electronic means
 - (d) proactive technical limitations (eg geo-fencing, flight termination buffers, reduced fuel/energy states)
 - (e) recovery systems to reduce impact energy (eg parachute recovery systems).
- b. **Area at risk.** Areas at risk should include (see figures AMC UAS.30(b)1 to AMC UAS.30(b)5 for examples):
 - i. 'Green areas'—for normal operations.
 - ii. 'Orange areas'—where the UA may operate for short periods of time under emergency conditions (eg to conduct corrective manoeuvres to re-establish in the green area)
 - iii. 'Red areas'—where, after a loss of control event, a flight termination or an immediate landing is typically required to prevent the UA from operating over / becoming a hazard to non-permitted or higher risk locations (eg populous area).

- iv. 'Adjacent area'—the area at risk in the event that all containment risk controls have failed.

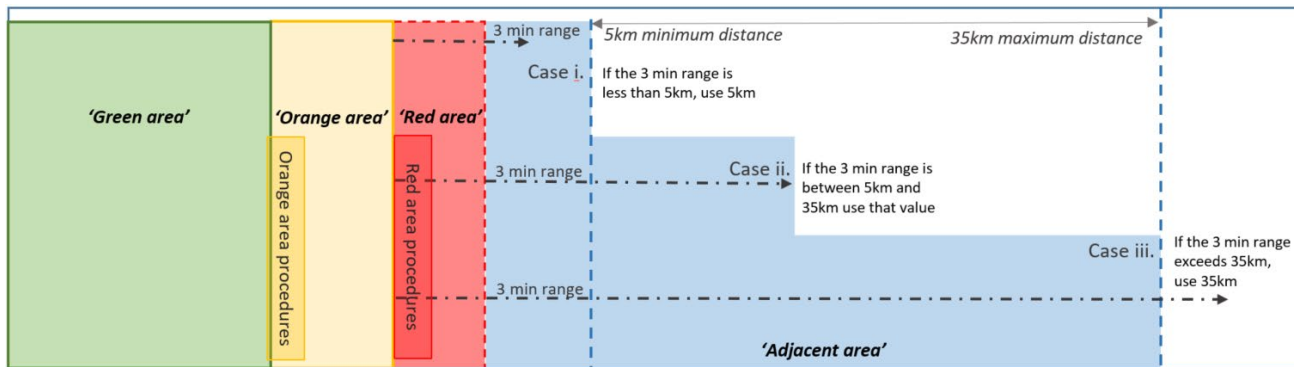


Figure AMC UAS.30(b)3vi.b-1: Area at risk side view side view

- c. **Adjacent area dimensions.** UAS Organisations should determine the lateral size of the adjacent area, measured from the outside edge of the orange area and calculated using the distance flown in 3 minutes at the maximum operational airspeed of the UA (except if an enclosed internal adjacent area covers a shorter distance), and:
- if the distance is less than 5 km, the minimum dimension is 5 km
 - if the distance is between 5 and 35 km, use the calculated dimension
 - if the distance is more than 35 km, the maximum dimension is 35 km.



Figure AMC UAS.30(b)3vi.b-2: Area at risk with no internal population (generic example only, do not use for planning)

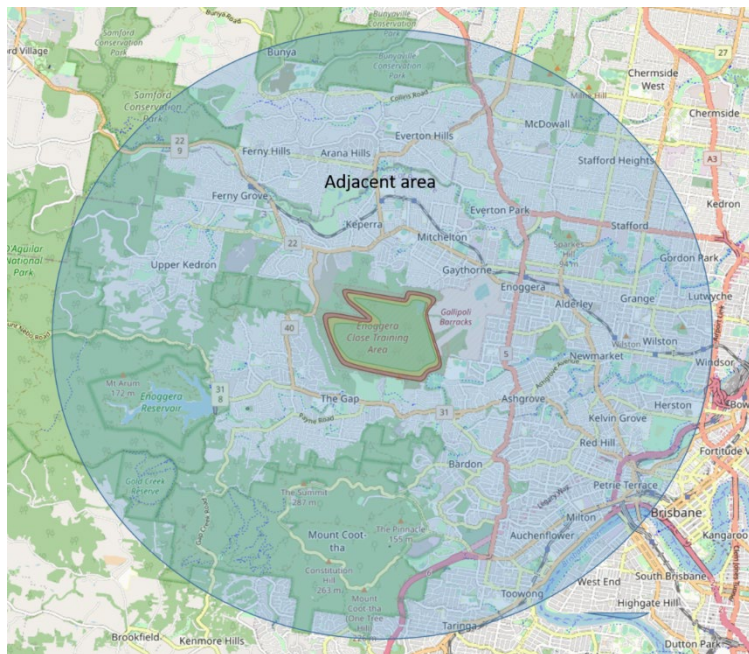


Figure AMC UAS.30(b)3vi.b-3: Adjacent area for an area at risk with no internal population (Generic example only, do not use for planning)

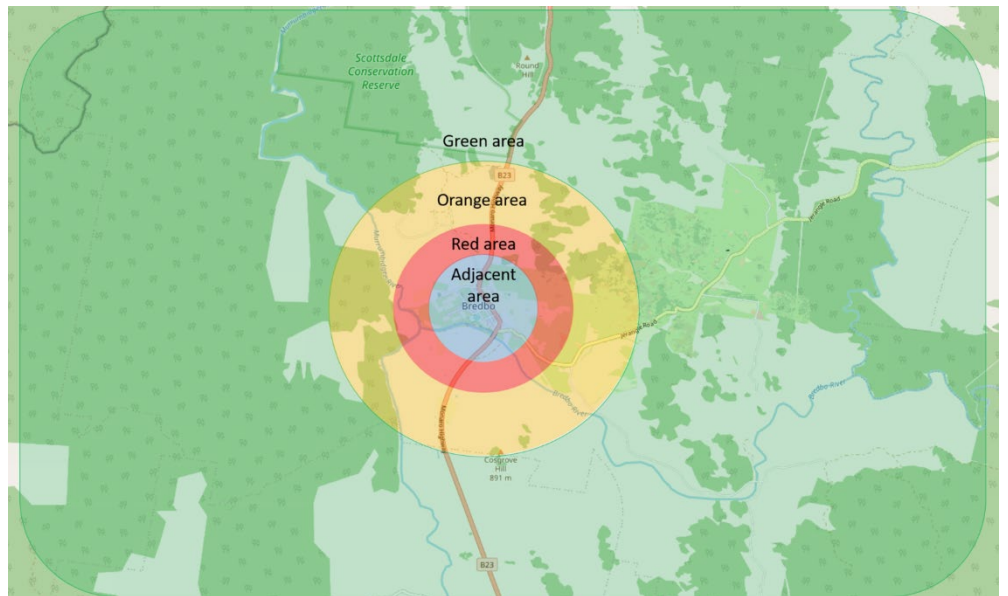


Figure AMC UAS.30(b)3vi.b-4: Area at risk with an internal population (Generic example only, do not use for planning)

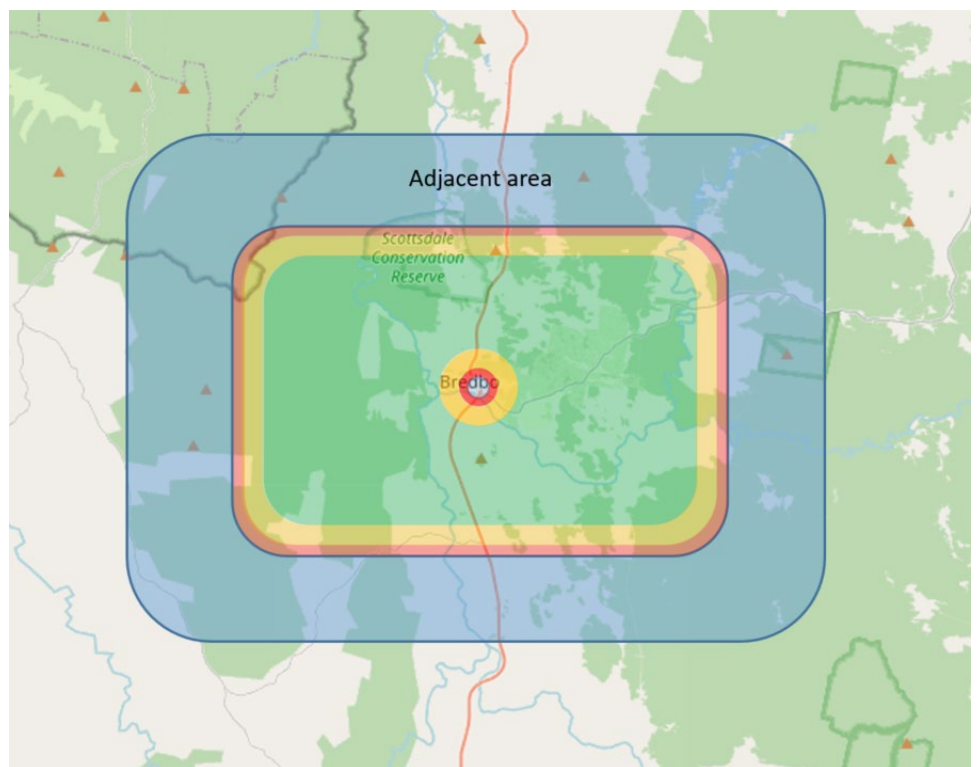


Figure AMC UAS.30(b)3vi.b-5: Adjacent area for an area at risk with an internal population (Generic example only, do not use for planning)

- d. **People at risk.** A UAS Organisation must evaluate population density within the areas at risk using quantitative means where practicable, or qualitative means if unable to use a quantitative method.
- e. **Identification of GP and Critical Infrastructure locations.** Locations of GP and Critical Infrastructure should be identified prior to operations and during Flight (where practicable), and where necessary, implement appropriate risk controls to eliminate or otherwise minimise

risk SFARP. Identified locations should be made available to the RP on the UA control software or on an equivalent mapping display.

- f. **GP and Critical Infrastructure avoidance criteria.** The UAS Organisation should determine and establish safe margins between the UAS and identified GP and Critical Infrastructure locations.
- g. **Defining planning criteria.** The UAS Organisation must define mission planning criteria for:
 - i. ensuring areas do not exceed the maximum permissible people at risk densities within the Standard Scenario(s) in use
 - ii. identifying GP and Critical Infrastructure locations
 - iii. determining avoidance criteria.
- h. **Constraining operating area.** The UAS Organisation should implement appropriate technical or operational risk controls to ensure that no single probable failure of the UAS or any external system supporting the operation leads to an operation beyond the intended area of operations (ie escape into the adjacent area), including the:
 - i. use of geo-fencing (if available) to contain the UA within the lateral limits of the operating area
 - ii. establishment of appropriate safe margins between the operating area and adjacent area
 - iii. immediate end of Flight (eg flight termination) through a combination of procedures/processes and/or available technical means if the UA leaves the area of operations.

GM UAS.30(b)3vi.b – Ground risk planning (AUS)

- a. **Areas at risk.** UAS Organisations should generally determine the green, orange and red areas at risk for a UA system based on:
 - i. 'Green area' dimensions, including:
 - (a) task profile to be flown (eg point to point, area surveillance)
 - (b) navigation accuracy (eg GNSS accuracy, position holding error, map error)
 - (c) UA flight logics.
 - ii. 'Orange area' dimensions, including:
 - (a) maximum operational speed of the UA
 - (b) turning radius (fixed wing) or stopping distance (multirotor)
 - (c) command and control latency

- (d) RP reaction time
 - (e) loss-of-link logic (eg pre-programmed path or direct return)
 - (f) geo-fence logic (if active) upon breach of the geo-fence. (180 degree turn or stopping).
- iii. 'Red area' dimensions, including:
 - (a) maximum operational speed of the UA
 - (b) maximum operational height above ground level
 - (c) descent profile resulting from the most credible UA failure mode(s), and whether the descent is likely to be controlled or under flight termination conditions (eg ballistic descent, glide ratio, drift under parachute recovery systems, debris field)
 - (d) command and control latency
 - (e) RP reaction time.
- b. **Adjacent area purpose.** The adjacent area accounts for the residual risk posed by the failure of the containment risk controls used in the green, orange and red risk areas. One of the key advantages of UAS is their relative low-cost, but the trade-off is that system reliability is generally lower or unknown. Therefore, the adjacent area limits the population density commensurate to Standard Scenario limitations as a means of minimising potential consequences from containment failures.
- c. **People at risk.** UAS Organisations should consider the following guidance when determining population densities.
 - i. **Quantitative values.** UAS Organisations should use quantitative values provided by authoritative statistical data sources (eg the Australian Bureau of Statistics) to determine the expected population density within an operational area. However, the UAS Organisation should also consider that this data may not reflect the actual population density at risk during an operation due to:
 - (a) time-stale data (date of last census)
 - (b) time of day and day of week variations
 - (c) seasonal variations (eg camping areas or holiday destinations that could be expected to have a greater population density during holiday periods)
 - (d) major weather events / area evacuations
 - (e) sheltering—in general, UA weighing less than 25 kg (limited to the speeds in the Standard Scenarios) cannot penetrate buildings except in cases where the UAS speed

or building materials are unusual (eg ballistic terminal speed descent, tents, glass roofs).

- ii. When using quantitative values to determine the people at risk, UAS Organisations should:
 - (a) for the green, orange and red areas at risk apply the highest population density (people per square kilometre) of any segment overflowed in the operating area
 - (b) for the adjacent area at risk, use population density (people per square kilometre), averaged over the whole adjacent area, based on:
 - (i) available population data
 - (ii) the adjacent area only beyond the Red area.
 - iii. **Qualitative descriptors.** Where a UAS Organisation cannot characterise population density through quantitative means, UAS Organisations may use the qualitative descriptors defined in [GM UAS.10](#) to determine the likely population density in an area, where relevant—prior to the implementation of risk controls to reduce the ‘at risk’ population.
 - d. **GP and Critical Infrastructure avoidance criteria.** Determinations of safe margins should include consideration of:
 - i. maximum airspeed of the UA
 - ii. maximum operational altitude above ground level
 - iii. UA descent profile under controlled descent or flight termination (eg ballistic descent, glide ratio, drift under parachute recovery systems, debris field)
 - iv. command and control latency
 - v. RP reaction time
 - vi. UA positional accuracy
 - vii. use of geo-fencing (if available)
 - viii. Loss of Link routing
 - ix. payloads, where the payload may introduce hazards.
4. a valid [DASR Form 150](#) submitted to DASA prior to commencement of UAS operations.

