



POLICY PROPOSAL

PP 2107US



Proposed amendments to Part 101 CASR and MOS - Unmanned aircraft and rockets

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1 Reference material

1.1 Acronyms

The acronyms and abbreviations used in this policy proposal are listed in the table below.

Acronym	Description
AAT	Administrative Appeals Tribunal
AGL	above ground level
AMSL	above mean sea level
ATC	Air Traffic Control
AOD	alcohol and other drugs
ATO	Approved Testing Officer
ASAP	Aviation Safety Advisory Panel
ATC	air traffic control
ATS	air traffic services
ATSB	Australian Transport Safety Bureau
BVLOS	beyond visual line of sight
CAA	Civil Aviation Authority
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CofA	Certificate of Airworthiness
CONOPS	concept of operations
CRI	Chief RePL Instructor
CRP	Chief Remote Pilot
DAMP	drug and alcohol management plan
DPP	documented practices and procedures
EVLOS	extended visual line of sight
FPV	first person view
HLS	helicopter landing site
IAW	in accordance with
ICAO	International Civil Aviation Organization
LIRA	Legal, International & Regulatory Affairs Branch, CASA
MOS	Manual of Standards

Acronym	Description
MTOW	maximum take-off weight
NAA	national aviation authority
NOF	NOTAM office
NOTAM	Notice to Airmen
OAR	Office of Airspace Regulation
OPC	Office of Parliamentary Counsel
PIR	post implementation review
PMI	principles and methods of instruction
ReOC	RPA operator certificate
RePL	remote pilot licence
RPA	remotely piloted aircraft
RPAS	remote piloted aircraft system
RPS	remote pilot station
SME	subject matter expert
STEM	science, technology, engineering and mathematics
TC	type certificate
TWG	technical working group
SOC	standard RPA operating conditions
VLOS	visual line of sight
VMC	visual meteorological conditions

1.2 Definitions

Terms that have specific meaning within this policy proposal are defined in the table below.

Term	Definition
beyond visual line of sight operation	An operation in which the remote crew does not have direct visual contact with the aircraft.
excluded RPA	An RPA operated under prescribed conditions for commercial purposes that does not require a CASA authorisation in the form of an RPA operator's certificate (ReOC) and/or a remote pilot licence (RePL) (for some weight categories): see regulation 101.237 of CASR for details.
extended visual line of sight operation	An operation, available to approved operators and remote pilots only, where, at times, the remote pilot does not have direct visual sight of the RPA; however, with assistance from trained RPA observers, the remote pilot is able to ensure safe operation of the RPA.

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Term	Definition
first person view	A visual method for controlling an RPA from a remote pilot station via an on-board camera. FPV equipment can only be used as an adjunct to visual observation during visual operations.
large RPA	An RPA (other than an airship) with a gross weight of more than 150 kg, or a remotely piloted airship with an envelope capacity of more than 100 m ³ .
medium RPA	An RPA with a gross weight of more than 25 kg but not more than 150 kg, or a remotely piloted airship with an envelope capacity of not more than 100 m ³ .
micro RPA	An RPA with a gross weight of not more than 250 g.
model aircraft	An aircraft that is used for sport or recreational purposes and which cannot carry a person, with a maximum gross weight of no more than 150 kg.
operator (the ReOC holder)	A person, organisation or enterprise engaged in, or offering to engage in, an RPAS operation.
populous area	In relation to the operation of an unmanned aircraft, an area that has a sufficient density of population for some aspect of the operation, or some event that might happen during the operation (in particular, a fault in, or failure of, the unmanned aircraft) to pose an unreasonable risk to the life, safety or property of somebody who is in the area, but is not connected with the operation.
remote crew member	A crew member charged with duties essential to the operation of a remotely piloted aircraft system during flight time.
remote pilot	The person who manipulates the flight controls of a remotely piloted aircraft, or who initiates and monitors the flight, and is responsible for its safe conduct during flight time.
remotely piloted	An aircraft is remotely piloted when controlled from a pilot station that is not on board the aircraft.
remotely piloted aircraft (RPA)	A remotely piloted aircraft, other than a balloon, a kite, or model aircraft.
remotely piloted aircraft system	A set of configurable elements consisting of a remotely piloted aircraft, its associated remote pilot station(s), the required command and control transmitters and receivers, and any other system elements as may be required at any point during flight operation.
remote pilot station	The place from which an RPA is operated by a RePL holder.
RPA observer	A remote crew member who, by visual observation of the RPA and the adjacent airspace, assists the remote pilot in the safe conduct of the flight.
small RPA	An RPA with a gross weight of more than 2 kg but not more than 25 kg.
very small RPA	An RPA with a gross weight of more than 250 g but not more than 2 kg.
visual line of sight operation	An unmanned aircraft operation in which the remote pilot operating the remotely piloted aircraft can continually see, orient and navigate the aircraft to meet their separation and collision avoidance responsibilities, with or without corrective lenses, but without the use of binoculars, a telescope or other similar device.

1.3 References

Legislation

Legislations are available on the Federal Register of Legislation website <https://www.legislation.gov.au/>

Document	Title
Primary	
	<i>Civil Aviation Act 1988</i>
	<i>Civil Aviation Regulations 1988 (CAR)</i>
	<i>Civil Aviation Safety Regulations 1998 (CASR)</i>
Part 47 of CASR	Registration of aircraft and related matters
Part 99 of CASR	Drug and alcohol management plans and testing
Part 101 of CASR	Unmanned aircraft and rockets
Regulation 2 of CAR	Interpretation
Instruments	
CASA Instrument 01/17	<i>Approval – Operation of RPA at night</i>
CASA Instrument 55/20	<i>Operation of Certain Unmanned Aircraft Directions 2020</i>
CASA EX37/21	<i>Educational, Training or Research Use of Certain RPA as if They were Model Aircraft – Prescription and Exemption Instrument 2021</i>
CASA EX38/21	<i>Obtaining Experience for Grant of RePL for Medium RPA, and for RePL Upgrade to Different Category of Small or Medium RPA – Exemption Instrument 2021</i>
CASA EX46/21	<i>Remotely Piloted Aircraft Operations Beyond Visual Line of Sight Instrument 2021</i>
Part 101 Manual of Standards	<i>Unmanned aircraft and rockets</i>

2 Introduction

2.1 Background

The drone industry is rapidly expanding. To keep pace with sector growth and demand, legislation governing drone operations must be regularly reviewed and assessed to provide effective and efficient regulations for all airspace users and the community.

In 2016, major amendments were made to Part 101 (Unmanned Aircraft and Rockets) of the Civil Aviation Safety Regulations 1998 (CASR) and its associated Part 101 Manual of Standards (MOS). In line with CASA policy, we have commenced a regulatory post-implementation review (PIR) of Part 101 and its MOS to recognise what is working well, what could work better, and what will be needed in the future, to support the rapidly evolving environment.

In addition to Part 101 of CASR and the Part 101 MOS, CASA relies on several legal instruments and approval conditions to manage RPAS (remote piloted aircraft system) safety regulation; however, it would be preferable to have a consolidated set of regulations and standards, with some built-in flexibility, to ensure clarity of policy and consistency across the wider industry. These proposed amendments seek to incorporate the relevant CASA direction, exemptions, and other instruments.

Improvements has been identified through several sources, including structured policy review and regulatory development activities within CASA, and formal and informal feedback from industry, Airservices Australia, the recreational sector and the public.

One of the primary goals of these amendments is to make the approval process for operators and their remote pilots more efficient and less costly to industry. This objective can be met by ensuring that the regulations are clear about the need for an approval by different people or entities involved in the operation.

Also, by providing options from the regulations into the MOS, CASA will be able to manage the safety risks of these operations more efficiently and at a lower cost to, and regulatory burden on, industry and the recreational sector.

2.2 Regulatory issues

The proposed amendments are to improve safety, facilitate better efficiency for CASA and industry, effect better processes, reduce costs, clarify requirements, and provide a more consistent framework for the regulation and operation of aircraft and rockets under Part 101 of CASR and its MOS. The proposed amendments will have far-reaching positive effects for operators.

Benefits include:

- deregulating indoor (enclosed) operations; providing further opportunities for operators by reducing red tape and the requirement for additional approvals (i.e., 30 metre rule) and aligning model aircraft and RPA (remotely piloted aircraft) regulations for enclosed operations
- use of automated systems for low-risk regulatory decision-making

- accurate data points for the measurement of 3 NM from aerodromes in CASA-verified drone safety apps
- creating a more efficient and streamlined regulatory suite by integrating several exemptions/instruments; clarifying definitions and reducing duplication and conflicting requirements
- directly supporting innovative operations, such as research, development and testing through increased flexibility to assess and approve novel operations and technological advancement
- reducing record keeping requirements for low-risk operations and defining 'significant change' for operations manuals
- clarifying requirements across Part 101 of CASR and its MOS
- adoption of gender-neutral language.

2.3 Previous consultation

CASA receives formal and informal feedback on drone related issues and pain points from various stakeholders such as, operators, industry bodies and the public. Feedback is collated and reviewed by subject matter experts (SME) and forms part of the consultative, policy development and regulatory review process.

Through the Aviation Safety Advisory Panel (ASAP), a formal technical working group (TWG) was established comprising of representatives from various areas of the drone industry, to ensure representation of all stakeholders affected by these proposed policies and amendments.

Participants met over video conference on 14, 15 and 20 July 2021 to consider the policies and amendments. The TWG was attended by representatives from:

- Advanced Aerial Solutions
- Airservices Australia
- Australian Association for Unmanned Systems (AAUS)
- Australian Certified UAV Operators (ACUO)
- Aviation Australia
- Fire Rescue Queensland
- HoverUAV
- Innovaero
- Insitu Pacific
- JFP Services
- Model Aeronautical Association of Australia (MAAA)
- Morrison Aerial Robotics
- SUA ROV
- Swoop Aero.

The TWG reached general consensus in support of the proposed policies and amendments and recommended that CASA proceed with public consultation. This consultation draft sets out the full policy proposals for Parts 11, 99 and 101 of CASR for public consideration and comment.

3 Proposed policy amendments

3.1 Preliminary information

This section outlines the policy intent, the proposed change and background to the issues leading to the proposed change. Each proposed policy or amendment, includes the following sections:

- Reference(s)
 - the applicable legislation or the Manual of Standards (MOS)
- Background
 - the detail in relation to the event or issues leading to the proposed change
- Issue
 - an explanation of the issue(s) and the reason for the change
- Key objectives
 - proposed structure and overall intent of the desired outcomes for each change.

CASA is proposing amendment to both CASR and MOS as there is a high level of interdependence between amendments. The 'overview and questions' document (the survey) references some of the information contained here. Please use this policy document for a more detailed explanation of the proposed amendments.

3.2 Alcohol and other drugs

3.2.1 Provide CASA the ability to test for alcohol and other drugs and Drug & Alcohol Management Plan (DAMP) applicability

References(s)

- Part 99 of CASR
- subregulation 99.030 (2) of CASR

Background / Issue

Consideration and management of alcohol and other drugs in the workplace is well understood by most organisations and entities. ReOC (RPA operator certificate) holders, operators and remote pilots generally have appropriate structures, procedures and processes in place to manage and mitigate the risks and consequences that can be caused by alcohol and other drugs.

The requirement for an organisation to establish and maintain a Drug and Alcohol Management Plan (DAMP) is in Part 99 of CASR (subregulation 99.030 (2)). While this requirement is well understood and established for operators of conventionally piloted aircraft, it does not apply to operators of RPA. The definition of persons performing Safety Sensitive Aviation Activities (SSAA) should be amended to include persons who are participating in RPA-related operations.

Some RPA operations involve medium to large RPA in high-risk situations or locations (such as near controlled aerodromes), performing complex or difficult manoeuvres. The consequences of

harm during such operations may be significantly increased if a remote pilot is under the influence of alcohol or other drugs (AOD). With technological advances and future operations where conventionally piloted and remotely piloted aircraft will share airspace in an integrated way, risks such as AOD in the workplace must be carefully assessed and managed.

Key objectives

CASA seeks to amend applicability of Subpart 99.B (subregulation 99.030 (2)) to include a requirement for ReOC holders, to develop and maintain a DAMP (or a micro DAMP). CASA seeks to retain flexibility to approve certain ReOC holders from the requirement to have a DAMP, for example, operators of low risk, small to medium RPA. CASA seeks to understand and consider the impacts of a transitional period for ReOCs to comply with DAMP requirements.