DRAFT DASR UAS.35 FOR JUL 26 DASR RELEASE

Contents

Section 1: Amended DASR UAS.35 DASR Part only.

Section 2: Amended DASR UAS.35 DASR Part, Acceptable Means of Compliance (AMC) and Guidance Material (GM).

SECTION 1: NEW DASR UAS.35 PART ONLY

The following replaces all DASR Part for DASR UAS.35 in toto.

DASR UAS.35 Standard Scenarios for Approved UAS Organisations

► GM

(a) **Standard Scenario for operations over non-Defence Controlled Ground or Water.** For operations under this Standard Scenario, Approved UAS Organisations must: ► GM

1. not conduct Test and Evaluation (T&E) of UAS Safety Critical systems
2. in addition to the requirements of UAS.30(b), establish and maintain a tailored Initial Airworthiness (IA) and Continuing Airworthiness (CA) system contextualised for Configuration, Role and Environment (CRE), including:
 - i. UAS safety and reliability ► AMC
 - ii. UAS configuration management
 - iii. maintenance requirements and instructions ► AMC
3. conduct operations:
 - i. with an Uncrewed Aircraft (UA) that does not exceed: ► GM
 - a. a dimension of 8 metres ► AMC
 - b. 145 knots (75 m/s) maximum commanded airspeed.
 - ii. that eliminates or otherwise minimises SFARP Flight in vicinity of identified GP and Critical Infrastructure locations ► AMC
 - iii. in either:
 - a. Restricted Areas (RA), Military Operating Areas (MOA) or control zones (CTR) that exclude non-Participating Aircraft, or ► AMC ► GM
 - b. Airspace over non-territorial seas with due regard for the safety of civil air navigation. ► GM
 - iv. crewed by a dedicated Remote Pilot (RP) for each UA, where the Remote Pilot (RP) can intervene during all stages of Flight except Lost Link. ► AMC

(b) **Standard Scenario for one RP to many UAs.** Approved UAS Organisations must ensure operations under this Standard Scenario occur:

1. using a UA that does not exceed a dimension of 1 metre and maximum commanded airspeed of 50 knots (25 m/s) ► AMC ► GM
2. using IA and CA risk controls contextualised to the CRE ► GM
3. in either:

- i. RA or MOA that exclude non-Participating Aircraft, or ▶ GM
 - ii. Airspace over non-territorial seas with due regard for the safety of civil air navigation. ▶ GM
- 4. over Defence Controlled Ground or Water ▶ AMC ▶ GM
- 5. crewed by an RP who can intervene during all stages of Flight except Lost Link. ▶ AMC
- (c) **Standard Scenario for Test & Evaluation (T&E) and high speed UAS.** Approved UAS Organisations must ensure operations under this Standard Scenario occur: ▶ GM
 - 1. with appropriate organisation, personnel and process risk controls for safe conduct of operations ▶ AMC
 - 2. using IA and CA risk controls contextualised to the CRE
 - 3. in either:
 - i. RA or MOA that exclude non-Participating Aircraft, or ▶ GM
 - ii. Airspace over non-territorial seas with due regard for the safety of civil air navigation. ▶ GM
 - 4. over Defence Controlled Ground or Water, where GP and Critical Infrastructure are absent unless approved by a Delegate of the Safety Authority for Flight Test (DoSA FT). ▶ GM
- (d) **Standard Scenario for Weaponised UAS.** Approved UAS Organisations must ensure weaponised UAS operations under this Standard Scenario occur: ▶ AMC ▶ GM
 - 1. in an approved Range Danger Area (RDA) ▶ GM
 - 2. in either:
 - i. RA or MOA that exclude all Aircraft except participating UAS, or ▶ GM
 - ii. Airspace over non-territorial seas with due regard for the safety of civil air navigation. ▶ GM
 - 3. that contain the RDA in the Airspace designated for the activity ▶ AMC
 - 4. over Defence Controlled Ground or Water ▶ GM
 - 5. with risk controls implemented for Mission Essential Personnel (MEP) ▶ AMC ▶ GM
 - 6. crewed by a dedicated RP for each UA, where the RP can intervene during all stages of Flight except Lost Link and Terminal Guidance. ▶ AMC

SECTION 2: AMENDED DASR UAS.35 DASR Part, AMC and GM

The following replaces all DASR Part for DASR UAS.35 and corresponding AMC and GM in toto.

DASR UAS.35

▼ GM

GM UAS.35 – Standard Scenario Privilege (AUS)

The DASR UAS.35 Standard Scenarios provide Approved UAS Organisations with a Privilege to operate UAS with residual risk to third parties (primarily civilians) through the Risk Management controls detailed in each Standard Scenario. This Privilege invokes specific requirements to execute Defence responsibilities to third parties in addition to those detailed in the broader Defence Aviation Safety Program. DASA will review and monitor this Privilege and will revoke the Privilege where it identifies non-compliances.

- (a) **Standard Scenario for operations over non–Defence Controlled Land or Water.** For operations under this Standard Scenario, Approved UAS Organisations must: ▼ GM

GM UAS.35 – Standard Scenario Privilege (AUS)

Approved UAS Organisations may also use this Standard Scenario over Defence Controlled Ground or Water.

1. not conduct Test and Evaluation (T&E) of UAS Safety Critical systems
2. in addition to the requirements of UAS.30(b), establish and maintain a tailored Initial Airworthiness and Continuing Airworthiness system contextualised for Configuration Role and Environment (CRE), including:
 - i. UAS safety and reliability ▼ AMC

AMC UAS.35(a)2i – Safety and reliability (AUS)

- a. The UAS Organisation should conduct a hazard assessment that ensures the equipment, systems, and installations are designed to minimise hazards in the event of a probable failure of the UAS and any external system supporting the operation
- b. The UAS Organisation should ensure the UAS is manufactured by a competent and/or proven entity. This may be achieved through an assessment of quality certifications (eg relevant International Standards Organisation (ISO) standards), Original Equipment Manufacturer (OEM) manufacturing procedures, the specification of materials, suitability and durability of materials used, processes necessary to allow for repeatability in manufacturing and conformity within acceptable tolerances and configuration control.
- c. **Technical risk controls.** Technical risk controls should include automatic protection of the Flight envelope to prevent the RP from making any single input under normal operating conditions that would cause the UA to exceed its Flight envelope or prevent it from recovering in a timely fashion.

- ii. UAS configuration management
- iii. maintenance requirements and instructions ▼ AMC

AMC UAS.35(a)2iii – Maintenance requirements and instructions (AUS)

- a. Maintenance requirements should define:
 - i. personnel authorised to conduct maintenance (eg operations or maintenance personnel)
 - ii. qualification, training and experience requirements to conduct maintenance
 - iii. maintenance schedules (eg 'on condition' monitoring through pre and post flight inspection, specific timeframes) that consider:
 - (a) the mechanical, avionic, and computer-based systems (including software and firmware) associated with the:
 - (i) UA and power sources, such as battery cycles, fuel cells, etc
 - (ii) UAS support equipment, including transmitter and receiver equipment, radio devices, and any other item of plant or equipment associated with the operations or use of the UAS
 - (iii) UAS role equipment and fittings, such as cameras, electronic sensing devices, etc
 - (b) OEM defined / recommended servicing schedules
 - (c) defect reporting and mean time between failures.
 - iv. a system, where relevant, for:
 - (a) the controlled deferment of defects for non-Safety Critical systems
 - (b) post-maintenance check Flights
 - (c) release to service
 - (d) weight and balance management
 - (e) the management of Airworthiness Directives.
 - v. the requirement to maintain technical logs for:
 - (a) type, model, and unique identification of the Uncrewed Aircraft
 - (b) maximum gross weights
 - (c) total Flight time

- (d) in-service time for engines, motors, rotors, propellers, external loads and safety equipment, where relevant
 - (e) maintenance schedules, maintenance carried out and next maintenance action
 - (f) rectification of defective safety equipment
 - (g) unserviceable failsafe equipment
 - (h) maintenance certification.
 - b. Maintenance instructions should define:
 - i. how maintenance is to be carried out
 - ii. personnel authorised to conduct the maintenance activity.
3. conduct UAS operations:

- i. with an Uncrewed Aircraft (UA) that does not exceed: ▼ GM

GM UAS.35(a)3.i – UA dimension and speed limitations (AUS)

The UA dimension and airspeed constraints limit the theoretical size of the area on the ground (critical area) where a UA could impact a standing person and result in a fatality. This is achieved through maximum UA dimension and speed limitations in addition to systemic risk controls implemented by the UAS Organisation to protect people or reduce the consequence of an impact.

- a. a dimension of 8 metres ▼ AMC

AMC UAS.35(a)3i.a Maximum UA Dimension (AUS)

- a. UAS Organisations should calculate maximum UA dimension using:
 - i. wingspan for fixed wing
 - ii. main rotor diameter for rotorcraft
 - iii. maximum distance between rotor tips for multirotors.
 - b. Where UAS dimension alters during Flight (eg VTOL system with foldable wings), the largest UA dimension is used for the calculation.
- b. 145 knots (75 m/s) maximum commanded airspeed.
- ii. that eliminates or otherwise minimises SFARP Flight in vicinity of identified GP and Critical Infrastructure locations ▼ AMC

AMC UAS.35(a)3ii – Population density limitations (AUS)

- a. UAS.30(b)3vi.b provides the planning procedures for ground risk areas.
- b. The following tables provide the maximum 'at risk' residual quantitative population densities based on UA dimension and speed (critical area size) for operations under this Standard Scenario. UAS Organisations should only

use these tables following implementation of all other risk controls (eg avoidance criteria, time of day restrictions).

i. **Area at risk:**

Residual 'at risk' population densities			
Maximum UA dimension	1 m	3 m	8 m
Maximum airspeed	25 m/s	35 m/s	75 m/s
Max critical area size (for info only)	6.5 m	65 m	650 m
Maximum population density	500 ppl/km ²	50 ppl/km ²	5 ppl/km ²
Equates to (for info only – assumes an even distribution of population in a 1km x 1km grid square)	1 person every 2000 m ²	1 person every 20,000 m ²	1 person every 200,000 m ²

Table AMC UAS.35(a)3ii-1: Residual 'at risk' population densities

ii. **Adjacent area at risk:**

Adjacent Area Quantitative Values				
Maximum UA dimension		1 m	3 m	8 m
Maximum airspeed		25 m/s	35 m/s	75 m/s
Maximum Average population density (ppl/km ²)	Sheltering applicable ¹	No limit	<50,000	<5,000
	Sheltering not applicable	N/A	<5,000	<500
Note: - Sheltering can only be applied to adjacent areas if the UA weight is not more than 25 kg. - The adjacent area quantitative values apply only for the portion of the adjacent area that lies outside the 'Red area'.				

Table AMC UAS.35(a)3ii-2: Adjacent area qualitative values

- d. **Trade-off tables.** Where relevant, the UAS Organisation may use the following tables which provide an increase to the allowable residual 'at risk' population densities when UA size or speed is less than the standard UA size and speed values:

Max UA dimension trade-off table – Residual 'at risk' population densities due to reduction in max UA dimension (NB: green columns indicate standard values)									
Max UA dimension	1 m	1.5 m	2 m	3 m	4 m	5 m	6 m	7 m	8 m
Max airspeed (m/s)	25	35	35	35	75	75	75	75	75
Max residual population at risk (ppl/km ²)	500	100	75	50	10	8	6.5	5.7	5

Max UA airspeed trade-off table – Residual 'at risk' population densities due to reduction in max UA speed (NB: green columns indicate standard values)								
Max UA dimension	1 m	3 m	3 m	3 m	8 m	8 m	8 m	8 m
Max airspeed (m/s)	25	17.5	26	35	37.5	56	65.6	75
Max residual population at risk (ppl/km ²)	500	179	86	50	18	8.5	7.1	5

Table AMC UAS.35(a)3ii-3: Maximum UA dimension and maximum speed trade-off tables

iii. **in either:**

- a. **RA, MOA or control zones (CTR) that exclude non-Participating Aircraft, or ▼ AMC ▼ GM**

AMC UAS.35(a)3iii.a – Airspace management (AUS)

UAS Organisations should only operate UAS in RA, MOA or control zones (CTR) primarily used for military Aircraft where civilian Aircraft do not

routinely operate. The Airspace is to be for exclusive use by the UA, or the UA is to be segregated or separated from other Participating Aircraft.

GM UAS.35(a)3iii.a – RA, MOA and CTR (AUS)

- a. [En Route Supplement Australia \(ERSA\)](#) and [Designated Airspace Handbook \(DAH\)](#) provide the approval authorities for operations in CTR, Restricted Areas (RA) and Military Operating Areas (MOA).
- b. A CTR may enable the exclusion of non-Participating Aircraft where there is an active ATC service provided that ATC apply appropriate separation standards to Participating Aircraft.
- c. MOAs that extend into international Airspace are not enforceable under international law. Therefore, Defence cannot prevent foreign Aircraft from entering such MOA. However, through the [Airspace Regulations 2007](#), CASA can impose conditions of entry into MOAs for Australian registered Aircraft and publish any conditions in the [DAH](#). Therefore:
 - i. MOAs and a RAs place equivalent entry restrictions on Australian registered Aircraft
 - ii. foreign Aircraft:
 - (a) under international law, are not restricted from entering MOA
 - (b) although not legally restricted from entering a MOA, should not enter Australian MOA without contacting the relevant administering authority.
- d. [UAS.30\(b\)](#) provides the applicable core requirements for managing Airspace. UAS Organisations comply with [AMC2 UAS.30\(b\)3vi.a](#) by constraining any Defence UAS operation (outside Australian territory) to within a MOA. However, UAS Organisations will still need to be cognisant of foreign aircraft entering the MOA and implement appropriate procedures to respond to these situations.
- e. **Temporary RA and MOA requests.** Requests for temporary RA and MOA are staffed to CASA – Office of Airspace Regulation through either the National Airspace Management Organisation (eg for routine requests) or the Joint Airspace Control Cell (JACC) (eg for large exercises). CASA, IAW the [Airspace Act 2007](#), may establish temporary RA and MOA for purposes including:
 - i. public safety, including the safety of Aircraft in Flight
 - ii. national security.
- f. **Foreign areas equivalent to CTRs, RAs and MOAs.** UAS Organisations may use foreign Airspace where that Airspace provides equivalency to CTR, RAs and MOAs, if approved by the applicable Airspace controlling authority. In such situations, UAS Organisations will still be required to comply with DASR UAS.

- g. **Non-Participating Aircraft.** Note, if the UAS is contained inside a Restricted Operating Zone (ROZ)—even if that ROZ is within a CTR/RA that permits non-Participating Aircraft; but the ROZ excludes non-Participating Aircraft—then the UAS Organisation has met the intent of DASR UAS.35(a)3.iii.a.

- b. Airspace over non-territorial seas with due regard for the safety of civil air navigation. ▼ GM

GM UAS.35(a)3iii.b – Due regard (AUS)

See UAS.30(b)3vi.a including AMC and GM for *due regard* requirements.

- iv. crewed by a dedicated RP for each UA, where the RP can intervene during all stages of Flight except Lost Link ▼ AMC

AMC UAS.35(a)3iv – Intervention by the RP (AUS)

Intervention refers to an action, command or input by the RP to dictate the UA's Flight actions. In all situations (except Lost Link), the UAS should enable the RP to alter the Flight path of the UA and perform any other suitable actions to ensure safe Flight.

- (b) **Standard Scenario for one RP to many UAs.** Approved UAS Organisations must ensure operations under this Standard Scenario occur:

- 1. using a UA that does not exceed a dimension of 1 metre and maximum commanded airspeed of 50 knots (25 m/s) ▼ AMC ▼ GM

AMC UAS.35(b)1 Maximum UA dimension and airspeed (AUS)

- a. UAS Organisations should calculate maximum UA dimension using:
 - i. wingspan for a fixed wing UA
 - ii. main rotor diameter for a rotorcraft UA
 - iii. maximum distance between rotor tips for a multirotor UA.
- b. Where UAS dimension alters during Flight (eg VTOL system with foldable wings), the largest UA dimension is used for the calculation.

GM UAS.35(b)1 – UA dimension and speed limitations (AUS)

The UA dimension and airspeed constraints limit the theoretical size of the area on the ground (critical area) where a UA could impact a standing person and result in a fatality. This is achieved through UA dimension and speed limitations, in addition to systemic risk controls implemented by the UAS Organisation to protect people or reduce the consequence of an impact.

- 2. using IA and CA risk controls contextualised to the CRE ▼ GM

GM UAS.35(b)2 – IA and CA (AUS)

See DASR UAS.30(b)2 including AMC and GM for the requirements applicable to all Standard Scenarios. Approved UAS Organisations should ensure they implement IA

and CA risk controls appropriately contextualised to the risks introduced through one-to-many operations.

3. in either:

- i. RA or MOA that exclude non-Participating Aircraft, or ▼ GM

GM UAS.35(b)3i – RA and MOA (AUS)

- a. **En Route Supplement Australia (ERSA)** and **Designated Airspace Handbook (DAH)** provide the approval authorities for operations in Restricted Areas (RA) and Military Operating Areas (MOA).
- b. MOAs that extend into international Airspace are not enforceable under international law. Therefore, Defence cannot prevent foreign Aircraft from entering such MOA. However, through the **Airspace Regulations 2007**, CASA can impose conditions of entry into MOAs for Australian registered Aircraft and publish any conditions in the **DAH**. Therefore:
 - i. MOAs and a RAs place equivalent entry restrictions on Australian registered Aircraft
 - ii. foreign Aircraft:
 - (a) under international law, are not restricted from entering MOA
 - (b) although not legally restricted from entering a MOA, should not enter Australian MOA without contacting the relevant administering authority.
- c. **UAS.30(b)** provides the applicable core requirements for managing Airspace. UAS Organisations comply with **AMC2 UAS.30(b)3vi.a** by constraining Defence UAS operations (outside Australian territory) to within a MOA. However, UAS Organisations will still need to be cognisant of foreign Aircraft entering the MOA and implement appropriate procedures to respond to these situations.
- d. **Temporary RA and MOA requests.** Requests for temporary RA and MOA are staffed to CASA – Office of Airspace Regulation through either the National Airspace Management Organisation (eg for routine requests) or the Joint Airspace Control Cell (JACC) (eg for large exercises). CASA, IAW the **Airspace Act 2007**, may establish temporary RA and MOA for purposes including:
 - i. public safety, including the safety of Aircraft in Flight
 - i. national security.
- e. **Foreign areas equivalent to RAs and MOAs.** UAS Organisations may use foreign Airspace where that Airspace provides equivalency to RAs and MOAs, if approved by the applicable Airspace controlling authority. In such situations, UAS Organisations will still be required to comply with DASR UAS.

- f. **Non-Participating Aircraft.** Note, if the UAS is contained inside a Restricted Operating Zone (ROZ)—even if that ROZ is within an RA that permits non-Participating Aircraft; but the ROZ excludes non-Participating Aircraft—then the UAS Organisation has met the intent of DASR UAS.35(b)3i.
- ii. **Airspace over non-territorial seas with due regard for the safety of civil air navigation.** ▼ GM

GM UAS.35(b)3.ii – Due regard (AUS)

See UAS.30(b)3vi.a including AMC and GM for *due regard* requirements.

- 4. **over Defence Controlled Ground or Water** ▼ AMC ▼ GM

AMC UAS.35(b)4 – Population density limitations (AUS)

- a. DASR UAS.30(b)3vi.b provides the planning procedures for characterising ground risk areas for the General Public.
- b. The maximum population density within the adjacent area for this Standard Scenario is 40 000 persons per square kilometre, averaged over the entire adjacent area. UAS Organisations should only apply this value following implementation of all other risk controls (eg avoidance criteria, time of day restrictions).

GM UAS.35(b)4 – Risks to GP (AUS)

- a. See the **DASP Glossary** for the definition of Defence Controlled Ground or Water.
- b. When operating UAS in an area where General Public (GP) are not prohibited from entry (eg over water and in a MOA), UAS Organisations should usually document procedures for, and ensure:
 - i. surveillance to detect GP entering the area of operations (eg vessels)
 - ii. safe termination of operations if GP enter the area of operations.

- 5. **crewed by an RP who can intervene during all stages of Flight except Lost Link.** ▼ AMC

AMC UAS.35(b)5 – Intervention by the RP (AUS)

- a. Intervention refers to an action, command or input by the RP to dictate the UA's Flight actions. In all situations (except Lost Link), the UAS should enable the RP to alter the Flight path of the UA and perform any other suitable actions to ensure safe Flight.
- b. UAS Organisations should ensure all UAs are operated:
 - i. as a single Flight (eg single pre-flight brief, single FLTAUTH)
 - ii. IAW a single ATC clearance where clearances are required.

- c. UAS Organisations should ensure that the cognitive load on the RP does not exceed the capacity of RPs, through:
 - i. an assessment and Risk Management of the UAS human-machine-interface with consideration to the qualifications, training, experience of RPs qualified IAW the UAS Organisations training
 - ii. Remote Pilot Station 'sterile cockpit' procedures for critical phases of Flight (eg launch, recovery and high-workload mission phases)
 - iii. the use of Competent Spotters, where relevant.

- (c) **Standard Scenario for Test & Evaluation (T&E) and high speed UAS.** Approved UAS Organisations must ensure operations under this Standard Scenario occur: ▼ GM

GM UAS.35(c) – Standard Scenario for T&E and high speed UAS (AUS)

- a. This Standard Scenario provides the most restrictive set of Standard Scenario risk controls given the requirement to eliminate or otherwise minimise risks SFARP to third parties through the absence of General Public and Critical Infrastructure from the operating area. An AUO should not view this Standard Scenario as a less restrictive approval pathway for UAS operations because it contains a reduced number of risk controls relative to the other Standard Scenarios. DASA may place further limitations on an AUO's approval for operations under this Standard Scenario commensurate to the AUO organisation, personnel and process risk controls.
- b. This Standard Scenario enables Approved UAS Organisations (AUO) to conduct UAS T&E and high speed UAS operations within the requirements of the Standard Scenario, with:
 - i. elevated Aviation Safety risks to persons and Critical Infrastructure
 - ii. one RP for multiple UA's
 - iii. UAS of any dimension and speed.
- c. AUOs should seek advice from DASA where there is any doubt regarding the appropriateness of the risk controls implemented to manage activities under this Standard Scenario.
- d. **High speed UAS**
 - i. Where an AUO is operating high speed UAS, no single failure of the UAS should lead to operation outside of the red risk area (see [AMC UAS.30\(b\)3vi.b](#) for the applicable ground risk planning procedures, including red risk areas). One of the most effective means of protecting areas outside red risk areas is to use independent flight termination systems. A flight termination system should activate automatically when the UA position or actions are in doubt. The AUO should ensure fully independent flight termination systems:
 - (a) are designed and manufactured to ensure reliability commensurate to the risk the UAS poses to other Airspace users, people on the ground and Critical Infrastructure

- (b) does not interface with other UAS systems that could interfere with operation in the event of malfunction (eg separate power source, antenna, control actuators etc.)
- (c) includes an independent means of providing awareness to the RP of the UA position and altitude for ensuring continued awareness in the case of primary RPS failure.

1. with appropriate organisation, personnel and process risk controls for safe conduct of operations ▼ AMC

AMC UAS.35(c)1 – Appropriate organisation, personnel and process risk controls (AUS)

- a. Where the AUO conducts T&E, they should ensure Orders, Instructions and Publications (OIP) include:
 1. Aviation Safety Risk Management suitable for the scope of T&E
 2. processes and documentation for T&E, including approvals for specific T&E flight activities
 3. UAS crewing policy, including composition, competency, Currency and Flight time limitations
 4. procedures for the involvement of additional non-UAS Crew members in T&E
 5. T&E training, when relevant
 6. procedures for T&E instrumentation, where relevant.
- b. The AUO should ensure that personnel conducting UAS T&E hold appropriate qualifications, training and experience for the range of planned T&E.

2. using IA and CA risk controls contextualised to the CRE

3. in either:

- i. RA or MOA that exclude non-Participating Aircraft, or ▼ GM

GM UAS.35(c)3i – RA and MOA (AUS)

- a. En Route Supplement Australia (ERSA) and Designated Airspace Handbook (DAH) provide the approval authorities for operations in Restricted Areas (RA) and Military Operating Areas (MOA).
- b. MOAs that extend into international Airspace are not enforceable under international law. Therefore, Defence cannot prevent foreign Aircraft from entering such MOA. However, through the *Airspace Regulations 2007*, CASA can impose conditions of entry into MOAs for Australian registered Aircraft and publish any conditions in the DAH. Therefore:

- i. MOAs and a RAs place equivalent entry restrictions on Australian registered Aircraft
- ii. foreign Aircraft:
 - (a) under international law, are not restricted from entering MOA
 - (b) although not legally restricted from entering a MOA, should not enter Australian MOA without contacting the relevant administering authority.
- c. [UAS.30\(b\)](#) provides the applicable core requirements for managing Airspace. UAS Organisations comply with [AMC2 UAS.30\(b\)3vi.a](#) by constraining Defence UAS operations (outside Australian territory) to within a MOA. However, UAS Organisations will still need to be cognisant of foreign aircraft entering the MOA and implement appropriate procedures to respond to these situations.
- d. **Temporary RA and MOA requests.** Requests for temporary RA and MOA are staffed to CASA – Office of Airspace Regulation through either the National Airspace Management Organisation (eg for routine requests) or the Joint Airspace Control Cell (JACC) (eg for large exercises). CASA, IAW the [Airspace Act 2007](#), may establish temporary RA and MOA for purposes including:
 - i. public safety, including the safety of Aircraft in Flight
 - ii. national security.
- e. **Foreign areas equivalent to RAs and MOAs.** UAS Organisations may use foreign Airspace where that Airspace provides equivalency to RAs and MOAs, if approved by the applicable Airspace controlling authority. In such situations, UAS Organisations will still be required to comply with DASR UAS.
- f. **Non-Participating Aircraft.** Note, if the UAS is contained inside a Restricted Operating Zone (ROZ)—even if that ROZ is within an RA that permits non-Participating Aircraft; but the ROZ excludes non-Participating Aircraft—then the UAS Organisation has met the intent of DASR UAS.35(c)3.i.
- ii. [Airspace over non-territorial seas with *due regard* for the safety of civil air navigation.](#) ▼ GM

GM UAS.35(c)3ii – Due regard (AUS)

See [DASR UAS.30\(b\)3vi.a](#) including the associated AMC and GM for *due regard* requirements.

- 4. [over Defence Controlled Ground or Water, where GP and Critical Infrastructure are absent unless approved by a Delegate of the Safety Authority for Flight Test \(DoSA FT\).](#) ▼ GM

GM UAS.35(c)4 – Risks to GP (AUS)

- a. See the [DASP Glossary](#) for the definition of Defence Controlled Ground or Water.
 - b. **General Public.** When operating UAS in an area where GP are not prohibited from entry (eg over water and in a MOA), UAS Organisations should document procedures for, and ensure:
 - i. surveillance to detect GP entering the area of operations (eg vessels)
 - ii. safe termination of operations if GP enter the area of operations.
 - c. **Adjacent area.** [DASR UAS.30\(b\)3vi.b](#) provides the planning procedures for characterising ground risk areas for the GP. The relevant test plan or equivalent document should detail formal Risk Management (RM) procedures commensurate to the UAS CRE and population densities within the relevant area at risk and adjacent area. For adjacent areas encompassing increased population densities (eg towns), RM should include consideration of systems such as fully independent flight termination systems to ensure flight termination should the UAS escape the planned operating area.
- (d) **Standard Scenario for Weaponised UAS Evaluation.** Approved UAS Organisations must ensure weaponised UAS operations under this Standard Scenario occur: ▼ [AMC](#) ▼ [GM](#)

AMC UAS.35(d) – Risk controls for weaponised UAS operations (AUS)

- a. Approved UAS Organisations should implement a combination of technical and operational risk controls in order to eliminate or otherwise minimise risks SFARP when conducting weaponised UAS operations.
- b. **Technical risk controls.** Technical risk controls should include:
 - i. containment of the UA in the Range Danger Area (RDA) and the Airspace designated for the activity (eg geo-fencing, tether, minimising battery charge or fuel, programmable maximum and minimum altitude)
 - ii. the functionality to enable manual termination of Flight by the RP.
- c. **Operational risk controls.** Operational risk controls should include:
 - i. pre-Flight checks (including independent verification of Safety Critical data), carried out IAW approved OEM or equivalent procedures, that confirm the configuration and serviceability of the Explosive (including the UA arming and firing systems)
 - ii. emergency procedures for:
 - (1) GP intrusion into the operational area
 - (2) intrusion by another Airspace user into the assigned Airspace
 - (3) Explosive payload malfunction.