Testing Requirements

CASA **proposes** to seek the ability of a CASA approved testing officer to test a person who is performing unmanned aircraft-related Safety Sensitive Aviation Activities (SSAA) for alcohol or other drugs. These activities are proposed to be defined for individuals who are:

- operating a model aircraft
- or
- operating an RPA
- or
- essential to the control and navigation of the RPA.

Testing by CASA approved testing officers would be carried out randomly as well as targeted testing based on information and intelligence provided to CASA.

Allowing CASA approved testing officers to conduct such testing would enhance aviation safety and ensure that operators consider AOD use as a risk to their operations and mitigate these risks accordingly.

DAMP Requirements

A DAMP is a risk mitigation plan for an organisation to identify and manage potential safety risks associated with the use of AOD.

In line with creating an SSAA activity within Part 99 of CASR relevant to the operation of RPA, ReOC holders would be required to, regardless of the size of the RPA they operate (i.e., small, medium, or large), establish and manage a DAMP.

Subject to the outcomes of public consultation, CASA may limit the DAMP requirement to those ReOC holders operating only medium and large RPA. Operation of small RPA would not require a DAMP.

The formal introduction of DAMP requirements may create additional administrative burden to operators; however, ReOC holders generally, have already implemented their own policies in relation to AOD in accordance with CASA guidelines.

Micro-Business DAMP Exemption

For ReOC organisations with 10 employees or less who are identified as operating in SSAA, CASA **proposes** to introduce a Micro-Business DAMP mechanism in Part 99 or 101 of CASR. Under a micro-business DAMP, an operator may apply for and, if approved, implement and manage a smaller scaled DAMP. The micro-business DAMP would provide the organisation authority to conduct random testing on its personnel, but this is not a requirement.

The circumstances for the proposed required micro-business DAMP testing are:

- following an accident or serious incident
- if the DAMP supervisor has reasonable grounds to believe a person may be adversely affected by AOD

or

- following return to work after a positive result (see sections 4-10 of the [CASA Micro-business Drug and Alcohol Management Plan \(DAMP\)](#)).

3.3 Enclosed/ Sheltered operations

3.3.1 Concept of enclosed and sheltered operations – use of RPA and model aircraft ‘indoors’

Reference(s)

- Regulation 101.005 of CASR
- Regulation 101.025 of CASR
- Part 101 MOS

Background / Issue

Due to the risks they present to other airspace users, or people and property on the ground (e.g., night operations, operations within 3 NM of a controlled aerodrome, operations close to people) Part 101 of CASR restricts unmanned aircraft operations. When operations are conducted indoors, airspace risks can be mitigated. For other categories of risk, operators must comply with existing limiting regulations.

Regulation 101.005 of CASR (Applicability of Part) does not provide consideration of alleviation for RPA operations indoors but does so for model aircraft. Aligning the applicability of Part 101 of CASR for RPA used indoors – or for ‘enclosed operations’, for which the aviation safety risks are limited, and risks to people and property are better managed by other safety legislation, will simplify the regulations and provide extended utility for operators.

Key objectives

Enclosed operations

CASA **proposes** to deregulate operational spaces where the likelihood of the RPA escaping and posing a hazard to other airspace users is removed. CASA considers that other regulatory requirements and standards will mitigate risk to people or property in ‘enclosed’ spaces. This approach has been adopted by other National Aviation Authorities including the United States

Federal Aviation Administration, United Kingdom Civil Aviation Authority, Federal Office of Civil Aviation Switzerland, European Union Aviation Safety Agency and Transport Canada. In addition, regulation 101.055 of CASR also provides that a person must not operate in a way that creates a hazard to another aircraft, person, or property, which applies to operations both indoors and out.

Sheltered operations

The concept of sheltered operations provides for people (and possibly animals) that are sheltered from the unmanned aircraft that is operating outside of a protective structure. A sheltered operation would allow the operation of unmanned aircraft within 30 m of a person who is sheltered.

Sheltered operations will not apply to rockets, balloons, or kites.

CASA is also considering shielded operations like New Zealand Civil Aviation Rule 101.3; *Operation of an aircraft within 100m of, and below the top of, a natural or manmade object.*

The Part 101 MOS would also be amended to reference the revised definitions and any consequential changes required.

3.3.2 Definitions for enclosed operation and sheltered operation

Reference(s)

- CASR Dictionary

Background / Issue

CASA is proposing new definitions for *enclosed operation* and *sheltered operation* to provide greater flexibility relating to operations conducted 'indoors'.

Enclosed operations provide for the protection of airspace users outside of the structure. Safety considerations and compliance with other safety regulations to protect people permitted inside the structure would be required by the operator conducting the activity in the enclosed space. Regulation 101.055 of CASR provides that a person must not operate in a way that creates a hazard to another aircraft, person, or property, and applies to operations both indoors and out.

Similarly, sheltered operations would provide for the protection of people located inside the structure, such as a building, when operations are conducted outside the structure.

These definitions will not apply to rockets, balloons and kites.

Key objectives

CASA **proposes** to introduce new definitions to support change in relation to operations indoors.

Regulation 101.026 of CASR

101.026 Meaning of enclosed operation

The operation of an unmanned aircraft, other than a large RPA, is an enclosed operation if the operation complies with the following requirements:

- the unmanned aircraft is operated inside a structure that can prevent the unmanned aircraft, or any part of the unmanned aircraft, from exiting the structure; and
- in the event of a collision between the unmanned aircraft and the structure, any person located outside the structure at the time of the collision is not likely to be injured because of the collision.

Regulation 101.027 of CASR

101.027 Meaning of sheltered operation

The operation of an unmanned aircraft is a sheltered operation if it complies with the following requirements:

- the operation takes place outside a structure that prevents the unmanned aircraft, or any part of the unmanned aircraft, from entering the structure;
- in the event of a collision between the unmanned aircraft and the structure, any person located inside the structure at the time of the collision is not likely to be injured because of the collision.

CASA will review the term *structure*, which may need to be further defined such as whether it is a shelter or a physical barrier relevant to the size of the RPA being operated.

3.4 EVLOS/ BVLOS/ Risk assessment/ research and development

3.4.1 CASA discretion to approve operations that meet acceptable risk management frameworks

Reference(s)

- New provision Part 101 of CASR
- Part 101 MOS

Background / Issue

Innovative RPAS operations are expanding rapidly. While CASA adopts the Specific Operations Risk Assessment (SORA) methodology for most complex and novel operations, some regulations and standards limit or prohibit flexibility for these operations to be conducted when evidence and assessment shows it can be conducted safely.

Flexibility is required for CASA to be able to respond to changing technology and novel circumstances to support innovative, but safe, operations. CASA may issue exemptions to the rules but would prefer to regulate the industry by level of risk in such circumstances.

Key objectives

A new regulation is proposed to provide CASA the discretion to approve an operation, where a risk assessment, acceptable to CASA (such as the Specific Operations Risk Assessment methodology), demonstrates the operation can be conducted at an acceptable level of safety, where the operation would not otherwise be allowed by the regulations.

CASA seeks to prescribe further criteria for discretionary approvals for operations that meet certain risk tolerances and acceptable levels of safety in the MOS.

3.4.2 Provide for research and development activities and prescribe in the MOS

Reference(s)

- Regulation 101.029 of CASR
- Part 101 MOS

Background / Issue

A drone is a model aircraft if it is being operated for the purpose of sport or recreation. By default, all other operations of drones are classified as RPA. While there is no strict definition of commercial operations, CASA separates operation of RPA as commercial, and model aircraft as sport and recreation.

Organisations that are conducting research and development activities are operating RPA, as these activities are not considered sport and recreation. Conducting research, such as collecting data for a university study, or conducting RPA development activities, such as building bespoke RPA for the purposes of educational research, sometimes do not fit neatly into either sport and recreation, or commercial operations.

To operate an RPA that weighs more than 2 kg for commercial purposes (for remuneration or profit) a person must hold a valid RePL and operate under a ReOC.

For medium and large RPA operating for the purposes of research, development, and testing that are sport or recreation, and where the operation cannot be conducted within the Standard Operating Conditions contained in regulation 101.238 of CASR, it is considered a higher operational risk which should be controlled through individual assessment of a person's concept of operation. This should be controlled via a CASR head of power (suggested to be regulation 101.029 of CASR).

There is an interaction with regulations 101.270 and 101.275 of CASR which requires persons to hold CASA approval to operate a large RPA. Such activity has historically been permitted by way of a ReOC, but this is a less than ideal regulatory fit for the circumstance and imposes more administrative burden on the applicant and CASA. CASA **proposes** to investigate a new definition of research and development where it is not treated as a commercial or a recreational activity.

CASA considers risks posed from conducting research and development of micro, very small and small RPA can be sufficiently mitigated if operated as an additional provision to excluded category RPA under the standard operating conditions in regulation 101.238 of CASR.

Key objectives

CASA is **proposing** to include an additional subregulation in regulation 101.237 *Meaning of excluded RPA*, i.e., subregulation 101.237 (9) of CASR stating:

A micro RPA, very small RPA or a small RPA is an excluded RPA if it is being operated:

- by a person solely for the purpose of research and development testing the RPAS for the manufacturer of the RPAS; and
- in accordance with the manufacturer's documented procedures; and
- after the person conducts a risk assessment that records in writing that the risks posed by the operation are at an acceptable level; and
- in the standard RPA operating conditions.

Subject to consultation feedback on the proposal to develop research and development activities definitions and alleviation under the SOC, CASA will seek to clearly define the criteria and applicability prescribed in the MOS. This would include experimental research and university research, and may include science, technology, engineering and mathematics (STEM) related activities or classes.

3.4.3 Remove multiple approvals for simple BVLOS (EVLOS) operations

Reference(s)

- Regulation 101.073 of CASR
- Subregulation 101.300 (4) of CASR
- CASA EX46/21

Background / Issue

The overlap between regulation 101.073 and subregulation 101.300 (4) of CASR duplicates the approval requirement for ReOC and RePL holders and generates confusion within industry about who needs to hold the approval to operate RPA beyond visual line of sight (BVLOS).

BVLOS operations includes extended visual line of sight (EVLOS) operations where the RPA is not within the remote pilot's visual line of sight and a secondary observer is used to maintain situational awareness of the surrounding airspace.

The secondary observer must know the exact location of the RPA to assist in traffic avoidance and can be either co-located (Class 1 EVLOS) or dislocated (Class 2 EVLOS) from the remote pilot.

Key objectives

CASA **proposes** to streamline the application and approval process for operating BVLOS and remove the requirement to issue separate approvals to the ReOC holder and RePL holder.

CASA would prefer to issue one approval to the ReOC holder; the ReOC holder would be required to submit and hold CASA approved documented procedures and ensure that remote pilots are trained and competent in the BLVOS procedures.

To reduce red tape, CASA **proposes** to approve BVLOS operations by issuing the instrument to the holder of the ReOC operator rather than the RePL holder.

On 29 April 2021, *CASA EX46/21 — Remotely Piloted Aircraft Operations Beyond Visual Line of Sight Instrument 2021* came into effect, expiring at the end of 30 April 2023. The Instrument exempts remote pilots from compliance with regulation 101.073 and paragraph 101.300 (4) (a) of CASR subject to the conditions set out in the instrument. The exemption highlights the issues raised above and will need to be reviewed; additional amendment to regulation 101.073 and subregulation 101.300 (4) of CASR may be required.

CASA **proposes** to prescribe the supervising remote pilot requirements identified in exemption CASA EX46/21 within the Part 101 MOS. Conditions identified in subregulation 101.300 (4) of CASR may be better placed in the MOS, relevant to the type of BVLOS operation being performed. For example, EVLOS Class 1 does not require a pass in an examination for the purpose of an instrument rating under Part 61 of CASR.

Training procedures identified in the operator's approved practices and procedures would be sufficient to employ an observer in an EVLOS operation Class 1. CASA would prefer to prescribe in the Part 101 MOS qualifications required for the crew of an RPA that is being operated BVLOS. This would allow CASA the flexibility to apply appropriate qualification requirements commensurate to the operation being conducted.

The conditions placed on a remote pilot licence by subregulation 101.300 (4) of CASR may no longer be required as these conditions would be provided for by regulation 101.073 of CASR and the requirements when prescribed within the Part 101 MOS.

3.4.4 Orientation, height, and lateral distance of an RPA in an EVLOS operation

Reference(s)

- Part 101 MOS sections:
 - 5.11 (1) (a)
 - 5.11 (2) (c)

Background / Issue

CASA **proposes** to amend section 5.11 of the MOS to prescribe, through an assessment policy, how safety margins can be maintained and how the applicant can monitor the control link performance in flight and take necessary actions if the control link degrades too far.

Paragraph 5.11 (1) (a) of the MOS does not align with the standard published manufacturer control link performance figures.

5.11 Orientation, height and lateral distance of an RPA in an EVLOS operation

- (1) In an EVLOS operation, an RPA must not be flown at a distance from the remote pilot that is more than 80% of:
 - (a) the manufacturer's control link performance figure for flight below 500 ft; or

Most manufacturer figures for the control link performance are based on a clear day and clear line of sight from the controller to the RPA.

Rather than relying on prescriptive measures, it may be more reasonable to use outcome-based provisions when controlling this component of the flight, as environmental factors and atmospheric conditions may reduce or increase the distance the RPA can be safely flown and controlled from, the remote pilot.

The MOS should not preclude operations from a remote operations centre when:

- an observer is visually in line of sight of the RPA
- an observer has a means of maintaining communication with the remote pilot
- the command and control link are maintained from the remote pilot (ground control station (GCS)) to the RPA.

The MOS should also be technology agnostic.

Key objectives

CASA **proposes** to amend section 5.11 of the MOS to be outcome-based and:

- require the control link performance to be maintained from controller to RPA (as an outcome), however achieved (deliberately non-prescriptive)
- require the control link performance to be maintained from the remote pilot in command to observer (as an outcome), however achieved (deliberately non-prescriptive)

Paragraph 5.11 (2) (c) of the MOS prescribes that the height of the RPA must be referenced to the aerodrome or helicopter landing site (HLS) elevation; this may also be a redundant requirement.

- (c) if any part of the operation is conducted within 3 NM of the movement area of an aerodrome, including an aerodrome that is an HLS — the height of the RPA must be referenced to the aerodrome or HLS elevation as published in the AIP from time to time; and

The provision should not preclude operations from a Remote Operations Centre when:

- an observer is visually in line of sight with the RPA
- an observer has a means of maintaining communication with the RPIC
- the command-and-control link are maintained from RPIC (GCS) to RPA.

The approval process would include CASA assessment of how safety margins can be maintained for example, how the applicant will monitor the control link performance in flight and identify the necessary actions if the control link degrades too far.

3.4.5 Radio and telephone communications in an EVLOS operation class 2

Reference(s)

- Part 101 MOS Section 5.10

Background / Issue

CASA considers it appropriate for an operator to propose the method of communication for assessment of applicability to the approved operation. CASA is proposing to remove the prescriptive provisions regarding the use of communication devices to allow an applicant the ability to demonstrate a system that may be acceptable to CASA.

The MOS restricts an operator from using a mobile telephone device as the secondary communication system if a similar system is used for the primary system. CASA considers that a person may use the same type of systems with considerations such as, alternate service providers, independent software, independent protocols, etc.

Changing the wording to a more outcome and risk based requirement will allow CASA to prescribe assessment policy but also update this policy relatively quickly, to keep pace with technological advancements.

Key objectives

CASA **proposes** to amend the title to: *Communications in an EVLOS operation class 2*.

Replace subsection 5.10 (1) of the MOS:

5.10 Radio and telephone communications in an EVLOS operation class 2

- (1) For an EVLOS operation class 2, the radio or telephone communication system (the *primary communication system*) used by the remote pilot and each observer must be supported by an alternative or backup radio or telephone communication system (the *secondary communication system*) that is immediately activated if the primary communication system fails.

with:

For an EVLOS operation class 2, the communication system (the primary communication system) used by the remote pilot and each observer must be supported by an alternative or backup communication system (the secondary communication system) that is able to be immediately activated if the primary communication system fails.

Repeal subsection 5.10 (2) of the MOS.

- (2) If a mobile telephone is the primary communication system, a second mobile telephone is not a secondary communication system.

3.5 Micro/ Excluded/ SOC/ Large RPA

3.5.1 Repeal/ amend approval requirements of operation of large RPA

Reference(s)

- Regulation 101.255 of CASR
- Regulation 101.270 of CASR
- Regulation 101.275 of CASR
- Subparagraph 101.295 (2) (b) (iii) of CASR

Background / Issue

CASA **proposes** to amend or remove duplication and unnecessary provisions for requirements to operate large RPA.

Regulation 101.270 of CASR requires that an operator must hold a ReOC to operate any RPA; however, this does not apply to the operation of an excluded RPA or a micro RPA (as Subpart 101.F of CASR does not apply to micro RPA).

101.270 Certain RPA—requirement for RPA operator’s certificate

- (1) This regulation does not apply in relation to the operation of an excluded RPA.
- (2) A person commits an offence of strict liability if:
 - (a) the person conducts operations using RPA; and
 - (b) the person does not hold a certificate as an RPA operator under Division 101.F.4 that authorises the person to conduct the operations.

Regulation 101.275 of CASR duplicates these requirements for application and approval to operate large RPA; however, subregulations 101.275 (1B) and (3) of CASR have not historically been exercised by CASA, as approval to operate large RPA would not be granted unless the operator held a ReOC (regulation 101.270 of CASR).

101.275 Approval of operation of large RPA

- (1) A person may operate a large RPA only with CASA’s approval.

Penalty: 50 penalty units.

- (1A) A person may apply to CASA, in writing, for approval to operate a large RPA.

Note 1: An application must be in the approved form, include all the information required by these Regulations and be accompanied by every document required by these Regulations—see regulation 11.030.

Note 2: Part 11 deals with applications and decision making.

(1B) Subject to regulation 11.055, CASA must grant the approval if:

- (a) the person is certified as an operator of large RPA; and
- (b) the operation would not contravene any condition of the certification.

Note 1: Under regulation 201.004, an application may be made to the Administrative Appeals Tribunal for review of:

- (a) a decision refusing to issue, or cancelling, suspending or varying, an approval; or
- (b) a decision imposing a condition on an approval.

Note 2: For certification as an operator of RPA, see Division 101.F.4.

(3) Without limiting regulations 11.056 and 11.067, CASA may impose conditions on an approval:

- (a) prohibiting the operation of the relevant RPA at night or in conditions other than VMC; or
- (b) restricting the extent to which the RPA may be operated at night or in conditions other than VMC; or
- (c) requiring the RPA to stay within a specified area, or
- (d) requiring the operator to make specified broadcasts.

In addition, a large RPA cannot be operated as an excluded RPA, which makes it difficult to obtain experience on a specific large RPA for a remote pilot licence rating. It is unreasonable for a person to perform a flight test, conducted by CASA for the purposes of subparagraph 101.295 (2) (b) (iii) of CASR, the first time a person operates the large RPA.

Additionally, to operate large RPA under subregulation 101.237 (8) of CASR for training, CASA requires a person to hold a rating on the RePL for the RPA to be added to the ReOC.

CASA has the authority to issue conditions on a ReOC that limits aspects of the operations performed and could rely on this approach, instead of regulation 101.275 of CASR. In summary, requiring the operator to, in the first instance, be certified as an operator of large RPA to issue the approval, appears to contradict itself.

Key objectives

CASA seeks to clarify and remove duplicity across regulations 101.255, 101.270 and 101.275 of CASR and reduce red tape by repealing subregulations 101.275 (1B) and (3) of CASR, and instead rely on regulations 101.255 and 101.270 of CASR. Another appropriate mechanism may also achieve the same desired outcome.

3.5.2 Incorporate CASA EX38/21 – gaining experience on medium RPA for RePL upgrade

Reference(s)

- Regulation 101.237 of CASR
- CASA EX38/21

Background / Issue

Instrument CASA EX38/21 was made in April 2021, making it more practical for RePL holders to gain experience operating RPA to obtain a licence upgrade for a different type of RPA, or for a different category of RPA. The two pathways to upgrade a RePL are through an approved training organisation or through a CASA flight test.

Generally, for medium RPA, a CASA flight test is the most practical option for RePL upgrades as only a limited number of approved training organisations offer medium RPA training courses, with CASA flight tests offered in most State and Territory capital cities. Due to the construct of the regulations, it is difficult for applicants, outside of an approved training organisation, to gain sufficient operating experience with a medium RPA to sufficiently practice ensuring the RPA can be flown safely during the flight test conducted by CASA.

If the applicant does not have sufficient flying experience for a particular RPA, a flight test may present some safety concerns to the applicant and the CASA representative conducting the flight test.

A medium RPA is not an excluded RPA for paragraph 101.237 (6) (a) of CASR.

- (6) A small RPA is an *excluded RPA* if it is being operated in standard RPA operating conditions by:
- (a) a person for the sole purpose of meeting the experience requirement mentioned in paragraph 101.295(2)(c) for the grant of a remote pilot licence; or

This provision prevents a person with a RePL for a small RPA, from operating a medium RPA under standard RPA operating conditions to gain experience for a medium RPA flight test conducted by CASA.

The same issue occurs if a person seeks to upgrade their RePL for a different category of RPA. Under paragraph 101.237 (6) (b) of CASR, a small RPA is an excluded RPA if it is being operated in standard RPA operating conditions by the holder of a RePL, for the purpose of gaining practical experience and competency in the operation of an RPA of a category that is specified in the licence. For the purposes of a category upgrade, the relevant new category will not be specified in the person's RePL.

In addition, under regulation 101.270 of CASR, a person commits an offence if they conduct operations using RPA and do not hold a certificate as an RPA operator (a ReOC holder) that authorises the conduct of the operation. This offence provision does not apply to a person operating an excluded RPA (such as a small RPA operated under subregulation 101.237 (6) of CASR in standard RPA operating conditions) to gain operating experience for a flight test. However, the provision does apply to RePL upgrades to a medium RPA, or RePL upgrades to a different category of small or medium RPA.

CASA EX38/21 is designed to address these issues by allowing relevant operating experience for a type or category flight test to be obtained, without committing an offence and without the need to be a ReOC holder.

Key objectives

CASA **proposes** to insert a provision in regulation 101.237 of CASR that provides for the following:

A medium RPA is an excluded RPA if it is being operated:

- by a person who holds a remote pilot licence that authorises the person to operate an RPA of the category of that RPA; and
- in standard RPA operating conditions; and
- for the purposes of practice to gain competency for a RePL flight test for that RPA type.

Note: The standard RPA operating conditions prescribed in regulation 101.238 require the RPA is not operated within 30 m of a person who is not directly associated with the operation of the RPA. The mass of some medium RPA may require the remote pilot to allow greater than 30 m distance from a person who is not directly associated with the operation to ensure the RPA is not operated in a way that creates a hazard to another aircraft, another person, or property as prescribed in reg 101.055 Hazardous operation prohibited.

3.5.3 Definition of excluded RPA - ‘demonstration of an RPAS’ and ‘RPAS testing after maintenance or repair’

Reference(s)

- Regulation 101.237 of CASR

Background / Issue

Note: This proposed amendment is intended to cover micro RPA, very small RPA, small RPA, and medium RPA but not large RPA.

The demonstration of RPAS for sale to a prospective customer, is a commercial operation that requires operation under a ReOC. For manufacturers and small businesses, the requirement to operate under a ReOC to enable RPA test flight before sale is an administrative and financial impost.

CASA is proposing to alleviate the requirement to operate RPA under a ReOC, for the purposes of demonstrating an RPA for sale, and/or, for the testing of RPA (and model aircraft) after maintenance or repair where the operator can conduct the test flight safely under the RPA standard operating conditions.

It is intended to provide that an RPA is an excluded RPA if it being operated by a person for the purpose of:

- demonstration of RPAS for sale to a prospective customer
- or
- RPAS testing after maintenance or repair for the manufacturer, authorised maintainer or repairer of the RPAS, and
 - the remote pilot has conducted and recorded a risk assessment for the flight
 - the RPA is being operated in the standard RPA operating conditions
 - if the RPA is a medium RPA, the person holds a remote pilot licence that authorises the person to operate the RPA.

For test flights or demonstrations of RPA that require operation or manoeuvres that cannot be demonstrated under the SOC, a ReOC will be required.

Key objectives

CASA is seeking feedback on the proposal to include additional criteria in regulation 101.237 of CASR *Meaning of excluded RPA* to provide for the demonstration flight of RPAS for sale, and the test flight of RPA after maintenance or repair, under the RPA standard operation conditions.

The criteria would not apply to the operation of large RPA due to the increased safety risks associated with the operation of large RPA. Operating large RPA under a ReOC provides a greater level of assurance, risk prevention and control.