GM UAS.35(d) – Risk Controls for weaponised UAS operations (AUS)

The [Explosives Safety Regulatory Framework](#) details additional risk controls applicable to Explosives (eg fuzing systems).

1. in an approved Range Danger Area (RDA) ▼ GM

GM UAS.35(d)1– Range Danger Area (AUS)

The Defence Training Area Management Manual ([DTAMM](#)) details Defence Range Danger Area policy.

2. in either:

- i. RA or MOA that exclude all Aircraft except participating UAS, or ▼ GM

GM UAS.35(d)2i – RA and MOA (AUS)

- a. [En Route Supplement Australia \(ERSA\)](#) and [Designated Airspace Handbook \(DAH\)](#) provide the approval authorities for operations in Restricted Areas (RA) or Military Operating Areas (MOA).
- b. MOAs that extend into international Airspace are not enforceable under international law. Therefore, Defence cannot prevent foreign Aircraft from entering such MOA. However, through the [Airspace Regulations 2007](#), CASA can impose conditions of entry into MOAs for Australian registered Aircraft and publish any conditions in the [DAH](#). Therefore:
 - i. MOAs and a RAs place equivalent entry restrictions on Australian registered Aircraft
 - ii. foreign Aircraft:
 - (a) under international law, are not restricted from entering MOA
 - (b) although not legally restricted from entering a MOA, should not enter Australian MOA without contacting the relevant administering authority.
- c. [UAS.30\(b\)](#) provides the applicable core requirements for managing Airspace. UAS Organisations comply with [AMC2 UAS.30\(b\)3vi.a](#) by constraining Defence UAS operations (outside Australian territory) to within a MOA. However, UAS Organisations will still need to be cognisant of foreign Aircraft entering the MOA and implement appropriate procedures to respond to these situations.
- d. **Temporary RA and MOA requests.** Requests for temporary RA and MOA are staffed to CASA – Office of Airspace Regulation through either the National Airspace Management Organisation (eg for routine requests) or the Joint Airspace Control Cell (JACC) (eg for large exercises). CASA, IAW the [Airspace Act 2007](#), may establish temporary RA and MOA for purposes including:
 - i. public safety, including the safety of Aircraft in Flight
 - ii. national security.
- e. **Foreign areas equivalent to RAs and MOAs.** Approved UAS Organisations may use foreign Airspace where that airspace provides equivalency to RAs and MOAs, if approved by the applicable Airspace

controlling authority. In such situations, UAS Organisations will still be required to comply with DASR UAS.

- f. **Non-Participating Aircraft.** Note, if the UAS is contained inside a Restricted Operating Zone (ROZ)—even if that ROZ is within an RA that permits non-Participating Aircraft; but the ROZ excludes non-Participating Aircraft—then the UAS Organisation has met the intent of DASR UAS.35(d)2.i.
- ii. **Airspace over non-territorial seas with *due regard* for the safety of civil air navigation.** ▼ GM

GM UAS.35(d)2ii – Due regard (AUS)

See [DASR UAS.30\(b\)3vi.a](#) including the associated AMC and GM for *due regard* requirements.

- 3. **that contain the RDA in the Airspace designated for the activity** ▼ AMC

AMC UAS.35(d)3 – Safe margins between RDA and designated airspace (AUS)

- a. Approved UAS Organisations (AUOs) should establish safe margins between an RDA and the boundary of the Airspace designated for the activity, including consideration of adjacent area activity such as high-density Airspace.
- b. AUOs should implement measures to detect and manage inadvertent Airspace intrusions. When conducting Risk Management, an AUO should consider:
 - i. warning and response times
 - ii. potential closure speeds
 - iii. their capability to terminate the weaponised UAS activity.
- 4. **over Defence Controlled Ground or water** ▼ GM

GM UAS.35(c)4 – Defence Controlled Ground or Water areas (AUS)

- a. See the [DASP Glossary](#) for the definition of Defence Controlled Ground or Water.
- b. The Defence Training Area Management Manual ([DTAMM](#)) details the approval processes and requirements for management of activities involving explosives. Service-specific policy may apply to the determination of appropriate areas.
- c. **General Public.** When operating UAS in an area where GP are not prohibited from entry (eg over water and in a MOA), UAS Organisations should document procedures for, and ensure:
 - i. surveillance to detect GP entering the area of operations (eg vessels)
 - ii. safe termination of operations if GP enter the area of operations.
- d. **Informed Personnel.** Approved UAS Organisations should only permit Informed Personnel within the relevant ground area in addition to Mission Essential

Personnel when their respective Commands are reasonably informed and retain risks at the appropriate Service or Group prescribed level.

5. with risk controls implemented for Mission Essential Personnel (MEP) ▼ AMC ▼ GM

AMC UAS.35(d)5 – Safety risks to MEP (AUS)

- a. Approved UAS Organisations (AUOs) should incorporate technical risk controls including:
 - i. highly reliable, fail-safe, mechanical solutions that prevent initiation, launch, activation or arming of the weaponised UA until MEP are outside the RDA or within a protected location (eg for arming, a physical connection that removes a pin during UA launch)
 - ii. an unambiguous indication of the arming status.
- b. AUOs should incorporate operational risk controls that consider the following:
 - i. location(s) of MEP
 - ii. normal Flight paths, Lost Link and flight termination trajectories
 - iii. navigation system accuracy
 - iv. likely failure modes of the weaponised UAS
 - v. potential Radio Frequency interference
 - vi. battery and fuel hazards
 - vii. geo-fencing
 - viii. risk recovery controls (eg parachutes and air brakes).

GM UAS.35(d)5 – Safety risks to MEP (AUS)

- a. The Defence Aviation Safety Program Manual (DASPMAN) Volume 3, Chapter 14 *Safety Management Systems*, provides guidance regarding 'grossly disproportionate' assessments relevant to MAO decisions regarding MEP risk exposure.
 - b. 'Protected location' in AMC UAS.35(d)5 refers to any location that prevents harm to personnel from the weaponised UA. Note, 'harm to personnel from the weaponised UA' can include harm through blast, fragmentation, heat or ballistic effects.
6. crewed by a dedicated RP for each UA, where the RP can intervene during all stages of Flight except for Lost Link and during Terminal Guidance. ▼ AMC

AMC UAS.35(d)6 – Intervention by the RP (AUS)

Intervention refers to an action, command or input by the RP to dictate the UA's Flight actions. In all situations (except Lost Link and Terminal Guidance), the UAS should enable the RP to alter the Flight path of the UA and perform any other suitable actions to ensure safe Flight.

DRAFT DASR UAS.36 FOR JUL 26 DASR RELEASE

Contents

[Section 1:](#) New DASR UAS.36 DASR Part only.

[Section 2:](#) New DASR UAS.36 DASR Part, Acceptable Means of Compliance (AMC) and Guidance Material (GM).

SECTION 1: NEW DASR UAS.36 DASR Part

The following is new DASR Part in toto.

DASR UAS.36

► GM

- (a) **Standard Scenario for limited operations over non-Defence Controlled Ground or Water.** UAS Organisations must ensure operations under this Standard Scenario occur: ► GM
1. using a Uncrewed Aircraft (UA) that does not exceed a dimension of 1 metre, and for: ► AMC ► GM
 - i. Approved UAS Organisations (AUO), a maximum commanded airspeed of 50 knots (25 m/s)
 - ii. UAS Organisations not operating as an AUO, a maximum possible commanded airspeed of 50 knots (25 m/s)
 2. with due regard to the safety of civil air navigation ► GM
 3. over: ► AMC ► GM
 - i. Lightly Populated areas, or
 - ii. any area if the UAS take-off-weight is ≤ 250 g. ► GM
 4. crewed by a dedicated RP for each UA, where the Remote Pilot (RP) can intervene during all stages of Flight except Lost Link. ► AMC
- (b) **Standard Scenario for operations over Defence Controlled Ground or Water.** UAS Organisations must ensure operations under this Standard Scenario occur: ► GM
1. using a UA that does not exceed a dimension of 8 metres, and for: ► AMC ► GM
 - i. AUOs, a maximum commanded airspeed of 145 knots (75 m/s)
 - ii. UAS Organisations not operating as an AUO, a maximum possible commanded airspeed of 145 knots (75 m/s)
 2. in:
 - i. Restricted Areas (RA) or Military Operating Areas (MOA) that exclude non-Participating Aircraft, or ► GM
 - ii. non-controlled Airspace below 400 ft AGL and with due regard for the safety of civil air navigation ► GM
 3. over Defence Controlled Ground or Water ► AMC ► GM
 4. crewed by a dedicated RP for each UA, where the RP can intervene during all stages of Flight except Lost Link. ► AMC

5. with endorsement from an appropriate Test and Evaluation (T&E) practitioner when conducting operations identified through compliance with [DASR UAS.10\(c\)1](#)
▶ [AMC](#) ▶ [GM](#)

SECTION 2: NEW DASR UAS.36 DASR Part, AMC and GM

The following is new DASR Part and corresponding AMC and GM in toto.

DASR UAS.36

▼ GM

GM UAS.36 – Standard Scenario Privilege (AUS)

The DASR UAS.36 Standard Scenarios provide UAS Organisations with a Privilege to operate UAS with residual risk to third parties through the Risk Management procedures detailed in the Standard Scenarios. This Privilege invokes specific requirements to execute Defence responsibilities to third parties in addition to those detailed in the broader Defence Aviation Safety Program. DASA will review and monitor this Privilege and will revoke the Privilege where it identifies non-compliances.

- (a) **Standard Scenario for limited operations over non-Defence Controlled Ground or Water.** UAS Organisations must ensure operations under this Standard Scenario occur: ▼ GM

GM UAS.36(a) – Standard Scenario for limited operations over non-Defence Controlled Ground or Water (AUS)

This Standard Scenario enables limited UAS operations over non-Defence Controlled Ground or Water, with *due regard* for the Aviation Safety of other Aircraft and consideration of the risk to people on the ground, without the need for a discrete DASA approval. UAS Organisations may also use this Standard Scenario over Defence Controlled Ground or Water.

1. using a Uncrewed Aircraft (UA) that does not exceed a dimension of 1 metre, and for:
▼ AMC ▼ GM

AMC UAS.36(a)1 – Maximum UA dimension (AUS)

- a. UAS Organisations should calculate maximum UA dimension using:
 - i. wingspan for a fixed wing UA
 - ii. main rotor diameter for a rotorcraft UA
 - iii. maximum distance between rotor tips for a multirotor UA.
- b. Where UAS dimension alters during Flight (eg VTOL system with foldable wings), the largest UA dimension is used for the calculation.

GM UAS.36(a)1 – UA dimension and speed limitations (AUS)

- a. The UA dimension and airspeed constraints limit the theoretical size of the area on the ground (critical area) where a UA could impact a standing person and result in a fatality. This is achieved through maximum UA dimension and speed limitations, and assumes no additional risk controls to protect people or reduce the consequence of an impact.
- b. **Airspeed management.** This Standard Scenario constrains UAS Organisations to operating UAS without the capability for higher speeds than the limitations imposed, unless they are an Approved UAS Organisation (AUO). AUOs may limit

UA airspeed through 'maximum commanded airspeed' given the independent assurance provided to an AUO's organisation and Flying Management System. In these cases, DASA expects the AUOs to Risk Manage UAS with greater speed capability than the imposed limitations.

- i. Approved UAS Organisations (AUO), a maximum commanded airspeed of 50 knots (25 m/s)
 - ii. UAS Organisations not operating as an AUO, a maximum possible commanded airspeed of 50 knots (25 m/s)
2. with due regard for the safety of civil air navigation ▼ GM

GM UAS.36(a)2 – Due regard (AUS)

See DASA UAS.30(b)3vi.a including AMC and GM for *due regard* requirements.

3. over: ▼ AMC ▼ GM

AMC UAS.36(a)3 – Population density limitations (AUS)

- a. DASA UAS.30(b)3vi.b provides the planning procedures for characterising ground risk areas for the GP.
- b. The maximum population density within the adjacent area for this Standard Scenario is 40 000 persons per square kilometre, averaged over the entire adjacent area. UAS Organisations should only apply this value following implementation of all other risk controls (eg avoidance criteria, time of day restrictions).

GM UAS.36(a)3 – Ground area definitions (AUS)

See GM UAS.10 for the definition of Lightly Populated areas.

- i. Lightly Populated areas, or
- ii. any area if the UAS take-off-weight is ≤ 250 g. ▼ GM

GM UAS.36(a)3iii – UA take-off-weight ≤ 250 g (AUS)

The permission for a UA with a take-off-weight of ≤ 250 g recognises that the hazards to people on the ground are inherently minimised for a UAS with this take-off-weight and airspeed limit. This does not negate the obligation on the UAS Organisation to further eliminate or otherwise minimise risks SFARP.

4. crewed by a dedicated RP for each UA, where the RP can intervene during all stages of Flight except Lost Link. ▼ AMC

AMC UAS.36(a)4 – Intervention by the RP (AUS)

Intervention refers to an action, command or input by the RP to dictate the UA's flight actions. In all situations (except Lost Link), the UAS should enable the RP to alter the Flight path of the UA and perform any other suitable actions to ensure safe Flight.

- (b) **Standard Scenario for operations over Defence Controlled Ground or Water.** UAS Organisations must ensure operations under this Standard Scenario occur: ▼ GM

GM UAS.36(b) – Standard Scenario for operations over Defence Controlled Ground or Water (AUS)

This Standard Scenario enables operations with larger UAS through limiting operations to Defence Controlled Ground or Water and exclusive use Airspace, without the need for a discrete DASA approval.

1. using a UA that does not exceed a dimension of 8 metres, and for: ▼ AMC ▼ GM

AMC UAS.36(b)1 Maximum UA dimension (AUS)

- a. UAS Organisations should calculate maximum UA dimension using:
 - i. wingspan for a fixed wing UA
 - ii. main rotor diameter for a rotorcraft UA
 - iii. maximum distance between rotor tips for a multirotor UA.
- b. Where UAS dimension alters during Flight (eg VTOL system with foldable wings), the largest UA dimension is used for the calculation.