Proposal for 'demonstration of RPAS'

An RPA is an excluded RPA if it is being operated:

- by a person solely for the purpose of demonstrating an RPAS for sale to a prospective customer by or on behalf of the manufacturer of the RPAS; and
- in accordance with the sales agent or manufacturer's documented procedures; and
- the remote pilot has conducted a risk assessment for the flight; and
- the RPA is being operated in the standard RPA operating conditions; and
- if the RPA is a medium RPA — the person holds a remote pilot licence that authorises the person to operate the RPA.

Proposal for 'RPAS testing after maintenance or repair'

An RPA is an excluded RPA if it is being operated:

- by a person solely for the purpose of RPAS testing after maintenance or repair for the manufacturer by an authorised maintainer or repairer of the RPAS; and
- in accordance with the authorised maintainer or repairer documented procedures; and
- the remote pilot has conducted a risk assessment for the flight; and
- the RPA is being operated in the standard RPA operating conditions; and
- if the RPA is a medium RPA — the person holds a remote pilot licence that authorises the person to operate the RPA.

3.5.4 Remove unnecessary requirements from meaning of standard RPA operating conditions

Reference(s)

- Regulation 101.065 of CASR
- Regulation 101.238 of CASR

Background / Issue

Regulation 101.238 of CASR sets out the standard RPA operating conditions (SOC) under which an excluded RPA operation must be conducted. Some of these conditions are not required as they are covered in another regulation.

The wording of paragraph 101.238 (c) of CASR includes the phrase 'a person not directly associated with the operation of the RPA'.

This is ambiguous, particularly when it comes to the subject of an RPA's camera, e.g., an actor or a model. The paragraph should refer to a person who is responsible for the safety of the operation of the excluded RPA.

Restricted areas

Subparagraphs 101.238 (d) (i) - (iii) of CASR describe that an RPA cannot be operated in a prohibited or restricted area and distinguishes these areas as RA1, RA2 and RA3. When operating under the SOC in the excluded category, a person is not permitted to operate in RA3 restricted airspace under any circumstances and operation within RA1 and RA2 is subject to regulation 101.065 of CASR.

CASA **proposes** to amend subparagraphs 101.238 (d) (i) - (iii) as regulation 101.065 of CASR, *Operation in prohibited or restricted area*, achieves the same outcome.

Repeal subparagraph 101.238 (d) (iii) of CASR:

- (d) the RPA is not operated:
 - (i) in a prohibited area; or
 - (ii) in a restricted area that is classified as RA3; or
 - (iii) in a restricted area that is classified as RA2 or RA1 otherwise than in accordance with regulation 101.065; or

Amend subparagraph 101.238 (d) (ii) of CASR:

Remove 'that is classified as RA3'
and replace with
'otherwise, then in accordance with a permission under regulation 101.065'

This will provide the controlling authority of the restricted airspace the ability to grant permission (under regulation 101.065 of CASR) for excluded category operations in any class of restricted airspace.

The risk associated with an excluded category operation belongs to the controlling authority of the restricted or prohibited airspace. A permission will only be issued for operations in this airspace if the controlling authority is satisfied that relevant risks will be mitigated.

In or over restricted areas

CASA also **proposes** to amend the wording of regulation 101.065 of CASR:

101.065 Operation in prohibited or restricted area

- (1) A person may operate an unmanned aircraft in or over a prohibited area, or in or over a restricted area, only with the permission of, and in accordance with any conditions imposed by, the authority controlling the area.

It is not clear whether a person may fly 'in' or 'over' a restricted area. It is sufficient to say 'in' a restricted or prohibited area. The current wording may lead to a scenario where the controlling authority of the restricted airspace provides a permission for an unmanned aircraft to operate over the restricted airspace and in a class of airspace for which they hold no authority.

Additionally, if an unmanned aircraft was to operate over restricted or prohibited airspace, the operation would most likely be above 400 ft above ground level (AGL) and require separate approval from CASA to operate above this height. CASA has incorporated restricted airspace considerations for applications that request operations above 400 ft AGL.

In terms of RPAS operations, the risk of flying over a restricted area could be a failure of the system leading to the RPA entering restricted airspace without permission. This would be controlled through the issue of an approval to operate above 400 ft AGL as most restricted airspace starts at the surface and extends above 400 ft AGL.

Another point to consider is operating below restricted airspace, although the risk of the RPA climbing uncontrolled into restricted airspace is lower. In summary, operating over or under restricted airspace should form part of CASA assessment policy and should not be prescribed within Part 101 of CASR.

Key objectives

CASA **proposes** to amend paragraph 101.238 (c) of CASR as follows:

Repeal paragraph (c):

- (c) the RPA is not operated within 30 m of a person who is not directly associated with the operation of the RPA; and

substitute with:

(c) the RPA is not operated within 30 m of a person unless the person has duties essential to the control or navigation of the RPA, or, the RPA is operated as a sheltered operation; and

This amendment is supported by the proposed new definition for sheltered operation at amendments 3.3.1 and 3.3.2 of this policy proposal document.

CASA **proposes** to amend regulation 101.065 of CASR to remove reference to 'or over' in relation to RPAS operations in restricted airspace. Further consideration will be made to ensure amendment does not adversely impact operational requirements for heavy balloon operations above specific areas of controlled airspace.

Proposed draft detail

Repeal subparagraph 101.238 (d) (iii) of CASR:

- (iii) in a restricted area that is classified as RA2 or RA1 otherwise than in accordance with regulation 101.065; or

Amend subparagraph 101.238 (d) (ii) of CASR:

- (ii) in a restricted area that is classified as RA3; or

to state:

(ii) in a restricted area otherwise than in accordance with a permission under 101.065; or

Insert a note to regulation 101.238 of CASR to make it clear there are other limitations applicable to excluded RPA operations in subparts 101.A-C of CASR, such as:

- the RPA must not be operated in the no-fly zone of a non-controlled aerodrome during a relevant event
- the RPA must not be operated over the movement area of a non-controlled aerodrome
- the RPA is not an autonomous operation
- nothing may be dropped or discharged from the RPA that may cause a hazard

3.5.5 Amend applicability of Subpart F Part 101 of CASR to apply to micro RPA

Reference(s)

- Regulation 101.235 of CASR
- Regulation 101.237 of CASR
- Regulation 101.238 of CASR
- Regulation 101.270 of CASR
- Part 101 MOS Chapter 4

Background / Issue

In 2019, an amendment was made to the applicability of Subpart 101.F of CASR to provide for changes to excluded RPA and micro RPA (a micro RPA is not an excluded RPA).

An unintended consequence of that change is a ReOC holder is unable to operate a micro RPA under a ReOC and, approvals for a person to conduct BVLOS or night operations with micro RPA, under the privileges of a ReOC also cannot be utilised.

Regulation 101.237 of CASR would be amended to provide the conditions for operation of micro RPA as excluded RPA. CASA **proposes** to preserve subparagraph 101.238 (d) (v) of CASR, because a micro RPA can be operated within 3 NM from a controlled aerodrome under the prescribed requirements in Chapter 4 of the MOS.

This proposed amendment would allow an excluded operator to operate a micro RPA (only) within 3 NM of a controlled aerodrome.

Key objectives

CASA is proposing to amend the applicability of Subpart 101.F of CASR to apply to micro RPA at regulation 101.235 of CASR.

101.235 Application of Subpart 101.F

This Subpart applies to the operation of the following:

- (a) very small RPA;
- (b) small RPA;
- (c) medium RPA;
- (d) large RPA.

Note 1: This Subpart does not apply to model aircraft, as they are not RPA—see the definitions of *RPA* in regulation 101.021 and *model aircraft* in regulation 101.023.

Note 2: This Subpart also does not apply to micro RPA—see the definition of *micro RPA* in regulation 101.022.

At regulation 101.237 of CASR, CASA **proposes** to insert a provision that:

a micro RPA is an excluded RPA if it is being operated under the standard operating conditions (regulation 101.238 of CASR), or, under prescribed requirements within the Part 101 MOS.

Subparagraph 101.238 (d) (v) of CASR would be preserved:

a micro RPA can be operated within 3 NM of the movement area of a controlled aerodrome under the requirements in Chapter 4 of the MOS.

3.6 CASA Direction 55/20

3.6.1 Incorporate Instrument CASA 55/20: Direction — operation of certain unmanned aircraft

Reference(s)

- CASA Direction 55/20

Background / Issue

CASA Direction 96/17 Instrument was made in 2017 to address urgent aviation safety issues that were identified following the making of Part 101 of CASR. The Instrument expired at the end of September 2020 and was re-issued as CASA Direction 55/20, which expires 31 March 2022. CASA intends to incorporate the instrument's provisions into the CASR and the Part 101 MOS to provide an integrated, and better understood, legislative framework.

As well as providing policy clarity, integration of the provisions in CASA Direction 55/20 would overcome some duplication, definitional issues, and conflicting requirements.

Operation near controlled aerodromes

Direction 5 requires that a person must not operate an unmanned aircraft within 3 NM of the movement area of a controlled aerodrome, however this does not apply to the operation of a micro RPA, a model aircraft that weighs 250 g or less, a tethered balloon or kite, an unmanned free balloon, a rocket or fireworks. CASA seeks to retain this requirement. The MOS will also express the circumstances, like the Direction 55/20 does, when an unmanned aircraft can be flown within 3 NM of an aerodrome.

Operation near non-controlled aerodromes

Direction 6 requires that (1) a person must not operate an unmanned aircraft within 3 NM of the movement area of a non-controlled aerodrome if the person is aware that a manned aircraft is operating to or from the aerodrome, and (2) in the event of manned aircraft operating in the area, the person is to safely manoeuvre the unmanned aircraft away from the path of the manned aircraft and land as soon as possible. Direction 6 does not apply to the operation of a micro RPA, a model aircraft that weighs 250 g or less, a tethered balloon or kite, an unmanned free balloon, a rocket or fireworks. CASA seeks to retain these requirements. The MOS will also express the circumstances, like the Direction does, when an unmanned aircraft can be flown within 3 NM of an aerodrome.

Micro RPA

Micro RPA were previously treated in the regulations as excluded RPA (although this was always ambiguous). The 2019 amendments made it clear that micro RPA are not excluded RPA. As a result, micro RPA are only subject to the general rules in Subparts 101 A to C of CASR. This only works if two operational situations are addressed/ retained from the current directions in CASA Direction 55/20:

- Direction 8 relating to operations over emergency areas
- Direction 10 relating to simultaneous operation of more than one RPA.

Emergency operations

Direction 8 prohibits the operation of unmanned aircraft over an area where an emergency operation is being conducted, unless otherwise approved by the person in charge of the emergency operation. This is because the operation of unmanned aircraft over an area where an emergency operation is being carried out may create risks for any conventionally piloted aircraft involved in the emergency (e.g., firefighting aircraft over a bushfire).

Operating one RPA or model aircraft at a time

Direction 10 requires that a person can only operate one RPA or model aircraft at a time. It is intended to ensure that the person responsible for the safety of the flight can meet that obligation effectively and to limit the risks involved with 'swarms' of RPA or model aircraft. CASA **proposes** to prescribe requirements for such operations in the MOS. In accordance with subregulation 101.300 (5) of CASR, a condition on a RePL provides the licence holder must not operate more than one RPA at a time unless the person holds an approval under regulation 101.029 of CASR.

CASA **proposes** to retain the applicability of Direction 8 and 10 to relevant unmanned aircraft when the Direction is repealed, including for micro RPA and model aircraft. Direction 7 of CASA

Direction 55/20 directs that a person may not operate an unmanned aircraft higher than 400 ft AGL.

Operations above 400 ft AGL

Regulation 101.085 of CASR limits the operation of unmanned aircraft to 400 ft AGL, unless it is operated in an approved area or otherwise permitted by another provision in Part 101 of CASR. CASA **proposes** to incorporate the requirement in Direction 7 into the regulations but retain the Part 101 of CASR requirements relating to tethered balloons, kites, unmanned free balloons and rockets (regulation 101.085 of CASR). This gives effect to a blanket prohibition of unmanned aircraft operating above 400 ft AGL – unless operating in an approved area, in accordance with an exemption or licence privileges.

CASA requires the ability to authorise operations outside of approved areas. CASA intends to only allow operations above 400 ft AGL under a regulation 101.030 of CASR approval, or under a regulation 101.080 of CASR permission, when a person operates in areas specified in regulation 101.075 of CASR. Other areas where CASA may permit operations above 400 ft AGL outside of an approved area would be open mine sites where the displaced earth creates a substantial increase in the AGL reference point but may not affect the above mean sea level (AMSL) reference point. Another example may include additional height around obstacles within a certain radius.

Regulation 101.400 of CASR states that a person may operate a model aircraft outside an approved area above 400 ft AGL if it is kept in line of sight and clear of populous areas. CASA **proposes** to repeal this provision as model aircraft should not fly higher than 400 ft AGL without CASA approval under regulation 101.085 of CASR.

CASA **proposes** to use regulation 101.085 of CASR as the single regulation for maximum operating height of unmanned aircraft. Prescribing requirements within the Part 101 MOS allows CASA flexibility to implement acceptable means of compliance or create alternate standards.

Operation near people

Regulation 101.245 of CASR requires that an RPA be kept at least 30 m away from a second person who is '*not directly associated with the operation of the RPA*'. This last phrase is ambiguous as it may include, for example, the subject of a camera shot by an RPA, e.g., an actor or a model. However, RPA crew, other than the remote pilot, may need to be close to the aircraft at times while it is operating. CASA Direction 55/20 currently uses the wording *duties essential to the control or navigation of the aircraft* to identify the RPA crew. This appears to remove ambiguity when identifying who would be classified as the 'second person'. In line with this amendment, the subject of a camera shot by an RPA would not be essential to the control or navigation of the RPA.

Subregulation 101.245 (2) of CASR permits a second person within 30 m of an RPA if they are standing behind the RPA while it is taking off. This provision was originally intended for an RPA that is an aeroplane as the direction of travel is usually away from the remote pilot and any person standing behind them. This provision is not relevant to most vertical take-off and landing aircraft as these RPA can travel in any direction.

With the proposed amendment to subregulation 101.245 (1) of CASR and by repealing subregulation 101.245 (2) of CASR, it would ensure that only persons who have duties essential to the control or navigation of the RPA are within 30 m of the RPA.

Regulation 101.245 in Subpart 101.F of CASR does not apply to micro RPA. CASA requires a mechanism to ensure micro RPA, and model aircraft that weigh 250 g or less, are required to maintain 30 m distance from people.

CASA **proposes** an amendment to include Micro RPA within Subpart 101.F of CASR which will resolve the applicability issue for operating micro RPA near people.

CASA **proposes** to prescribe requirements in the Part 101 MOS for the operation of RPA within 30 m of people and repeal subregulations 101.245 (3) and (4) of CASR and incorporate these requirements into the Part 101 MOS. As an example, the current regulation permits operation of an RPA no closer than 15 m of a person, for which the second person has consented to the RPA operating up to that distance.

CASA prefers these requirements to be prescribed within the Part 101 MOS as certain procedures will accommodate these operations when operating under the authority of a ReOC. CASA may in the future, prescribe alternate requirements for RPA operating at closer distances with additional mitigations or controls in place, e.g., micro RPA or model aircraft operating closer than 15 m to a person, provided the RPA has no exposed rotating parts.

CASA also proposes to add a note to subregulation 101.395 (2) of CASR explaining in simple terms who CASA considers is directly associated with the operations of the model aircraft. This would provide further clarity on who is permitted within 30 m of a model aircraft.

For CASA to grant an approval to permit operations within 30 m of people not directly associated with the operation of model aircraft, regulation 101.395 of CASR will require a new provision to allow CASA to grant such an approval. The only current pathway is by way of an exemption to regulation 101.395 of CASR.

Subregulation 101.395 (2) in Subpart G of CASR does not apply to model aircraft that weigh 250 g or less. CASA proposes to include model aircraft that weigh 250 g or less within Subpart 101.G of CASR.

Key objectives

- Incorporate the Directions of CASA 55/20.

Direction 5:

In line with amended regulation 101.075 of CASR (to mirror regulation 101.072 of CASR and remove references to 400 ft), CASA **proposes** that the MOS will prescribe requirements in relation to the operation of unmanned aircraft near aerodromes (which it already does in Chapter 4 in respect of controlled aerodromes). CASA also proposes to incorporate the intent of Direction 5 into Part 101.C of CASR and the MOS to ensure that a person does not operate an unmanned aircraft within 3 NM of the movement area of a controlled aerodrome. As detailed in subsections 5 (3) and 5 (1) of the MOS, it does not apply to micro RPA, a model aircraft that weighs 250 g or less, a tethered balloon or kite, an unmanned free balloon, a rocket or fireworks.

Direction 6:

In line with amended regulation 101.075 of CASR (to mirror regulation 101.072 of CASR and removing references to 400 ft), the proposed regulation will detail that the MOS will prescribe requirements in relation to the operation of unmanned aircraft near non-controlled aerodromes (which it already does in Chapter 9). The intention of Direction 6 will be incorporated into the MOS, Chapter 9.

Direction 8:

CASA seeks to incorporate into Subpart 101.C of CASR, an offence against this new regulation, which would be a strict liability offence, attracting 50 penalty units. CASA would ensure consistency when referring to operations 'in' or 'over' emergency areas as in noted in the amendment to regulation 101.065 of CASR (see amendment 3.5.4 of this policy proposal document).

Direction 10:

A gap identified in the regulations where 'more than one' operation is only restricted to a RePL holder, however this restriction should apply to the operation of all RPA and model aircraft. CASA **proposes** a new regulation in Subpart 101.C of CASR that applies to unmanned aircraft, noting this may then require the repeal of the condition placed on a RePL holder in subregulation 101.300 (5) of CASR.

- (5) It is a condition of a remote pilot licence that the licence holder must not operate more than 1 RPA at a time unless:
 - (a) he or she holds an approval under regulation 101.029 to operate more than 1 RPA at a time; and
 - (b) the conditions (if any) imposed on the approval are complied with.

In the proposed regulation CASA seeks a head of power to the Part 101 MOS, so the MOS can prescribe requirements relating to operating more than 1 RPA or model aircraft at a time, or that the operation can be approved under regulation 101.029 of CASR. The approval can apply to anyone operating under that operator/organisation or can be issued to an individual. An offence against this proposed regulation would be a strict liability offence, attracting 50 penalty units.

The imposition of the above offences is not new. Previously, persons in contravention of directions in CASA Direction 55/20 would attract 50 penalty units for the subsequent contravention of direction under regulation 11.255 of CASR. CASA **proposes** to repeal subregulation 101.300 (5) of CASR as the proposed subregulation in 101.C of CASR will apply to the operator of unmanned aircraft.

CASA proposes to amend subregulation 101.300 (6) of CASR by removing the reference to subregulation 101.300 (5) of CASR.

- (6) The holder of a remote pilot licence commits an offence of strict liability if the holder contravenes a condition mentioned in subregulation (3), (4) or (5).

Paragraph 101.085 (1) (b) of CASR must be retained as other provisions within Part 101 of CASR allow certain operations above 400 ft, such as in Subpart 101.D of CASR.

101.085 Maximum operating height

- (1) A person may operate an unmanned aircraft above 400 feet AGL only:
 - (a) in an area approved under regulation 101.030 as an area for the operation of unmanned aircraft of the same class as the aircraft concerned, and in accordance with any conditions of the approval; or
 - (b) as otherwise permitted by this Part.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

A subregulation to 101.085 of CASR would be inserted, that permits operations of any unmanned aircraft above 400 ft when operating only:

- in an area approved under regulation 101.030; or,
- in accordance with prescribed requirements in the Part 101 MOS.

Regulation 101.400 of CASR would be repealed.

101.400 Operation of model aircraft outside approved areas

- (1) A person may operate a model aircraft outside an approved area above 400 feet AGL only if he or she:
 - (a) keeps it in sight; and
 - (b) keeps it clear of populous areas.

Penalty: 10 penalty units.

Note 1: For *populous area*, see regulation 101.025.

Note 2: CASA must publish details of the approval of an area (including any conditions) in NOTAM or on an aeronautical chart—see subregulation 101.030(5).

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

CASA **proposes** to amend the phrase in subregulation 101.245 (1) in Subpart 101.F of CASR

101.245 Operation near people

- (1) Subject to subregulations (2) and (3), a person must not operate an RPA within 30 metres of a person (the *second person*) who is not directly associated with the operation of the RPA.

to specify:

a person who has duties essential to the control or navigation of the RPA while it is operating.

Subsection 9 (1) of CASA Direction 55/20 may provide suitable words for this purpose (subsection 9 (2) could be inserted as a note).

Direction 9:

Direction 9 encompasses all RPA (including micro RPA); however, regulation 101.245 of CASR is within Subpart 101.F of CASR and does not apply to micro RPA. CASA would seek the best way to give effect to this mechanism ensuring applicability to micro RPA. This may be achieved by clarifying the application of Subpart 101.F of CASR (or certain provisions) by specifying micro RPA in regulation 101.235 of CASR. If micro RPA are to be included in the definition of excluded RPA (regulation 101.237 of CASR) it should be noted that the MOS currently permits a micro RPA to operate in the no fly zone of a controlled aerodrome.

9 Directions relating to the operation of RPA or model aircraft near people

- (1) A person controlling an RPA or a model aircraft must ensure that the aircraft is not operated less than 30 m from a person unless the person has duties essential to the control or navigation of the aircraft.
- (2) For subsection (1), the distance of 30 m is measured in every direction from the point on the ground or surface of the water directly below the aircraft.

CASA intends to clarify this subsection 9 (2) of the Direction by further explaining after "...below the aircraft," that it should be treated as a cylinder which is "glued" to the form of the earth and extends up to the height of the RPA.

CASA also proposes to amend subregulation 101.245 (5) of CASR to provide another pathway for RPA operators to operate closer to people through subregulation 101.245 (1) of CASR disapplying if the RPA is operated in accordance with a relevant MOS provision. CASA would require a head of power to prescribe requirements in the MOS in relation to operating within 30 m of people. The scenarios include emergency operations, such as dropping a life preserver, or a drone video shoot where operations are within 15 m of people. This proposal would ensure that CASA can issue an approval for operators, or publish standards, that cover all remote pilots.

Subregulations 101.245 (3) and (4) of CASR would be repealed and the content moved into the MOS.

- (3) Subregulation (1) does not apply if:
 - (a) the RPA is a very small RPA, small RPA or medium RPA; and
 - (b) the second person has consented to the RPA operating within 30 m of him or her; and
 - (c) the RPA is operated no closer than 15 m of him or her.
- (4) Subregulation (1) does not apply if:
 - (a) the RPA is an airship; and
 - (b) the airship approaches no closer to the second person than 10 m horizontally and 30 ft vertically.

A note would be inserted to subregulation 101.395 (2) of CASR to clearly identify what CASA considers to be ancillary positions that enhance or maintain the safe operation of model aircraft.

This note may include words to the effect:

A person directly associated with the operation of model aircraft may include other pilots, safety observers, flight line controllers, students under instruction, safety marshals or any other person deemed necessary to facilitate the safe operation of model aircraft.

Regulation 101.395 of CASR may require a new provision to allow CASA to approve operations within 30 m of people not directly associated with the operation of model aircraft. For CASA to grant such an approval, regulation 101.395 of CASR may require a new provision to allow it.

3.6.2 RPA and model aircraft operations near people - Part 101 MOS new chapter

Reference(s)

- subregulation 101.245 (1) of CASR
- subregulation 101.395 (2) of CASR
- Part 101 MOS new Chapter

Background / Issue

Regulation 101.245 of CASR requires that an RPA be kept at least 30 m away from a second person who is '*not directly associated with the operation of the RPA*'. This last phrase is ambiguous as it may include, for example, the subject of a camera shot by an RPA. However, RPA crew, other than the remote pilot, may need to be close to the aircraft at times while it is operating.

CASA Direction 55/20 uses the words, 'duties essential to the control or navigation of the aircraft' to clarify and identify those people, such as the crew of an RPA operation. This wording removes ambiguity, rather than attempting to identify who would be classified as a second person under regulation 101.245 of CASR.

Subregulation 101.245 (2) of CASR permits a second person within 30 m of an RPA if they are standing behind the RPA while it is taking off.

- (2) Subregulation (1) does not apply if the second person is standing behind the RPA while the RPA is taking off.

This provision was designed for an RPA that is an aeroplane where the direction of travel of the remote aircraft is usually away from the position of the remote pilot and any person standing behind the remote pilot. The condition is not relevant to most vertical take-off and landing aircraft as these RPA can travel in any direction.