GM UAS.36(b)1 – UA dimension and speed limitations (AUS)

- a. The UA dimension and airspeed constraints limit the theoretical size of the area on the ground (critical area) where a UA could impact a standing person and result in a fatality. This is achieved through UA dimension and speed limitations, and assumes no additional risk controls to protect people or reduce the consequence of an impact.
 - b. **Airspeed management.** This Standard Scenario constrains UAS Organisations to operating UAS without the capability for higher speeds than the limitations imposed, unless they are an Approved UAS Organisation (AUO). AUOs may limit UA airspeed through 'maximum commanded airspeed' given the independent assurance provided to an AUO's organisation and FMS. In these cases, DASA expects the AUOs to Risk Manage UAS with greater speed capability than the imposed limitations.
 - i. AUO, a maximum commanded airspeed of 145 knots (75 m/s)
 - ii. UAS Organisations not operating as an AUO, a maximum possible commanded airspeed of 145 knots (75 m/s)
2. in either:
 - i. Restricted Areas (RA) or Military Operating Areas (MOA) that exclude non-Participating Aircraft, or ▼ GM

GM UAS.36(b)2i – RA and MOA (AUS)

- a. [En Route Supplement Australia \(ERSA\)](#) and [Designated Airspace Handbook \(DAH\)](#) provide the approval authorities for operations in Restricted Areas (RA) and Military Operating Areas (MOA).
- b. MOAs that extend into international Airspace are not enforceable under international law. Therefore, Defence cannot prevent foreign Aircraft from entering such MOA. However, through the [Airspace Regulations 2007](#), CASA can impose conditions of entry into MOAs for Australian registered Aircraft and publish any conditions in the [DAH](#). Therefore:
 - i. MOAs and a RAs place equivalent entry restrictions on Australian registered Aircraft
 - ii. foreign Aircraft:
 - (a) under international law, are not restricted from entering MOA
 - (b) although not legally restricted from entering a MOA, should not enter Australian MOA without contacting the relevant administering authority.
- c. [UAS.30\(b\)](#) provides the applicable core requirements for managing Airspace. UAS Organisations comply with [AMC2 UAS.30\(b\)3vi.a](#) by constraining Defence UAS operations (outside Australian territory) to within a MOA. However, UAS Organisations will still need to be cognisant of foreign Aircraft entering the MOA and implement appropriate procedures to respond to these situations.
- d. **Temporary RA and MOA requests.** Requests for temporary RA and MOA are staffed to CASA – Office of Airspace Regulation through either the National Airspace Management Organisation (eg for routine requests) or the Joint Airspace Control Cell (JACC) (eg for large exercises). CASA, IAW the [Airspace Act 2007](#), may establish temporary RA and MOA for purposes including:
 - i. public safety, including the safety of Aircraft in Flight
 - ii. national security.
- e. **Foreign areas equivalent to RAs and MOAs.** UAS Organisations may use foreign Airspace where that Airspace provides equivalency to RAs and MOAs, if approved by the applicable Airspace controlling authority. In such situations, UAS Organisations will still be required to comply with DASR UAS.
- f. **Non-Participating Aircraft.** Note, if the UAS is contained inside a Restricted Operating Zone (ROZ)—even if that ROZ is within an RA that permits non-Participating Aircraft; but the ROZ excludes non-Participating Aircraft—then the UAS Organisation has met the intent of DASR [UAS.36\(b\)2.i](#).
- ii. [non-controlled Airspace below 400 ft AGL and with due regard for the safety of civil air navigation, or ▼ GM](#)

GM UAS.36(b)2ii – Due regard (AUS)

See [DASR UAS.30\(b\)3vi.a](#) including AMC and GM for *due regard* requirements. Of note, the requirement to remain below 400 ft AGL eliminates some of the options available in [AMC2 UAS.30\(b\)3vi.a](#).

3. over Defence Controlled Ground or Water: ▼ AMC ▼ GM

AMC UAS.36(b)3 – Population density limitations (AUS)

- a. [DASR UAS.30\(b\)3vi.a](#) provides the planning procedures for characterising ground risk areas for the GP.
- b. Table AMC UAS.36(b)3–1 provides the maximum population densities within the adjacent area averaged over the entire adjacent area for this Standard Scenario. UAS Organisations should only use these values following implementation of all other risk controls (eg avoidance criteria, time of day restrictions).

Adjacent Area Quantitative Values				
Maximum UA dimension		1 m	3 m	8 m
Maximum airspeed		25 m/s	35 m/s	75 m/s
Maximum Average population density (ppl/km ²)	Sheltering applicable ¹	<40,000	<5000	N/A
	Sheltering not applicable	N/A	<500	<50
Note: 1. Sheltering can only be applied to adjacent areas if the UA weight is not more than 25 kg. 2. The adjacent area quantitative values apply only for the portion of the adjacent area that lies outside the 'Red area'.				

Table AMC UAS.36(b)3–1: Adjacent quantitative values

GM UAS.36(b)3 – Risks to GP (AUS)

1. See the [DASP Glossary](#) for the definition of Defence Controlled Ground or Water.
2. When operating UAS in an area where GP are not prohibited from entry (eg over water and in a MOA), UAS Organisations should document procedures for, and ensure:
 - i. surveillance to detect GP entering the area of operations (eg vessels)
 - ii. safe termination of operations if GP enter the area of operations.
4. crewed by a dedicated RP for each UA, where the RP can intervene during all stages of Flight except Lost Link. ▼ AMC

AMC UAS.36(b)4 – Intervention by the RP (AUS)

Intervention refers to an action, command or input by the RP to dictate the UA's flight actions. In all situations (except Lost Link), the UAS should enable the RP to alter the Flight path of the UA and perform any other suitable actions to ensure safe Flight.

5. with endorsement from an appropriate Test and Evaluation (T&E) practitioner when conducting operations identified through compliance with [DASR UAS.10\(c\)1](#)
▼ [AMC](#) ▼ [GM](#)

AMC UAS.36(b)5 – T&E practitioners (AUS)

- a. An appropriate T&E practitioner should hold a Defence recognised T&E practitioner qualification and experience with UAS T&E, or Service or Defence Group–assessed equivalent.
- b. The UAS T&E practitioner should determine whether the UAS Organisation is capable of safely conducting an Experimentation activity through assessing the UAS Organisation's:
 - i. organisation
 - ii. personnel
 - iii. processes.

GM UAS.36(b)5 – T&E practitioners (AUS)

The [DTEM](#) defines the requirements and competencies of T&E practitioners.

DRAFT DASR UAS.40 FOR JUL 26 DASR RELEASE

Contents

Section 1: Amended DASR UAS.40 DASR Part only.

Section 2: Amended DASR UAS.40 DASR Part, Acceptable Means of Compliance (AMC) and Guidance Material (GM).

SECTION 1: AMENDED DASR UAS.40 PART ONLY

The following replaces the DASR Part for DASR UAS.40 in toto.

DASR UAS.40 Open Category

- (a) UAS Organisations approving operations in the Open category must: ▶ AMC ▶ GM
1. assign accountability and responsibilities for:
 - i. all UAS operations ▶ GM
 - ii. Aviation Safety Risk Management ▶ GM
 - iii. Occurrence reporting. ▶ AMC
 2. ensure UAS operations and maintenance occurs IAW all relevant Orders, Instructions and Publications, including Original Equipment Manufacturer, Service or Group manuals appropriate for the UAS type
 3. use the Radio Frequency (RF) spectrum only IAW:
 - i. an approved commercial frequency band, or
 - ii. a Defence Spectrum Office approval.
 4. operate with only one Uncrewed Aircraft (UA) per RP, where the RP can intervene during all stages of Flight except during Lost Link ▶ GM
 5. operate Micro UAS (< 250 g take-off-weight): ▶ GM
 - i. without creating a hazard to another Aircraft, person or Critical Infrastructure
 - ii. below 400 ft AGL ▶ GM
 - iii. using one of the following visual options, where the RP maintains: ▶ GM
 - a. Visual Line Of Sight (VLOS) or Extended Visual Line Of Sight (EVLOS) with the UA:
 - (1) by day
 - (2) within electronic line of sight of the Remote Pilot Station (RPS)
 - (3) by night where the visual conditions are equivalent to daytime for the Flight area, or ▶ GM
 - b. unaided visual contact with the UA operating Airspace: ▶ AMC
 - (1) and visibility of no less than 5 km from the RP
 - (2) where the UA remains within 1.5 km electronic line of sight of the RPS
 - (3) only over: ▶ GM

- (a) Defence Controlled Ground or Water
 - (b) Isolated environments, or
 - (c) Remote areas.
 - iv. using pre-programmed emergency or flight termination system procedures that ensure compliance with all DASR UAS.40 operating requirements and limitations
 - v. in Restricted Areas (RA) and Military Operating Areas (MOA) only when:
 - a. approved by the authority controlling the area
 - b. using appropriate safety margins from the Airspace boundary. ▶ AMC
 - vi. in the no-fly zone of a controlled Aerodrome, only with approval from a relevant authority ▶ GM
 - vii. in proximity to a ship or other vessel, only with approval from a relevant authority ▶ GM
 - viii. in the no-fly zone of a non-controlled Aerodrome or Helicopter Landing Site only where no concurrent relevant events occur within the associated Airspace ▶ GM
 - ix. using a controlling RP who meets training, qualification and experience requirements defined by the relevant Service or Defence Group ▶ AMC
 - x. not over an area where a fire, police or other public safety or emergency operation is being conducted without approval of the person in charge of the operation.
6. operate Very Small UAS (250 g to <2 kg take-off-weight) IAW the requirements for Micro UAS, and no closer than: ▶ GM
- i. 30 m from General Public (GP) not sheltered from UA hazards ▶ GM
 - ii. 30 m from Critical Infrastructure
 - iii. 15 m from Mission Essential Personnel (MEP) and Informed Personnel except:
 - a. where required to facilitate launch and recovery
 - b. for MEP essential to mission outcomes, and exposed MEP are appropriately sheltered from the UAS.
7. operate Small UAS (2 to <25 kg take-off-weight), IAW the above requirements and limitations for Very Small UAS, only over Defence Controlled Ground or Water.

SECTION 2: AMENDED DASR UAS.40 DASR Part, AMC and GM

The following replaces the DASR Part and corresponding AMC and GM for DASR UAS.40 in toto.

DASR UAS.40

- (a) UAS Organisations approving operations in the Open category must: ▼ AMC ▼ GM

GM UAS.40(a) – Purpose statement (AUS)

(Context) Open category facilitates a range of constrained Defence UAS operations where the UAS Organisation may have no previous aviation experience, without the need for a discrete DASA approval. **(Hazard)** Inadequately constrained regulatory risk controls for Open category UAS operations may compromise Aviation Safety. **(Defence)** This regulation requires a UAS Organisation to implement simple and robust risk controls to eliminate Aviation Safety risks SFARP, and if it is not reasonably practicable to eliminate those risks, to otherwise minimise safety risks SFARP.

1. assign accountability and responsibilities for:

- i. all UAS operations ▼ GM

GM UAS.40(a)1i – Accountability for all UAS operations (AUS)

A commander (with an appropriate delegation) or Defence Group equivalent is usually the accountable person for Open category UAS operations.

- ii. Aviation Safety Risk Management ▼ GM

GM UAS.40(a)1ii – Aviation Safety Risk Management (AUS)

The Defence Aviation Safety Program Manual, Volume 3, Chapter 14 provides guidance for development and usage of Aviation Safety Risk Management.

- iii. occurrence reporting. ▼ AMC

AMC UAS.40(a)1iii – Occurrence Reporting (AUS)

UAS Organisations should report UAS Occurrences in accordance with the DASR UAS.10(b)1 and the guidance in the DASPMAN Volume 3, Chapter 10.2. This reference contains a non-exhaustive list of Occurrences that must be reported via Aviation Safety Reporting in Sentinel.

2. ensure UAS operations and maintenance occurs IAW all relevant Orders, Instructions and Publications, including Original Equipment Manufacturer, Service or Defence Group manuals appropriate for the UAS type
3. use the Radio Frequency (RF) spectrum only IAW:
 - i. approved commercial frequency band, or
 - ii. a Defence Spectrum Office approval.

4. operate with only one Uncrewed Aircraft per RP, where the RP can intervene during all stages of Flight except during Lost Link ▼ GM

GM UAS.40(a)4 – Intervention by the RP (AUS)

Intervention refers to an action, command or input by the RP to direct the UA's Flight actions.

5. operate Micro UAS (< 250 g take-off-weight): ▼ GM

GM UAS.40(a)5 – UA speed (AUS)

UAS Organisations operating IAW UAS.40 should generally limit the UA speed to 25 m/s (50 kts) groundspeed to reduce potential injury consequences. Where a UAS Organisation conducts Flights that exceed 25 m/s, they should consider additional risk controls or operating under a Standard Scenario that provides the necessary permissions.

- i. without creating a hazard to another Aircraft, person or Critical Infrastructure
- ii. below 400 ft AGL ▼ GM

GM UAS.40(a)5ii – Operating below 400 ft AGL (AUS)

The imposition of a 400 ft AGL operating ceiling constrains Open category UAS to Airspace where fewer Aircraft routinely operate. This limitation assists to define operating context for the purpose of Risk Management.

- iii. using one of the following visual options, where the RP maintains: ▼ GM

GM UAS.40(a)5iii – Visual range (AUS)

- a. UAS.40 limits flights to within visual range of the RP using two options. The options assure that the RP can always see and avoid other Aircraft.
- b. Regardless of which visual option a UAS Organisation employs, they should ensure that RPs are aware of the various limitations on visual detection. RPs should exercise caution in relying on their perception of maximum visual range, and use the available visual cues at all times.
- c. **Pre-Flight considerations.** UAS Organisations are responsible for ensuring RPs collect relevant Aeronautical Information (AI) (eg NOTAMs) to maximise the effectiveness of visual detection, and make broadcasts on relevant airband frequencies where appropriate. These actions aid in the identification of Flight activity for which the UA may pose a hazard. Relevant Flight activity could include low-level flying such as:
 - i. military low jet routes
 - ii. agricultural aviation
 - iii. tourist Aircraft
 - iv. rescue helicopters

- v. fire-bombing Aircraft
- vi. other UAS.
- a. Visual Line Of Sight (VLOS) or Extended Visual Line Of Sight (EVLOS) with the UA:
 - (1) by day
 - (2) within electronic line of sight of the Remote Pilot Station (RPS)
 - (3) by night where the visual conditions are equivalent to daytime for the Flight area, or ▼ GM

GM UAS.40(a)5iii.a(3) – Night visual conditions (AUS)

Night visual conditions equivalent to daytime are usually limited to areas such as brightly lit sports fields, Aerodromes and other high illumination areas.

- b. unaided visual contact with the UA operating area: ▼ AMC

AMC UAS.40(a)5iii.b – Maintaining awareness of UA position (AUS)

UAS Organisations should ensure the UAS provides the RP with UA position and altitude information adequate for the RP to Deconflict the UA with other Aircraft at all times.

- (1) with visibility of no less than 5 km from the RP
- (2) where the UA remains within 1.5 km electronic line of sight of the RPS
- (3) only over: ▼ GM

GM UAS.40(a)5iii.b(3) – Ground environment definition (AUS)

See GM UAS.10 for ground environment definitions.

- (a) Defence Controlled Ground or Water
- (b) Isolated environments, or
- (c) Remote areas.
- iv. using pre-programmed emergency or flight termination system procedures that ensure compliance with all DASR UAS.40 operating requirements and limitations
- v. in Restricted Areas (RA) and Military Operating Areas (MOA) only when:
 - a. approved by the authority controlling the area
 - b. using appropriate safety margins from the Airspace boundary. ▼ AMC

AMC UAS.40(a)5v.b – Safe margins from Airspace boundaries (AUS)

- a. UAS Organisations should establish safe margins from Airspace boundaries, including consideration for:
 - i. credible failures of the UAS
 - ii. stopping distance from maximum airspeed
 - iii. any command and control latency
 - iv. technical risk controls (eg geo-fencing)
 - v. risk recovery controls (eg parachutes, air brakes, autonomous recovery system, etc)
 - vi. Lost Link and emergency routing
 - vii. Flight termination systems and designated Flight termination sites
 - viii. adjacent area activity that may affect UAS behaviour, such as RF emitters
 - ix. adjacent area activity such as high-density Airspace.
- vi. in the no-fly zone of a controlled Aerodrome, only with approval from the relevant authority ▼GM

GM UAS.40(a)5vi – Relevant approval (AUS)

- a. Figure GM UAS.40(a)5vi–1 depicts the no-fly zone of Defence and civilian controlled Aerodromes, which are areas below 400 ft AGL:
 - i. within three (3) nm in any direction from the runway threshold of any runway of a non-controlled aerodrome
 - ii. within the areas shaded dark grey less than seven (7) km from the runway threshold, and above 300 ft AGL beyond 7km from the runway threshold
 - iii. for UAS <250 g take-off-weight only, above 150 ft AGL within the light grey shaded area.
- b. For Aerodromes with multiple runways, the no-fly areas overlap and apply concurrently, measured from each runway.

- c. For approval to operate in the no-fly zone of Defence and civilian controlled Aerodromes, the Air Traffic Control agency listed in [En-Route Supplement Australia](#) are the approvers.

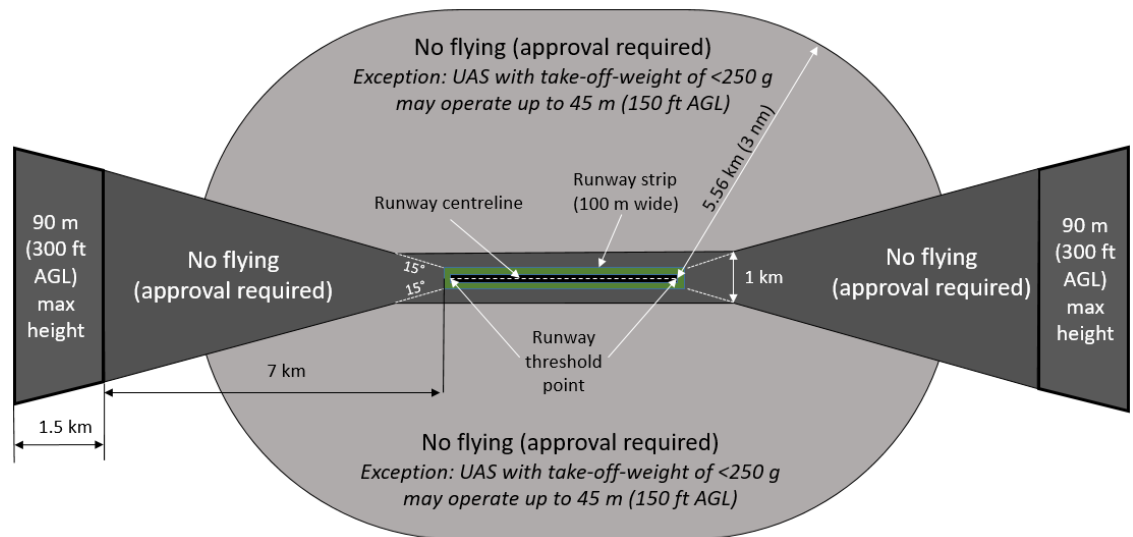


Figure GM UAS.40(a)5vi-1: Controlled aerodrome no-fly zones

- vii. in proximity to a ship or other vessel, only with approval from a relevant authority ▼ [GM](#)

GM UAS.40(a)5vii – Relevant approval (AUS)

- a. For operations in proximity to a civilian vessel, the captain, vessel master or delegate provides approval.
 - b. For UAS operations in proximity to Royal Australian Navy or foreign warships, restrictions may apply. UAS Organisations may contact the Royal Australian Navy Headquarters Fleet Air Arm for advice.
- viii. in the no-fly zone of a non-controlled Aerodrome or Helicopter Landing Site (HLS) only when no concurrent relevant events occur within the associated Airspace ▼ [GM](#)

GM UAS.40(a)5viii – Relevant events (AUS)

- a. A relevant event refers to any time a crewed Aircraft is within the relevant Airspace of an Aerodrome or HLS, including when an Aircraft is in the course of approaching, landing at, taking off from, or manoeuvring on the movement area of the Aerodrome.
- b. If the UA is already airborne when a relevant event occurs, the RP is required to manoeuvre the UA away from the path of the crewed Aircraft and land the UA as soon as safely possible.
- c. The no-fly area for a HLS is a circle of 0.75 nm (1.4 km) radius centred on the helipad, surface to 400 ft AGL.

- d. Figure GM UAS.40(a)5viii-1 shows the no-fly zone of a non-controlled Aerodrome, which are areas below 400 ft AGL:
- within three (3) nm, in any direction, from the runway threshold of any runway of a non-controlled aerodrome
 - for UAS <250 g take-off-weight only, from 150 to 400 ft AGL within the light grey shaded area
 - from the surface to 400 ft AGL within the areas shaded dark grey.

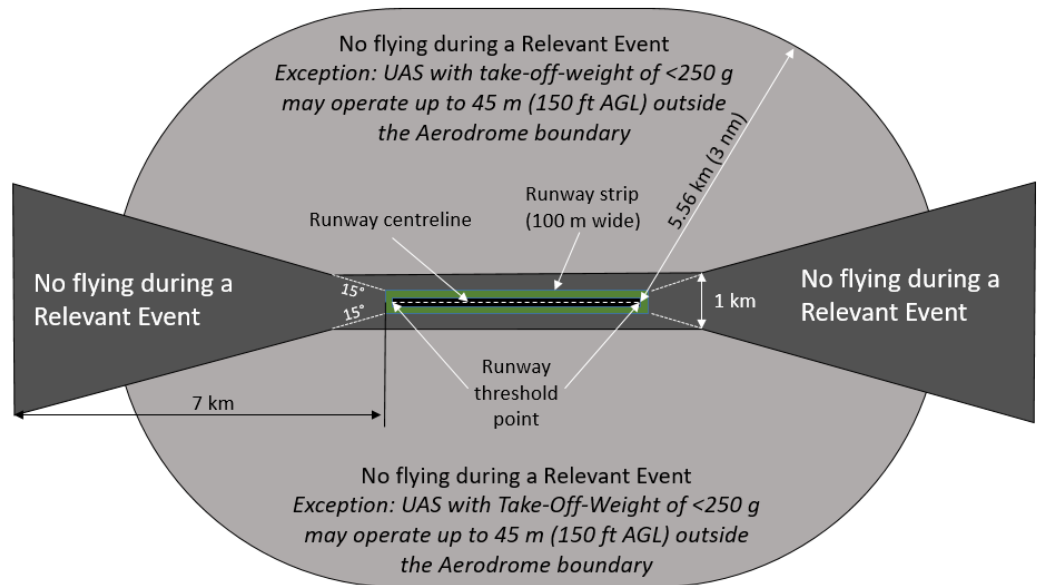


Figure GM UAS.40(a)5viii -1: Non-controlled aerodrome no-fly zones

- ix. using a controlling RP who meets training, qualification and experience requirements defined by the relevant Command or Group ▼ AMC

AMC UAS.40(a)5ix – RP Qualifications (AUS)

Services and Defence Groups should ensure Open category RPs are trained to a standard that ensures Aviation Safety risks are eliminated or otherwise minimised SFARP.

- x. not over an area where a fire, police or other public safety or emergency operation is being conducted without approval of the person in charge of the operation.
6. operate Very Small UAS (250 g to <2 kg take-off-weight) IAW the requirements for Micro UAS, and no closer than: ▼ GM

GM UAS.40(a)6 – Areas surrounding the operation (AUS)

- a. UAS Organisations operating UAS under UAS.40 should ensure planning and operating procedures include consideration of surrounding areas and the consequences of escaped UA or other similar situations where the RP loses control of the UA. UA range and endurance should drive the extent of consideration given to other Aircraft, people or Critical Infrastructure in surrounding areas, and whether the UAS Organisation should implement additional risk controls to manage those risks.

- b. For additional guidance, UAS Organisations could consider the AMC and GM to [UAS.30\(b\)3vi.b](#) provided for ground risk planning under the Standard Scenarios.
- i. 30 m from General Public (GP) not sheltered from UA hazards ▼ GM

GM UAS.40(a)6i – GP sheltering (AUS)

This requirement assures the protection of GP from hazards related to the UA Flight. Where structures or natural features physically protect GP, the RP may operate the UA closer than 30 m.

- ii. 30 m from Critical Infrastructure
 - iii. 15 m from Mission Essential Personnel (MEP) and Informed Personnel except:
 - a. where required to facilitate launch and recovery
 - b. for MEP where essential to mission outcomes, and exposed MEP are appropriately sheltered from the UAS.
7. operate Small UAS (2 to <25 kg take-off-weight), IAW the requirements and limitations for Very Small UAS, and only over Defence Controlled Ground or Water.



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DASR AMENDMENT RECORD DCP-0048

DASR CLAUSE: 145.A.30(f)1

RATIONALE FOR CHANGE

A DAVENG review of 145.A.30(f)1 in regards to the use of colour contrast dye penetrant inspections / visible dye penetrant inspections, has recommended that 145.A.30(f)1 should be removed from DASR. The DAVENG advice is based on that the following all prohibit the use of colour contrast dye penetrant inspections to determine final serviceability of aircraft/aeronautical product, specifically ASTM E1417:

- ASTM E1417 - *Standard Practice for Liquid Penetrant Testing*
- CASA Airworthiness Bulletin 20-002 *Use of Visible (Red) Dye Liquid Penetrant with Inspection of Safety Critical Components*
- FAA Advisory circular AC 25-29 - *Development of a Nondestructive Inspection Program/Organization*

CURRENT AMC TEXT

1. By way of exception to paragraph (f), a maintenance organisation may authorise those personnel specified in paragraphs (g) and (h)(1), qualified in Category B1 in accordance with DASR 66, to carry out and/or control colour contrast dye penetrant inspections/visible dye penetrant inspections which are to be detailed in the MOE.

REVISED REGULATION TEXT

1. NOT APPLICABLE



DASR AMENDMENT RECORD
DCP 0048

DASR AMC: 145.A.30(f) paragraph 12

RATIONALE FOR CHANGE

DAVENG required the green text to be added to DASR (DCP 2019-11), as it was determined that the use of visible dye was not suitable to determine final serviceability of aircraft/aeronautical product. The green text only allows colour contrast dye penetrant inspections / visible dye penetrant inspections to be performed if specific procedures are approved by DASA.

As clause 145.A.30(f)1 is not applicable to DASR, the green text is redundant, therefore paragraph 12 is to be deleted.

CURRENT AMC TEXT

12. Colour contrast dye penetrant inspections / visible dye penetrant inspections are only to be used when the specific procedure has been approved by the Authority.

REVISED AMC TEXT

Delete paragraph 12 in toto.



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DASR AMENDMENT RECORD DCP - 0049

DASR CLAUSE: AMC 147.A.140(a)7

RATIONALE FOR CHANGE

The absence of relevant PMKeyS Proficiency Codes in the Air Domain MTOE has led to inaccurate MAMLs and delays to their release. Incorporating clearly defined PMKeyS Proficiency Codes within the MTOE will improve the accuracy and timeliness of MAML issuance. Additionally, AMC and GM have been developed to clarify the specific information required for inclusion in the exposition.

CURRENT AMC TEXT

Not applicable new AMC.

NEW AMC TEXT

AMC 147.A.140(a)7 - ADF Maintenance Training Organisation Exposition (AUS)

1. For ADF Maintenance Training Organisations only, details of the maintenance training courses forming the extent of the approval should include relevant PMKeyS data. PMKeyS Proficiency Codes and their definitions, for each training course or combination of training courses, should be included for:
 - a. all DASR 66 basic knowledge training for both Vocational Education and Training Aeroskills Units of Competency (including training level achieved) and military specific training; and
 - b. all DASR 66 Military Aircraft Type Training courses, with separate PMKeyS Proficiency Codes for completion of On the Job Training ~~(when required)~~.
2. Any changes to PMKeyS Proficiency Codes, or their definition (e.g. any changes to Aeroskills competencies required to issue the PMKeyS Proficiency Codes), should be notified to DASA, via Form 12, prior to any changes taking effect.



DASR CLAUSE: GM 147.A.140(a)7**RATIONALE FOR CHANGE**

New guidance material (GM) is to be introduced to complement the new AMC 47.A.140(a)7 by providing guidance on the minimum course information required for inclusion in the Air Domain MTOE.

As this new GM supports the new AMC, it will take precedence over the current GM, which will be redesignated to GM1.

CURRENT GM TEXT**GM 147.A.140(a)7 - Maintenance Training Organisation Exposition (AUS)**

Details of approved Military Aircraft Type Ratings should include how the course content maintains alignment with changes to the relevant aircraft type design.