The proposed amendment to subregulation 101.245 (1) of CASR and the repeal of subregulation 101.245 (2) of CASR would provide that only persons who have duties essential to the control or navigation of the RPA are permitted within 30 m of the RPA.

Regulation 101.245 in Subpart 101.F of CASR does not apply to micro RPA (see regulation 101.235 of CASR). CASA also requires a mechanism to ensure micro RPA and model aircraft that weigh 250 g or less, maintain 30 m from people. CASA **proposes** to amend the

applicability of Subpart F of CASR to include micro RPA (see amendment number 3.5.5 of this policy proposal document) which would resolve the applicability issue for operating micro RPA near people.

Key objectives

CASA **proposes** to prescribe requirements in the Part 101 MOS for the operation of RPA within 30 m of people. CASA **proposes** to repeal subregulations 101.245 (3) and (4) of CASR and incorporate the repealed requirements into the Part 101 MOS.

CASA would prefer these requirements to be prescribed in the Part 101 MOS to enable a more flexible and adaptable approach to operations near people. CASA may in the future, prescribe alternate requirements for RPA operating at closer distances with additional mitigations or controls in place, for example micro RPA operating closer than 15 m to a person, provided the RPA has no exposed rotating parts (use of propeller guards).

CASA would also like to adopt different wording in subregulation 101.395 (2) of CASR relating to model aircraft for similar reasons, while at the same time retaining the current concept to ensure that when more than one person is flying a model aircraft, the second pilot or an observer may be within 30 m.

Subregulation 101.395 (2) in Subpart 101.G of CASR does not apply to model aircraft that weigh 250 g or less. CASA **proposes** to include model aircraft that weigh 250 g or less within Subpart 101.G of CASR.

Relevant provisions for rockets and balloons within the new chapter will need to be created as the provision for operating near people is proposed to move into Subpart 101.C of CASR, which will apply these restrictions to unmanned aircraft generally. Consideration will be given to limit an airship (other than an airship that is a large RPA) to operate no closer than 30 m to a person.

Airships are lighter than air, but when they are a significant size, have considerable inertia that is related to the mass amount of air they displace. As airships can be a medium RPA or large RPA, further consideration may be required in relation to the current subregulation 101.245 (4) of CASR to ensure that only airships can be operated within 10 m of another (second) person.

3.6.3 Operation of more than one unmanned aircraft and CASA Direction 55/20 - new Part 101 MOS Chapter

Reference(s)

- Subregulation 101.300 (5)
- Part 101 MOS new Chapter (8)

Background / Issue

In line with amendment 3.6.1 of this policy proposal document, CASA is proposing to move the requirements of subregulation 101.300 (5) of CASR and CASA Direction 55/20 (Direction 10) into a new chapter in the Part 101 MOS.

- (5) It is a condition of a remote pilot licence that the licence holder must not operate more than 1 RPA at a time unless:
- (a) he or she holds an approval under regulation 101.029 to operate more than 1 RPA at a time; and
 - (b) the conditions (if any) imposed on the approval are complied with.

CASA **proposes** to include a provision in the MOS that allows the holder of a remote pilot licence for a particular category and type, the ability to train or gain experience on operating more than one RPA at a time under standard operating conditions.

Key objectives

CASA **proposes** to move the prescribed requirements in subregulation 101.300 (5) of CASR and requirements from CASA Direction 55/20 into the Part 101 MOS.

CASA **proposes** to draft and include a new MOS chapter that prescribes requirements for one-too-many operations, for example:

A person may operate more than one RPA at a time for the purposes of training or gaining experience in the operation of more than one RPA at a time if the person holds a RePL that authorises operations of the specific RPA being operated.

3.6.4 Repeal Division 9.2 Part 101 MOS - No-fly zones in certain non-controlled airspace

Reference(s)

- Part 101 MOS Division 9.2

Background / Issue

CASA is proposing to remove Division 9.2 (sections 9.07, 9.08 and 9.09) of the MOS in its entirety, as the provision is unnecessarily contradictory, restrictive and it does not add any safety benefit. No approval is required to operate RPA in the no-fly zones of non-controlled airspace. The intent of the provision is to create a no-fly zone to provide a buffer for operations from accidentally penetrating overlying controlled airspace; however, this is not required as there are no approval requirements to operate in the controlled airspace.

Key objectives

CASA proposed to remove Division 9.2 of the MOS.

Division 9.2 No-fly zones in certain non-controlled airspace

9.07 Prescribed areas and requirements

- (1) For subregulation 101.247 (1) of CASR, this Division prescribes the requirements relating to the operation of an RPA in a prescribed area.
- (2) For subsection (1), the no-fly zone of non-controlled airspace is a prescribed area for this Division.
- (3) If:
 - (a) controlled airspace overlies non-controlled airspace (the *overlying controlled airspace*); and
 - (b) the lower limit of the overlying controlled airspace is less than 500 ft AGL; then, the airspace that is within 100 ft of the lower limit of the overlying controlled airspace is the *no-fly zone of non-controlled airspace*.

9.08 Definitions

In this Division:

no-fly zone of non-controlled airspace means the airspace that is within 100 ft of the lower limit of overlying controlled airspace.

overlying controlled airspace means controlled airspace:

- (a) that overlies non-controlled airspace; and
- (b) whose lower limit is less than 500 ft AGL.

9.09 Approval to operate an RPA in a prescribed area

A person must not operate an RPA in the no-fly zone of non-controlled airspace unless CASA has approved the operation in writing for this Division.

3.6.5 Weather and day limitations; night operations in the Part 101 MOS

Reference(s)

- Regulation 101.095 of CASR
- Part 101 MOS new Chapter 6

Background / Issue

Regulation 101.095 of CASR provides where a person may operate an unmanned aircraft into cloud, or at night, or in conditions other than visual meteorological conditions (VMC) if permitted by another provision of Part 101 of CASR or in accordance with an air traffic control (ATC) direction.

101.095 Weather and day limitations

- (1) A person may operate an unmanned aircraft:
 - (a) in or into cloud; or
 - (b) at night; or
 - (c) in conditions other than VMC;only if permitted by another provision of this Part, or in accordance with an air traffic control direction.

Paragraph 101.095 (1) (a) of CASR '*in or into cloud*', is redundant for RPA and model aircraft, as operating in or into cloud would involve flying in conditions which are not VMC. This provision is also covered by paragraph 101.095 (1) (c) of CASR.

CASA considers the relevance of these requirements to be based around conventionally piloted aircraft; it does not cleanly translate to RPA and model aircraft.

The VMC requirements relating to cloud refers to a visual flight rules (VFR) pilot who may not be able to conduct instrument flight and has the potential to lose orientation if they were to fly in non-VMC conditions.

The pilot of an unmanned aircraft is required to keep the RPA within their visual line of sight (VLOS) and operating in cloud would not comply with this requirement. Flying beyond visual line of sight (BVLOS) requires an approval for operating BVLOS and above 400 ft AGL.

For several years, CASA has approved, under paragraph 101.095 (1) (b) of CASR, RPA to operate at night subject to conditions, with consideration of the risks posed by night and daytime operations. CASA considers that operating an RPA at night below 400 ft AGL reduces risk to other airspace users compared to day operations, as the lowest altitude permitted for conventional aircraft would be 1 000 ft above the highest obstacle within 10 miles of itself (the aircraft) in accordance with regulation 174B of CAR.

Any unmanned aircraft operation that is above 400 ft AGL would require an approval from CASA which assesses and considers risk associated with night operations. CASA intends to place the conditions for RPA to fly at night, in the Part 101 MOS (proposed new Chapter 6).

Some subparts of Part 101 of CASR already permit night operations (for example, see regulation 101.390 of CASR for model aircraft), which work as intended and do not require amendment.

The acronym *VMC* in paragraph 101.095 (1) (c) of CASR is only relevant to the type of aircraft that is being flown, e.g., helicopter, fixed wing; and the altitude and airspace in which that aircraft is flying in.

While this works for conventional aircraft, there is little correlation to requirements for unmanned aircraft as the person controlling the unmanned aircraft is dislocated and an unmanned aircraft may be operated safely when other aircraft cannot fly due to visibility minimums.

CASA considers that visibility requirements for operations above 400 ft can be controlled via assessment policy under regulation 101.085 of CASR and the requirement for an approval. Subsequently, there should be no visibility requirements for unmanned aircraft operations (other than model aircraft and excluded RPA) below 400 ft AGL.

For other unmanned aircraft (i.e., balloons and rockets), operations may be undertaken without an area approval in certain circumstances, for example, operations outside an approved area. The removal of visibility and operations in cloud limitations as detailed above will permit launches to be undertaken with no area approval and no visibility requirements, as there would be no other means of restriction. As an area approval is not required for operations that are above 400 ft but not in controlled airspace, it would not be appropriate for CASA to now require an area approval for those operations to enable the visibility and cloud operation restrictions to be applied.

Key objectives

CASA **proposes** to disapply paragraphs 101.095 (1) (a) and (c) of CASR to RPA and model aircraft either through amending the provision or creating a new provision.

Subpart 101.C of CASR applies to unmanned free balloons (see regulation 101.005 of CASR for applicability). Regarding regulation 101.095 of CASR, the requirements need to be retained for unmanned aircraft other than RPA and model aircraft (balloons and rockets).

CASA also proposes to add to paragraph 101.095 (1A) of CASR words to give the effect that:

subregulation (1) does not apply if 'a person operates an RPA or model aircraft at night in accordance with requirements prescribed by the Part 101 MOS'.

3.6.6 Requirements for operations at night in Part 101 MOS

Reference(s)

- Part 101 MOS - new chapter 6

Background / Issue

In line with amendment to regulation 101.095 of CASR (amendment 3.6.5 of this policy proposal document), CASA **proposes** a new chapter in the MOS to provide the ability for unmanned aircraft to be operated at night in accordance with prescribed requirements. This approach would incorporate and remove the requirement for *CASA Instrument 01/17 – Approval – Operation of RPA at night*.

Key objectives

Proposed new Chapter 6 - Operation of RPA at night:

6.01 Purpose

For subregulation 101.095 (1) of CASR, CASA is proposing a new chapter to prescribe the requirements relating to the operation in conditions other than VMC, below 400ft AGL, of an unmanned aircraft.

6.02 Definitions

6.03 Operations of RPA at night

1. A certified operator is approved to conduct an RPA operation at night if the requirements of this section are complied with.
2. The operator must have documented practices and procedures specific to operating RPA at night, which cover the following items:
 - training and testing of individuals; and,
 - risk assessment and mitigation processes; and,
 - Minimum equipment requirements.
3. The operator must ensure that the RPA is operated by only:

- the chief remote pilot; or
- a remote pilot authorised by the chief remote pilot.

4. Before authorising a remote pilot to operate the RPA at night, the chief remote pilot must be satisfied that the remote pilot:

- has the knowledge and practical abilities to operate the RPA at night; and,
- has received appropriate training and testing in relation to the operation of the RPA at night; and,
- has been authorised by the operator to operate the RPA in accordance with the operator's documented practices and procedures.

5. The operator and the authorised remote pilot must ensure the launch and landing areas are illuminated so that the position of the RPA can be established and maintained by the authorised remote pilot by visual reference.

6. The operator and the authorised remote pilot must ensure that the RPA is fitted with the following:

- serviceable equipment for a GPS hold and return to home function; and,
- orientation lighting when the RPA is in flight.

7. The operator and the authorised remote pilot must not operate the RPA:

- in rain; or
- if thunderstorms are observed or reported within 5 km of the location of the proposed operation; or,
- cloud is predicted below 1000 ft AGL on official weather forecast: or
- fog is present

3.7 Enforcement provisions

3.7.1 Clarify CASA's power to monitor use of RPA for safety purposes

Reference(s)

- New Part 101 of CASR provision

Background / Issue

CASA is proposing to amend Part 101 of CASR to enable CASA to conduct surveillance using electronic means or electronic devices to monitor RPA and model aircraft in the interests of aviation safety, including the safety of persons or property on the ground. CASA uses existing CAR 288 detention powers in the Civil Aviation Regulations and delegation instruments for electronic surveillance to monitor RPA activity.

For the purposes of aviation safety, consideration should also be given to CASA inspectors to direct RPA operators and pilots to immediately cease operating the RPA if there is a safety breach.