Revised GM TEXT**GM 147.A.140(a)7 – ADF Maintenance Training Organisation Exposition (AUS)**

Where training competencies are recorded in PMKeyS, the MTOE should include clear and traceable mapping between each course and its associated PMKeyS Proficiency Codes (see Table 1 for an example). This mapping enables DASA to support accurate licensing outcomes.

Table 1: Example course table for ADF MTO Expositions

Course Title	PMKeyS Course Code	PMKeyS Proficiency Code	DASA Approved Course Version and Date	Current In Use Course Version (minor updates*)	LMP/Course Folder Objective Hyperlink	Units of Competency if applicable (including Training Level**)
Military Aircraft Type Training						
Spitfire Safety Familiarisation Course	232323	P123123	Version 7 10 Oct 2024	Version 7.2 02 Feb 2025	fBP123456	N/A
Spitfire B1 Type Theory & Practical	121212	P999999	Version 5 15 Nov 2024	Version 5.6 05 Jan 2025	fBP989898	N/A
Spitfire B1 Type OJT	343434	P888888	Version 5 15 Nov 2024	Version 5 15 Nov 2024	fBP989898	N/A
Spitfire Ground Handling	454545	P323232	Version 2 12 Jan 2025	Version 2.1 02 Feb 2025	fBP123457	N/A
Basic Knowledge Training Course						
Air Force AVTECH IET	213397	P115364	N/A ***	N/A	fBP654321	MEA208 (TL4); MEA209 (TL2); MEAAVI0014 (TL2); MEA219 (TL2); MEA222 (TL2)
Explosive Ordnance Introduction (EOI) course	111511	P010589	V7 10 Oct 2024	V7 10 Oct 2024	fBP987654	N/A

* Minor updates via indirect approval IAW DASR 147.A.140(c)

** SADL Training Levels

*** DASA approval not required for VET courses

DASR CLAUSE: GM1 147.A.140(a)7	
RATIONALE FOR CHANGE	
The new GM 147.A.140(a)7 will take precedence over the current GM, therefore the current GM will be redesignated to GM1.	
CURRENT GM TEXT	
GM 147.A.140(a)(7) - Maintenance Training Organisation Exposition (AUS) Details of approved Military Aircraft Type Ratings should include how the course content maintains alignment with changes to the relevant aircraft type design.	
REDESIGNATED GM1 TEXT	
GM1 147.A.140(a)7 - Maintenance Training Organisation Exposition (AUS) Details of approved Military Aircraft Type Ratings should include how the course content maintains alignment with changes to the relevant aircraft type design.	

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DASR AMENDMENT RECORD DCP - 0053					
DASR GLOSSARY					
RATIONALE FOR CHANGE					
The DASP Glossary definition of AUTHOP is now expected to cover both civilian non-Defence registered Aircraft, as well as Foreign Military Aircraft (DASR NDR and DASR GR.27, respectively)					
CURRENT GLOSSARY TEXT					
Authority To Operate (AUTHOP) * Authorisation to operate a non-Defence registered aircraft.					
REVISED GLOSSARY TEXT					
Authority To Operate (AUTHOP) * Authorisation to operate or Sponsor a non-Defence registered aircraft.					



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DASR AMENDMENT RECORD DCP - 0061					
DASR ACRONYMS					
RATIONALE FOR CHANGE					
The term Authorised Maintenance Data (AMD) is only used in GM SPA.10.B – Command Clearance (AUS) and can cause confusion as DASR generally uses the terms maintenance data and credible data. This DCP removes ‘AMD’ from DASR Acronyms					
CURRENT ACRONYM TEXT					
<table><tr><td>AMD</td><td>Authorised Maintenance Data</td></tr></table>				AMD	Authorised Maintenance Data
AMD	Authorised Maintenance Data				
REVISED ACRONYM TEXT					
Delete AMD in toto from DASR Acronyms					



DASR ACRONYMS
RATIONALE FOR CHANGE
The term Authorised Maintenance Data (AMD) is only used in GM SPA.10.B – Command Clearance (AUS) and can cause confusion as DASR generally uses the terms maintenance data and credible data This DCP also removes ‘AMD’ from DASR Glossary, ‘Task ‘Sign-Off’ *’ definition.
CURRENT GLOSSARY TEXT
<u>Task ‘Sign-Off’ *</u> This is a statement, signed by an appropriately authorised and competent person or an appropriately authorised and competent MAML holder, that, the maintenance task has been completed, to the standard required, in accordance with the AMD.
REVISED GLOSSARY TEXT
<u>Task ‘Sign-Off’ *</u> This is a statement, signed by an appropriately authorised and competent person or an appropriately authorised and competent MAML holder, that, the maintenance task has been completed, to the standard required, in accordance with the maintenance data.

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DASR AMENDMENT RECORD DCP - 0055	
DASR CLAUSE: DASR 21 SUBPART C	
RATIONALE FOR CHANGE	
Minor amendment to DASR 21 Subpart C to clarify parts of GM and AMC	
CURRENT REGULATION TEXT	
Refer Annex A: DASR 21 Subpart C AMC and GM Amendment Record	
REVISED REGULATION TEXT	
Refer Annex A: DASR 21 Subpart C AMC and GM Amendment Record	



DCP-0055: DASR 21 Subpart C AMC & GM Amendments

Notes to readers:

This document shows the proposed changes to the AMC and GM wording as follows:

- a. Highlighted text marks an addition.
- b. Strikethrough formatting marks removal.
- c. Green text marks Australian-specific text.

This document does not contain the affected subparts in their entirety and only contains the sections that contain proposed changes. The changed sections have been marked by their header AMC/GM number and split using “...” to represent unchanged text.

Subpart B – MILITARY TYPE-CERTIFICATES AND MILITARY RESTRICTED TYPE-CERTIFICATES

AMC1 21.A.14(c) - Alternative Demonstration (AUS)

...

The TCAE should contain the following:

- a. Information regarding the eligibility of the organisation to hold the Type Certificate (and subsequent changes to type design, MSTC and major repairs) in accordance with the requirements of DASR 21.A.14 (and / or DASR 21.A.92(a) and / or DASR 21.A.112B and / or DASR 21.A.117(c) and / or DASR 21.A.432B if applicable). This includes demonstration against the recognition framework criteria (see below) where external design organisations have been engaged via DASR 21.A.2 to provide DASR 21 Subpart J, or holder functions.
- b. An overview of the Product's Type Design and Certification including subsequent modifications (and / or Supplementary Certificates and major repairs if applicable). Access arrangements to type design data for the life of type should be included here.
- c. ADF Configuration, Role and Environment (CRE) (including a link to the SOIU).
- d. ADF Capabilities to support the Product including specialist support.
- e. Key organisations involved in the management of the product's design, including their contractual relationships with Defence; their maturity, experience, capabilities, limitations, responsiveness, quality of product, impartiality, past performance, and future viability; and any gaps in overall coverage. Information related to DASR 21 subpart J approval held by the organisation or equivalent approvals held under recognised authorities should be included.
- f. An assessment of the likelihood of leveraging other military and civil operator's programs to support the Defence product's design, including Defence's ability to influence those programs, and the type of data that will be accessible.
- g. Information related to the performance of holder obligations under DASR 21.A.44 (and / or DASR 21.A.118A and / or DASR 21.A.451 if applicable), including systems, processes and procedures used.
- h. Information related to how the organisation, or the design organisation(s) with which they have an agreement, will perform its function as an applicant for and holder of any subsequent major changes to type design after the issue of the MTC. This information should include a methodology for major or minor classification of recognised design certifications.
- i. Information related to how the requirements of DASR 21.A.42 for integration of Products, Weapons and other Systems onto the aircraft will be conducted.

- j. Information about the nominated individual responsible for managing the in-house and contracted holder obligations and QTE compliance information.
- k. System of managing changes to the TCAE including frequency of review and notifying the Authority of any changes.
- l. How the organisation conducts internal governance including over their supporting design organisation(s)/network.
- m. A compliance matrix describing how the organisation shall comply with each DASR applicable to fulfil the MTC Holder obligations.
- n. Information related to how the requirements of DASR 21.A.3A for reporting failures, malfunction, defects and the rectification of unsafe conditions to the type design will be conducted.

Type Continued Airworthiness Exposition (TCAE) requirements

The TCAE shall include all elements describing how the MTC holder will undertake continued airworthiness for the platform and execute the obligations of the Holder. The TCAE is the key foundation document detailing the specific arrangements for the platform. The TCAE should contain the following:

- a. Information regarding the demonstration against the recognition framework criteria (see below) where external design organisations have been engaged via DASR 21.A.2 to provide holder functions.
- b. An overview of the product's type design and certification genesis including subsequent modifications (and / or supplemental type certificates and major repairs if applicable). Access arrangements to type design data for the life of the type should be included here.
- c. ADF Configuration, Role and Environment (CRE) (including a link to the Statement of Operating Intent and Usage (SOIU)).
- d. ADF capabilities to support the product including specialist support.
- e. Key organisations involved in the management of the product's design, including their contractual relationships with Defence; their maturity, experience, capabilities, limitations, responsiveness, quality of product, impartiality, past performance, and future viability; and any gaps in overall coverage. Information related to DASR 21 Subpart J approval held by the organisation or equivalent approvals held under recognised authorities should be included.
- f. An assessment of the likelihood of leveraging other military and civil operator's programs to support the Defence product's design, including Defence's ability to influence those programs, and the type of data that will be accessible.
- g. Information related to the performance of holder obligations under DASR 21.A.44; DASR 21.A.118A (where applicable) and DASR 21.A.451 (where applicable), including systems, processes and procedures used.
- h. Information related to how the organisation, or the design organisation(s) with which they have an agreement, will perform its function as an applicant for and holder of any subsequent major changes to type design after the issue of the MTC.
- i. Information related to how the requirements of DASR 21.A.M42 for integration of Products, Weapons and other Systems onto the aircraft will be conducted.
- j. Information about the nominated individual responsible for managing the in-house and contracted holder obligations and qualifications and experience compliance information for key personnel.
- k. System of managing changes to the TCAE including frequency of review and notifying the Authority of any changes.

- l. How the organisation conducts internal governance including over their supporting design organisation(s)/network.
- m. A compliance matrix describing how the organisation shall comply with each DASR applicable to fulfil the holder obligations under DASR 21.A.44; DASR 21.A.118A (where applicable) and DASR 21.A.451 (where applicable).
- n. Information related to how the requirements of DASR 21.A.3A for reporting failures, malfunction, defects and the rectification of unsafe conditions will be conducted.

...

AMC 21.A.21(a)(1) - Alternative Demonstration (AUS)

Establishment of MTC holder

Where the applicant is an acquisition Project Office that has demonstrated its capability under [DASR 21.A.14\(c\)](#), the PO must ensure that an MTC holder organisation who will hold the type certificate has been established. ~~and the associated TCAE reviewed by the Authority.~~ The nominated holder is to seek a military type certificate holder organisation (MTCHO) approval under DASR 21 Subpart C.

...

SUBPART C - MILITARY TYPE-CERTIFICATE HOLDER ORGANISATION

GM 21.A.73(b) – Australian Defence Context

Unlike civil TC type certificate holder obligations, the obligations attendant with holding Defence-issued authorisations under the DASP (for MTC, MRTC, MSTC and Major Repairs) ~~Defence MTC and MRTC obligations~~ are not enforceable via national legislation; DASR (in general) are enforceable for commercial organisations only via contract law. As a result, during the certification or approval process, the Authority will assess a nominated Australian government organisation under [DASR 21 Subpart C](#), and when satisfied issue the military type-certificate holder organisation (MTCHO) approval ~~(MTCHO approval)~~ to that organisation. Upon issue of the relevant MTC under [DASR 21 Subpart B](#), that organisation becomes responsible for conduct of the holder obligations as detailed in [DASR 21.A.44](#), and where subsequent authorisations are issued, the relevant obligations under DASR 21.A.109, DASR 21.A.118A and DASR 21.A.251(a).

~~Contracting of holder responsibilities.~~

Where the government organisation does not meet [DASR 21.A.14\(a\) or \(b\)](#) provisions, or is unable to meet all obligations internally, it may demonstrate its capability to hold an MTC, MRTC, MSTC or Major Repair authorisation by holding an approval issued under DASR 21 Subpart C. ~~which allows for the government organisation to contract~~ The organisational approval is underpinned by DASR 21.A.2 enabling a support arrangement with a design organisation to be entered for the provision of undertaking the [DASR 21.A.44](#), [DASR 21.A.118A](#) and [DASR 21.A.451\(a\)](#) ~~aligned~~ holder obligations. ~~to commercial or foreign design organisations under [DASR 21.A.2](#).~~

Where procurement/support arrangements do not include a DASR MDOA and rely on a foreign design organisation, ~~preclude an external organisation holding a DASR MDOA from being contracted under these provisions~~, the holder organisation will need to use the DASA recognition framework to describe how holder obligations will be achieved. ~~assist demonstration of the external design organisation as suitable to meet the requirements.~~ Particular attention shall be paid to how failures,

~~malfunctions and defects~~ unsafe conditions identified in the type design are provided to the MTCHO and subsequently rectified (DASR 21.A.3A and 21.A.3B). ~~are reported into the DASR framework (DASR 21.A.3A) and investigated for impact to the type design.~~

AMC 21.A.73(b) – Agreement with a design organisation

The agreement entered into with the supporting design organisation(s) as enabled by DASR 21.A.2 should be suitable to support the military type-certificate holder undertaking or executing the holder obligations and functions, and the Authority needs to be assured that the support design organisation(s) are competent in the tasks functions they are ~~contracted~~ required to perform.

...

GM 21.A.76(a) – (Type) Continued Airworthiness System

...

3.1.1 General

...

(g) How the military type-certificate holder organisation undertakes technical hazard log management for their products in collaboration with their operators to ensure hazards are eliminated or otherwise minimised ~~managed~~ SFARP.

...

3.1.4 Senior Defence Engineer (SDE)

(I) Providing platform technical advice to operators with respect to flight conditions underpinning Military Permit to Fly (MPTF) applications ~~or other risk-based authorisations.~~

...