CASA **proposes** that new provisions in Part 101 of CASR will empower CASA and delegates (such as CASA inspectors) to monitor, conduct electronic surveillance of and track use of

unmanned aircraft. The information collected about the aircraft and about the individual would be usable by CASA for the primary purpose of its regulatory functions (paragraph 9 (f) of the *Civil Aviation Act 1988*) in relation to administration of Part 101 of CASR, and the information should be referable to other government agencies for the purposes of law enforcement (having regard to Australian Privacy Principle 6.2 (e)). For clarity, exercise of this surveillance power should be limited only to CASA's safety remit, for the purposes of aviation safety.

Key objectives

CASA is proposing to insert a new Subpart 101.BA of CASR setting out CASA's surveillance, monitoring and information gathering powers for unmanned aircraft. Consideration of the provisions would:

- Provide delegable power of CASA to conduct electronic surveillance, tracking and data collection in relation to the operation of unmanned aircraft, limited to (strictly confined to) the interests of aviation safety. CASA would be seeking very little limitation; however, if delegated to others, CASA may choose to impose limitations where appropriate.
- Empower CASA to share personal information collected under the above power for law enforcement purposes with an enforcement body, within the meaning given in the *Privacy Act 1988*.
- Create a Part 101 MOS head of power for the purposes of the provision. The installation, use and maintenance of equipment used by CASA to conduct surveillance must be in accordance with procedures set out in the Part 101 MOS.

CASA **proposes** that the Part 101 MOS will deal with matters such as recording a daily log of each surveillance event, the airspace in which the surveillance occurred, what unmanned aircraft were detected, at which heights did operations occur, and similar details relevant to potential enforcement of breach of a safety regulation.

The Part 101 MOS head of power should provide that information (or data) collected in relation to the operation of the unmanned aircraft and the person operating the unmanned aircraft must be dealt with in the way prescribed in the MOS. It is intended that the MOS will address information retention, destruction, security, and handling issues.

The new subpart would create a separate delegable power of CASA in relation to a person—who having been detected via surveillance as being the person operating the unmanned aircraft, and CASA having reasonable suspicion in relation to the person operating the aircraft in a manner that endangers other aircraft or persons or property, or in contravention of a provision in the aviation legislation—to direct the person (including offence of 50 penalty units for non-compliance) to produce identification, being:

- the person's remote pilot licence (see regulation 101.252 of CASR)
- or
- other documents that include a photograph of the holder showing the holder's full face and that was issued within the previous 10 years by the government or a government authority in Australia or a foreign country (see subregulation 61.340 (2) of CASR as an example).

It would also create a separate delegable power for CASA to direct the person (as mentioned above) to immediately land the unmanned aircraft and to cease operating the unmanned aircraft (including offence of 50 penalty units for non-compliance).

3.7.2 Requirements in relation to monitoring RPA for safety purposes

Reference(s)

- New Part 101 MOS provision

Background / Issue

In line with amendments in 3.7.1 in this policy proposal document, the Part 101 MOS would require amendment to prescribe the requirements relating to monitoring RPA for safety purposes.

Key objectives

CASA **proposes** to prescribe requirements for:

- procedures for the installation, use and maintenance of equipment used by CASA to conduct surveillance. It is preferred that the Part 101 MOS will deal with matters such as recording a daily log of each surveillance event, the airspace in which the surveillance occurred, what unmanned aircraft were detected, at which heights did operations occur, and similar details relevant to potential enforcement of breach of a safety regulation.
- how information (or data) collected in relation to the operation of the unmanned aircraft and the person operating the unmanned aircraft must be managed. It is preferred that the MOS will address information retention, destruction, security and handling issues.

3.7.3 Provide CASA the ability to approve electronic authorisations and automated renewals

Reference(s)

- Part 11 of CASR

Background / Issue

CASA **proposes** a requirement for the ability to permit automated decision making (e.g., automated renewal of ReOC in the [myCASA portal](#)). As technology advances CASA seeks to utilise efficiencies and to reduce red tape for operators who wish to conduct low risk operations that do not require individual assessment (such as 3 NM approvals).

CASA **proposes** to establish procedures and criteria to enable low risk activities to be 'approved' electronically. Entry control and surveillance of RPA operators will still provide appropriate assurance and oversight. Further opportunities in other business areas of CASA would benefit from computer assisted decision making, particularly for routine assessment of low-risk applications for grant of authorisations, such as aircraft registration or flight crew licences.

The business processes supporting computer-assisted decision making will require further business planning and implementation discussion. At a high level, an enabling regulatory power would be beneficial to future proof CASA administrative decision making.

Key objectives

CASA **proposes** to include a provision in Part 11 of CASR that CASA may utilise automated computer programs for low-risk regulatory decision making processes to reduce complexity and CASA processing times.

3.7.4 Enable CASA to suspend or cancel separate authorisations on a RePL or ReOC

Reference(s)

- Regulation 101.315 of CASR
- Regulation 101.320 of CASR
- Regulation 101.365 of CASR

Background / Issue

When considering enforcement options, or when conducting/reviewing surveillance or a complaint, CASA does not have an option to consider variation or suspension of separate authorisations on a RePL or ReOC.

Key objectives

CASA **proposes** to amend regulations 101.320 and 101.365 of CASR to enable partial variation (which could also be in the form of cancellation of a partial authorisation on a RePL or ReOC), or suspension of a RePL or ReOC.

101.320 Variation, suspension or cancellation of remote pilot licence

- (1) CASA may vary, suspend or cancel a remote pilot licence by written notice to the holder of the licence, if:
 - (a) CASA has given to the holder a show cause notice under regulation 101.315 in relation to it; and
 - (b) CASA has taken into account any representations made, within the period stated in the notice, by or on behalf of the holder; and
 - (c) there are reasonable grounds for believing that the holder:
 - (i) has operated an RPA in contravention of these Regulations, an instrument under these Regulations or a condition of the licence; or
 - (ii) has operated an RPA negligently or carelessly; or
 - (iii) in operating an RPA, has recklessly endangered human life or property; or
 - (iv) at the time of the grant of the licence did not meet, or now no longer meets, the criteria for eligibility under regulation 11.055 as they applied at the time of the grant.

Note: For subparagraph (iv), in determining whether the criteria for eligibility were or are met, CASA may take into account the matters mentioned in subregulation 11.055(4).

101.365 Variation, suspension or cancellation of RPA operator's certification

- (1) CASA may vary, suspend or cancel a certified RPA operator's certification by written notice to the operator, if:
 - (a) CASA has given to the operator a show cause notice under regulation 101.360 in relation to it; and
 - (b) CASA has taken into account any representations made, within the period stated in the notice, by or on behalf of the operator; and
 - (c) there are reasonable grounds for believing that:
 - (i) the operator has operated an RPA in contravention of these Regulations, an instrument under these Regulations or a condition of the certification; or
 - (ii) a person engaged or employed by the operator has operated an RPA negligently or carelessly; or
 - (iii) a person engaged or employed by the operator, in operating an RPA, has recklessly endangered human life or property; or
 - (iv) at the time the operator was certified the operator did not meet, or now no longer meets, the criteria for eligibility under regulation 11.055 as they applied at the time of certification.

Note: For subparagraph (iv), in determining whether the criteria for eligibility were or are met, CASA may take into account the matters mentioned in subregulation 11.055(4).

At subregulation 101.315 (3) of CASR, CASA **proposes** to insert a provision enabling further show cause notice/suspensions if it relates to a different authorisation on a RePL.

Immediate suspension if serious risk to the safety of air navigation

- (3) The remote pilot licence is suspended from the time the show cause notice is given to the holder, if:
- (a) CASA reasonably considers that there may be a serious risk to the safety of air navigation if the licence were not suspended; and
 - (b) the show cause notice states that the licence is suspended for that reason.

3.7.5 Enable CASA to suspend or cancel excluded category operations

Reference(s)

- New Part 101 of CASR provision

Background / Issue

When considering enforcement options, or when conducting/reviewing surveillance or a complaint, CASA does not have an option to consider suspension or cancellation of excluded category operations. Part 101 of CASR does not provide for the suspension or cancellation of excluded category operations, as the pilot is not the holder of an authorisation (other than a medium excluded RPA which is the holder of a RePL). This has an impact when matters are referred to coordinated enforcement as CASA cannot suspend excluded category operations while significant matters are being investigated, or after the finalisation of an enforcement matter.

To provide CASA an enforcement option for excluded category operations, or part thereof, the regulations will need to be amended to provide a specific power (exercisable on proscribed grounds, like those mentioned for RePLs and ReOCs in Subpart 101.F of CASR) for CASA to prevent or prohibit a person from conducting excluded category operations—either temporarily or permanently.

Key objectives

CASA **proposes** to provide a specific power for CASA to prevent a person from conducting excluded category operations. Additional provisions to Subpart 101.F.1 of CASR may be required—the way CASA ‘suspends or cancels’ a person’s ability to operate excluded RPA is by regulation 11.245 of CASR direction.

This will be a decision reviewable by the Administrative Appeals Tribunal (AAT) and will require amendment to the table in regulation 201.004 of CASR.

3.7.6 Enable CASA to suspend or cancel approvals

Reference(s)

- Regulation 101.029 of CASR

Background / Issue

When considering enforcement options, or when conducting/reviewing surveillance or a complaint, CASA does not have an option to consider suspension or cancellation of an approval (e.g., 3 NM approval, EVLOS, BVLOS, above 400 ft AGL, movement area etc). Part 101 of CASR does not fully support the suspension or cancellation of an approval as a complete instrument, or in part, as listed by activity, aerial work and/or RePL training, or by RPA category and/or weight. This has an impact when matters are referred to coordinated enforcement –CASA cannot suspend approvals while significant matters are being investigated, or after the finalisation of an enforcement matter.

Depending on the nature of the approval and the matter being investigated, the inability to suspend may pose a risk to aviation safety.

To allow CASA to vary, suspend or cancel an approval or part thereof, CASA **proposes** to amend the regulations to provide a specific power (exercisable on proscribed grounds, like those mentioned for RePLs and ReOCs in Subpart 101.F of CASR).

Key objectives

CASA **proposes** to amend Part 101 of CASR to provide a specific power for CASA to vary, suspend or cancel an approval.

CASA may also specify that it will not accept a new application that relates to the operation or privileges subject to enforcement action until the enforcement action has been finalised.

3.7.7 Operations of Australian licenced and registered personnel and aircraft, outside of Australian territory

Reference(s)

- Regulation 101.238 of CASR
- Regulation 101.300 of CASR
- Regulation 101.340 of CASR

Background / Issue

Under the *Civil Aviation Act 1988* (The Act), one of CASA's functions is to regulate the operation of Australian aircraft wherever they are in the world, and all aircraft operated in Australia.

Part 101 of CASR would not prevent a model aircraft including an RPA that is operated as a model aircraft (recreationally) from conducting operations outside Australian territory (beyond 12 NM from the Australian coastline), when the aircraft is registered as an Australian aircraft. Part 47 of CASR presently does not require registration of model aircraft including RPA that are operated as model aircraft. Local laws of the country in which the operations take place must also be observed. Model aircraft and RPAs that are not registered in Australia and that are

operated outside Australian territory are not Australian aircraft and their operation cannot be regulated by CASA.

Excluded RPA operations are constrained to operations within Australian Territory by paragraph 101.238 (aa) of CASR.

In relation to a ReOC holder's operations, subject to acceptable procedures in their manual and acceptable arrangements with the civil aviation authority of the country where operations will take place, CASA may approve RPA aerial work operations, and or RPAS training to be conducted outside Australia.

Legislative Basis

The provisions of the *Civil Aviation Act 1988* and regulations that are relevant to CASA's regulation of RPA outside Australia are set out below:

Civil Aviation Act 1988

s3 Interpretation

Australian aircraft means:

- (a) aircraft registered in Australia; and
- (b) aircraft in Australian territory, other than foreign registered aircraft and state aircraft.

Civil Aviation Regulations 1988

CAR 3(5)

- (5) Subject to these Regulations, these Regulations do not apply to or in relation to state aircraft or to military aerodromes.

Context

The amendments to Parts 47 and 101 of CASR in 2020 requiring registration of RPAs have the effect of making registered RPAs Australian aircraft. An Australian aircraft operating outside Australia is required to adhere to the higher of Australian regulations and the United Nations Agency International Civil Aviation Organization (ICAO) standards when operated over the high seas, and the higher of Australian regulations and local regulations when operated in another ICAO state (country). This provides opportunity for Australian RPA to be operated outside Australia, including for commercial purposes, providing Australian standards and those of the state (country) in whose airspace the operation is conducted are met.