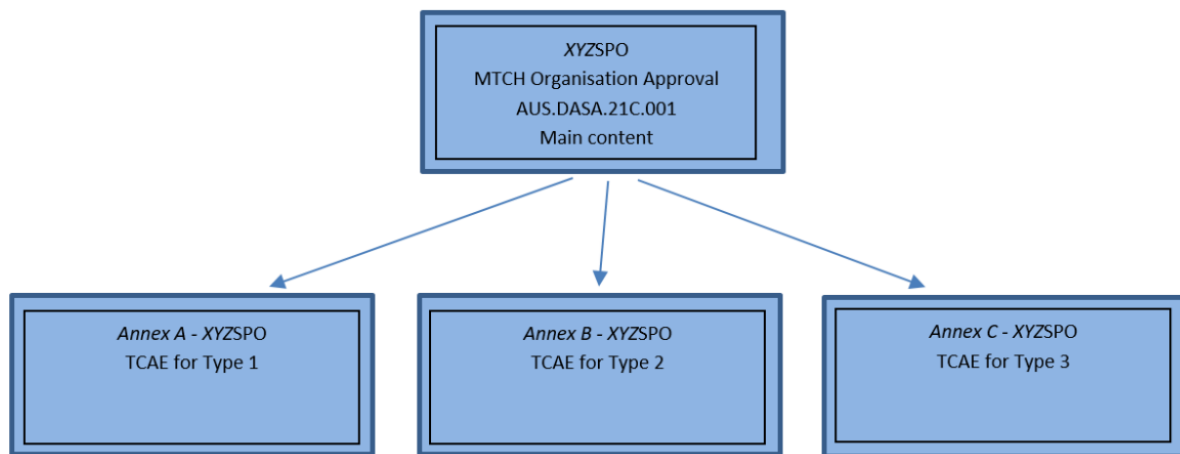
AMC 21.A.76(c) – (Type) Continued Airworthiness System - Governance

The governance system shall include periodic reviews based on the complexity and nature of the arrangements with the supporting organisation(s) and have appropriate feedback mechanisms to correct deficiencies. The governance function has the intent to ensure ~~contracted~~ supporting design organisation(s) are executing continued airworthiness obligations and functions as required by their arrangement. ~~are being executed in accordance with~~ [DASR 21.A.44](#).

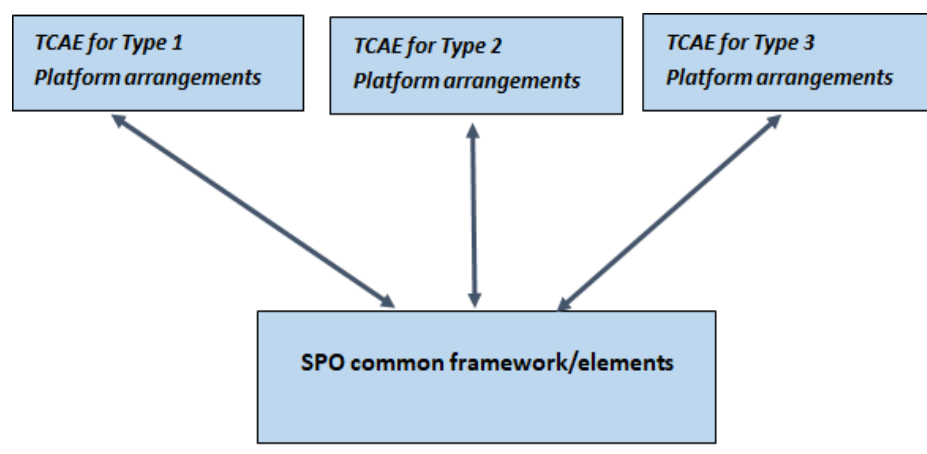
AMC 21.A.76(d) – Safety Management System

The SMS of the military type-certificate holder organisation shall be based on the size and complexity of the organisation. To meet the intent of DASR.SMS, the military type-certificate holder organisation may integrate their systems into the SMS of the supporting organisation or the Operator or elements of both. The intent of the DASR.SMS is to manage ~~organisational~~ hazards that may contribute or develop into flight safety hazards. The MTCHO is not expected to have a stand-alone SMS given the nature of their function within the DASR, however is required to meet the intent by prioritising safety outcomes to continually drive down ~~organisational~~ hazards that pose risk to the continued airworthiness of the type.

GM 21.A.77(a) – Type Continued Airworthiness Exposition (TCAE) Intent



To be removed figure – DO NOT INCORPORATE THIS TEXT



Replacement figure – DO NOT INCORPORATE THIS TEXT

GM 21.A.77(d) – Statement of the qualifications and experience

...

3.3 Personnel making decisions affecting continued airworthiness (where applicable)

For these personnel, no individual statement is required. The applicant should show to the Authority that there is a system to select, train, maintain and identify them for all tasks where they are necessary.

The following guidelines for such a system are proposed:

- a) These personnel should be identified in the exposition, or in a document linked to the exposition. This, and the corresponding procedures, should enable them to carry out the assigned tasks and to properly discharge associated responsibilities.

- b) The needs, in terms of quantity of these personnel to sustain the organisation's activities, should be identified by the organisation.
- c) These personnel should be chosen on the basis of their knowledge, background and experience.
- d) When necessary, complementary training should be established, to ensure sufficient background and knowledge in the scope of their authorisation. The minimum standards for new personnel to qualify in the functions should be established. The training should lead to a satisfactory level of knowledge of the procedures relevant for the particular role.
- e) Training policy forms part of the continued airworthiness system and its appropriateness forms part of investigation by the Authority within the organisation approval process and subsequent surveillance of persons proposed by the organisation.
- f) This training should be adapted in response to experience gained within the organisation.
- g) The organisation should maintain a record of these personnel which includes details of the scope of their authorisation. The personnel concerned should be provided with evidence of the scope of their authorisation.

...

AMC 21.A.81 – Applications – Form and manner

DASR Form 80C—Application for Military Type Certificate Holder Organisation approval and significant changes, is to be obtained from the Authority, and completed by the Accountable Manager of the organisation. The completed form (or changes there-of), an outline of the type continued airworthiness exposition (or changes there-of), and details of the proposed terms of approval (or changes there-of) are to be forwarded to the Authority. A change to the terms of approval that seeks to modify the privileges awarded under DASR 21.A.87c) or 21.A.87d) (i.e. the addition of applicable products on the accepted and justified list) should be considered as a 'significant' change.



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DASR AMENDMENT RECORD DCP - 0080

DASR CLAUSE: GM DASR MED.10.A para 4

RATIONALE FOR CHANGE

DASA has amended GM MED.10.A para 4 to align DASR Guidance Material with AC SI(OPS) 01-39 para 26. This amendment details that Defence use of an appropriate CASA issued medical certificate is acceptable for Defence pilots operating 100SQN aircraft and Air Force Balloon.

CURRENT REGULATION TEXT

CASA medical certificates. Defence use of an appropriate CASA-issued medical certificate is acceptable IAW the following:

- a. Reserve members and civilians (eg Defence Australian Public Servants, contractors) who provide Air Traffic Control services
- b. Civilians who pilot Defence Aircraft
- c. only for those flying related duties for which the certificate was issued
- d. only in non-deployed operations.

REVISED REGULATION TEXT

CASA medical certificates. Defence use of an appropriate CASA-issued medical certificate is acceptable IAW the following:

- a. Reserve members and civilians (eg Defence Australian Public Servants, contractors) who provide Air Traffic Control services
- b. Civilians who pilot Defence Aircraft
- c. only for those flying related duties for which the certificate was issued
- d. Defence Pilots operating 100SQN aircraft
- e. Defence Pilots operating Air Force Balloon
- f. only in non-deployed operations.





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DASR AMENDMENT RECORD DCP-0064

DASR CLAUSE: AMC SPA.30(b)2a.iv.d

RATIONALE FOR CHANGE

Current AMC wording embeds outdated, document specific limitations that no longer reflect current Defence EO policy, risk becoming misaligned with future changes in EO documentation, and may unintentionally constrain operators from applying more appropriate, system specific risk controls. DCP-0064 will amend AMC to provide more outcome-focussed wording that directs operators to apply detailed platform-specific knowledge, approved procedures and contemporary Defence EO policy.

CURRENT REGULATION TEXT

'for all Aircraft when dispensing flares, 2000 feet AGL over land and 500 feet over open water, except that MAO-AMs and UAS Operators should increase these heights using SRM, when thrustured flares (eg MJU-57) are employed.'

REVISED REGULATION TEXT

Delete AMC SPA.30(b)2a.iv.d in toto. Replace with AMC SPA.30(b)2a.:

- v **Flare dispense height limitations.** MAOs and UAS Operators should:
 - (a) apply Safety Risk Management (SRM) to determine minimum flare dispense heights which:
 - 1 are appropriate to the specific flare type, including its construction, burn characteristics, separation trajectory, and any components that may fall to the surface
 - 2 ensure the flare, its casing, or associated debris cannot present a hazard to Crew, officials, Spectators, Secondary Spectators, General Public, property or other Aircraft
 - 3 consider Aircraft performance, environmental conditions, and whether the release is over land or water



- 4 ensure sufficient separation from Spectators and Secondary Spectators in the event of abnormal flare behaviour (eg dud, short burn, thrusted release, or non-standard trajectory)
- (b) publish the minimum flare dispense height in OIP and review these heights periodically, or when flare types, Aircraft, or operating conditions change.

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DASR AMENDMENT RECORD DCP - 0050					
DASR CLAUSE: GM SPA.10.B paragraph 1					
RATIONALE FOR CHANGE					
The term Authorised Maintenance Data (AMD) is only used in GM SPA.10.B – Command Clearance (AUS) and can cause confusion as DASR generally uses the terms maintenance data and credible data. GM SPA.10.B to be amended to remove the term AMD to improve the clarity of the GM.					
CURRENT REGULATION TEXT					
1. Due the breadth of circumstances that may be approved by a Command Clearance, the documentation of the decision-making process may range from a stand-alone Command Clearance approval that elaborates on the factors considered, through to being documented in the AMD risk assessment process as used for a Deferred Defect.					
REVISED REGULATION TEXT					
1. Due the breadth of circumstances that may be approved by a Command Clearance, the documentation of the decision-making process may range from a stand-alone Command Clearance approval that elaborates on the factors considered, through to being documented in the risk assessment process used for Deferred Defect management.					



DASR AMENDMENT RECORD
DCP - 0050

DASR CLAUSE: DASR Glossary

RATIONALE FOR CHANGE

The term Authorised Maintenance Data (AMD) is only used in GM SPA.10.B – Command Clearance (AUS). GM SPA.10.B has been amended to remove the term AMD, therefore it can be removed from the DASR Glossary.

CURRENT DASR GLOSSARY TEXT

Authorised Maintenance Data (AMD) *

Those instructions, approved for use by the responsible Authority, required to retain aircraft and aircraft-related equipment in an airworthy condition. These instructions include, but are not limited to, maintenance manuals, technical maintenance plans, servicing schedules, component lifing policies and inspection programs.

REVISED DASR GLOSSARY TEXT

Delete glossary entry in toto.

Note the ADF Glossary also needs to be updated to remove 'authorised maintenance data' ID [67525](#)

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DASR AMENDMENT RECORD DCP - 0074	
DASR CLAUSE: AMC1 139.50 6b	
RATIONALE FOR CHANGE	
Alignment of DASR 139 terminology with ICAO Pavement Classification Rating (PCR)	
CURRENT REGULATION TEXT	
AMC1 DASR 139.50: 6b: Runway and taxiway information, including pavement classification number (PCN) data and runway distance supplement (RDS)	
REVISED REGULATION TEXT	
AMC1 DASR 139.50: 6b. Runway and taxiway information, including Pavement Classification Rating (PCR) data and runway distance supplement (RDS)	



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DASR AMENDMENT RECORD DCP - 0078	
DASR CLAUSE: DASR 139.50 paragraph 5	
RATIONALE FOR CHANGE	
The acronym APSEM stands for “Aircraft Pavement Strength Evaluation Manual”; however, DASR 139.50 (paragraph 5) refers to it as the “Airfield Pavement Strength Evaluation Manual”. This inconsistency in terminology may lead to confusion for users and misinterpretation of the referenced document. This proposal seeks to correct the terminology by replacing “Airfield” with “Aircraft”, thereby ensuring alignment with the correct definition and improving clarity within the DASR.	
CURRENT REGULATION TEXT	
5. Reference to the Airfield Pavement Strength Evaluation Manual	
REVISED REGULATION TEXT	
5. Reference to the Aircraft Pavement Strength Evaluation Manual	



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DASR AMENDMENT RECORD DCP 0063	
DASR CLAUSE: DASR AO.Gen.05D AMC 1e	
RATIONALE FOR CHANGE	
To align DASR AO.Gen.05 AMC 1e wording with the current Defence Aviation Orders, Instructions and Publications Manual (AVOIPMAN) rather than the superseded AAP 7000.001 Defence Aviation Publication Management Manual (DAPMM).	
CURRENT REGULATION TEXT	
"advising units on operation of the Defence Aviation Publication System"	
REVISED REGULATION TEXT	
"advising units on operation of the organisation's approved OIP system that ensures effective management, control and distribution of all applicable aviation publications and technical documents, in accordance with Defence requirements"	



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DASR AMENDMENT RECORD DCP-0077	
DASR CLAUSE: DASR SMS & Glossary	
RATIONALE FOR CHANGE	
Alignment of terminology across all DASRs and improve reference to SMS training.	
CURRENT REGULATION TEXT	
Current DASR SMS include 10 instances of "Authorised Organisation" across GM SMS.00 a, SMS.00 (a), SMS.05(a), SMS.10(a), SMS.20(a), SMS.30(a), SMS.40(a)	
Glossary: Noteworthy Risk An Aviation Safety risk that is determined to require particular scrutiny/monitoring (eg agreed specific Hazards and/or risks), has Defence-wide or cross Group/Service implications (eg Defence Fuel Installations), or has a residual risk level above a specific level, as defined by the Accountable Manager (AM).	
REVISED REGULATION TEXT	
1) Replace all instances of "Authorised Organisation" with "Approved Organisation". 2) AMC SMS.40(a)1 - Safety training and education: Hyperlink "DASA website" to https://dasa.defence.gov.au/safety-management-systems#sms-training 3) Glossary: Noteworthy Risk An Aviation Safety risk that is determined to require particular scrutiny or monitoring (eg agreed specific Hazards or risks), has Defence-wide or cross organisational implications (eg Defence Fuel Installations), or has a residual risk level above a specific level defined by the Accountable Manager (AM).	