Standards for international operation of aircraft are provided by ICAO under the Convention on International Civil Aviation (Chicago Convention) which is ratified in Australia by the Air Navigation Act 1920 and in which its articles are repeated.

Article 1 - Sovereignty

The contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory.

Article 2 - Territory

For the purposes of this Convention the territory of a State shall be deemed to be the land areas and territorial waters adjacent thereto under the sovereignty, suzerainty, protection, or mandate of such State.

Article 8 - Pilotless aircraft

No aircraft capable of being flown without a pilot shall be flown without a pilot over the territory of a contracting State without special authorization by that State and in accordance with the terms of such authorization. Each contracting State undertakes to insure (sic) that the flight of such aircraft without a pilot in regions open to civil aircraft shall be so controlled as to obviate danger to civil aircraft.

Article 17 - Nationality of aircraft

Aircraft have the nationality of the State in which they are registered.

Matters pertaining to RPAS in ICAO Annexes refer exclusively to aircraft of a type design. A small number of references are made in ICAO documents about unmanned aircraft and refer to aircraft that do not hold a type design. International operation of aircraft that do not hold a type certificate are viewed by ICAO as a bilateral matter for the states concerned, and standards for such operation are not provided for by ICAO.

In late 2019, CASA introduced Temporary Management Instruction (TMI) – 02/2019 to clarify that RPA outside Australian territory may not be conducted under the authority of a ReOC¹ other than for a large RPA that is registered².

Australia now has a registration system for the smaller weight classes of RPA and operators might now seek to operate RPAs in another country, or over the high seas beyond Australian territory.

Operations of any foreign RPAs in Australia are required to have a permission issued under Chapter 13 of the Part 101 MOS as an alternative to registration. However, this permission does not authorise operations required by a ReOC. RPAs that are registered in another country are also the responsibility of that country and preferably arrangements should be in place between CASA and the foreign Civil Aviation Authority (CAA) to administer that aircraft while in Australia.

ReOC holders who do not wish to have any foreign CAA oversight of their “overseas” operations (whilst in Australia) could simplify their operations and remove their aircraft from the foreign register for the time it is operated (and registered) in Australia.

ReOC holders that do not wish to have any CASA oversight of their overseas operations could simplify their operations and remove their aircraft from the Australian register for the time it is operated outside Australia. Operators would be required by local laws to comply with the requirements of the state in which the activity took place.

The external international legal framework has existed for a long time and was designed around large aircraft flying across borders, although there is a long history of particularly sport aircraft

¹ Does not prevent the activity overseas of itself just the activity conducted overseas under an Australian ReOC

² Always required to have been VH-registered therefore always Australian aircraft

(gliders, balloons etc) being packed up and sent as cargo to fly in another country or being brought to Australia to fly.

Key objectives

CASA **proposes** to allow for suitably qualified RPA Operator's Certificate holders with arrangements in place with foreign CAAs to be approved by CASA to conduct operations in Australian territory using foreign aircraft (see s.28A of the *Civil Aviation Act 1988* for equivalent regime but for manned aircraft).

The difference in the concept of operations (CONOPS) between the smaller size classes of RPA, and a large RPA capable of operations between countries or extended operations over the high seas, requires that both the following activities should be separately specified on the ReOC certificate document to allow CASA to consider and/or approve each function separately.

- a. RPA operations 'Into and Out of Australia'
 - i. Operations crossing the Australian territorial line (i.e., 12 NM and return)
- b. RPA 'Operations outside Australian territory'
 - i. RPA operations in another state (an ICAO state/other country)
 - ii. RPA operations over the high seas (beyond the Australian territorial limit)
- c. Remove pilot stations (RPS) operated across international borders
 - i. Overseas RPS operating RPA in Australian territory
 - ii. Australian RPS operating RPA outside Australian territory

3.8 Aerodromes/ Airspace

3.8.1 The relevant authority for all approvals for operations near aerodromes

Reference(s)

- Regulation 101.075 of CASR
- Regulation 101.080 of CASR
- Part 101 MOS Chapter 4 and 9

Background / Issue

For flight in any of the areas identified in subregulations 101.075 (1) or (3) of CASR, the existing process and procedures between CASA and Airservices Australia requires that operators must first get permission from CASA, not air traffic control (ATC).

For operation at controlled aerodromes, permission is required by ATC, after CASA approval is received. CASA coordinates with ATC as appropriate.

Regulation 101.080 of CASR requires that for the purposes of regulation 101.075 of CASR, a person must obtain permission from ATC of the controlled aerodrome. Following consultation with Airservices Australia, CASA **proposes** to amend these provisions to make it clear that approval from CASA is required prior to seeking approval from ATC for operations near controlled aerodromes. The approval from ATC should not be prescribed in legislation, but rather form part of the assessment process where CASA sends applications to ATC for their traffic impact and risk assessment.

Consideration might also be given to whether the penalty units prescribed in the offence provisions within regulation 101.075 of CASR (25 penalty units) need to be aligned to 50 penalty units as with breaches of Directions 5 and 6 of CASA Direction 55/20 (a breach under regulation 11.255 of CASR is 50 penalty units).

Key objectives

To clarify and remove duplication, CASA **proposes** to amend regulation 101.075 of CASR to mirror regulation 101.072 of CASR to prescribe requirements in the MOS for operations near aerodromes from surface level. References to regulation 101.080 in subregulations 101.075 (1) and (2) of CASR will be removed.

101.075 Operation near aerodromes

- (1) A person may operate an unmanned aircraft at an altitude above 400 feet AGL within 3 nautical miles of an aerodrome only if:
 - (a) the operation is permitted by another provision of this Part; or
 - (b) permission has been given for the operation under regulation 101.080.

Penalty: 25 penalty units.

- (2) A person may operate an unmanned aircraft over an area mentioned in paragraph (3)(a) or (b) only if:
 - (a) the operation is permitted by another provision of this Part; or
 - (b) permission has been given for the operation under regulation 101.080.

Penalty: 25 penalty units.

- (3) The areas for subregulation (2) are:
 - (a) a movement area or runway of an aerodrome; and
 - (b) the approach or departure path of a runway of an aerodrome.
- (4) A person must not operate an unmanned aircraft in such a manner as to create an obstruction to an aircraft taking off from, or approaching for landing at, a landing area or a runway of an aerodrome.

Penalty: 25 penalty units.

- (5) An offence against subregulation (1), (2) or (4) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

As CASA progresses with automated approval trials for operations near aerodromes, prescribing requirements for such approvals in the MOS will allow for greater flexibility moving forward.

In respect of sports aviation, the ATC provider manages heavy and medium balloon approvals. CASA is not proposing to remove the requirement for ATC to provide the approval, as this would consequently increase CASA's workload which would subsequently increase cost to industry. The most appropriate pathway will be determined whether regulations 101.075 and 101.080 of CASR can be disapplied to RPA and model aircraft to not disrupt the approval mechanisms in place for medium and heavy balloon approvals through ATC or, a new regulation created mirroring regulation 101.072 of CASR which will apply to RPA and model aircraft operations.

This regulation would prescribe requirements in the MOS for operations near aerodromes from surface level.

3.8.2 CASA discretion to issue NOTAMs or require via conditions in approvals

Reference(s)

- Regulation 101.030 of CASR

Background / Issue

Issue 1

CASA **proposes** to amend requirements in regulation 101.030 of CASR from 'must' to 'may', to provide discretion to issue NOTAMs or to require one as a condition in an approval. These provisions may be better located in the MOS.

101.030 Approval of areas for operation of unmanned aircraft or rockets

- (1) A person may apply to CASA for the approval of an area as an area for the operation of:
 - (a) unmanned aircraft generally, or a particular class of unmanned aircraft; or
 - (b) rockets.
- (2) For paragraph (1)(a), the classes of unmanned aircraft are the following:
 - (a) tethered balloons and kites;
 - (b) unmanned free balloons;

- (c) RPA;
 - (d) model aircraft.
- (3) In considering whether to approve an area for any of those purposes, CASA must take into account the likely effect on the safety of air navigation of the operation of unmanned aircraft in, or the launching of rockets in or over, the area.
 - (4) An approval has effect from the time written notice of it is given to the applicant, or a later day or day and time stated in the approval.
 - (5) An approval may be expressed to have effect for a particular period (including a period of less than 1 day), or indefinitely.
 - (6) CASA may impose conditions on the approval in the interests of the safety of air navigation.
 - (7) If CASA approves an area under subregulation (1), it must publish details of the approval (including any condition) in NOTAM or on an aeronautical chart.
 - (8) CASA may revoke the approval of an area, or change the conditions that apply to such an approval, in the interests of the safety of air navigation, but must publish details of any revocation or change in NOTAM or on an aeronautical chart.
 - (9) CASA must also give written notice of the revocation or change:
 - (a) to the person who applied for the approval of the area; or
 - (b) if that person applied for that approval as an officer of an organisation concerned with unmanned aircraft or rockets, and no longer holds that office—to the person who now holds the office.
 - (10) In the case of an approval of an area as an area for the operation of model aircraft:
 - (a) subregulation (7) does not apply; and
 - (b) subregulation (8) does not require the publication of any details of a revocation or change in NOTAM or on an aeronautical chart.

Subregulation 101.030 (7) of CASR requires CASA to publish a NOTAM for any area approved under this regulation. This does not provide CASA discretion to determine whether the NOTAM would provide any benefit or reduce risk to other air users. For example, a NOTAM raised for activities conducted within a Restricted Area may provide little safety benefit, if any.

Subregulation 101.030 (7) of CASR also provides for a process that cannot be met as issuing a NOTAM with any approval conditions is not possible. The NOTAM format is determined by the NOTAM Office within Airservices Australia.

The requirements in subregulations 101.030 (7) and (8) of CASR for NOTAMs, also form part of the area approval criteria (where required or relevant) and are redundant in this subregulation.

The provisions in subregulation 101.030 (9) of CASR, for the written notice of revocation and changes, are also covered in regulation 11.067 of CASR. The requirement in subregulation 101.030 (10) of CASR may also be removed as the proposed changes to regulation 101.030 of CASR would make subregulation 101.030 (10) of CASR redundant.

Issue 2

Operators of unmanned aircraft do not need an area approval unless it is required by a particular provision, or the operation is outside the remit of the regulations. Subregulation 101.030 (3) of CASR, requires CASA to consider the likely effect on the safety of air navigation when considering whether to approve an area for operations.

CASA rocket assessments consider ground risks, as well as air risk (subregulation 101.055 (3) of CASR requires that a person must not launch a rocket in a way that creates a hazard to an aircraft). CASA also considers ground risks to persons and property that are connected to or incidental to air navigation (CASA's most important consideration, section 9A of the *Civil Aviation Act 1988*).

CASA **proposes** to amend subregulation 101.030 (1) of CASR to provide that a person may apply for an approval under this regulation if another provision of the regulations limits an operation of an unmanned aircraft to an approved area or is not otherwise permitted under the regulations. CASA must be satisfied that the operator can conduct operations in accordance with any conditions on the approval.

CASA also proposes to amend subregulation 101.030 (3) of CASR to:

In considering whether to approve an area for any of those purposes, CASA may consider:

(a) the likely effect on the safety of air navigation of the operation of unmanned aircraft in, or launching of rockets [in or over] the area; and

(b) the likely effect on safety of persons and property on the ground in connection with the operation of unmanned aircraft in or launching of rockets [in or over] the area.

Key objectives

CASA seeks feedback on the consequences of removing regulation 101.030 (7) of CASR and the safety benefits if it remains. If to remain, CASA **proposes** amending subregulation 101.030 (7) of CASR to say that CASA 'may' (rather than 'must') issue a NOTAM or other advice in a form determined by CASA.

CASA **proposes** to retain the flexibility to publish advice via alternate methods such as through an aeronautical chart or in a CASA-verified drone safety apps/web applications. CASA also proposes to remove the words 'including any condition' and remove 'but must publish details of any revocation or change in NOTAM or on an aeronautical chart' after 'safety of air navigation' in subregulation 101.030 (8) of CASR.

Amend subregulation 101.030 (7) of CASR from 'must' to 'may' issue a NOTAM.

Repeal subregulations 101.030 (9) and (10) of CASR.

3.8.3 Flexibility to publish advice via alternative methods i.e., aeronautical chart or CASA-verified apps for approved areas

Reference(s)

- New Part 101 MOS provision

Background / Issue

In line with amendment 3.8.1 of this policy proposal document, amend regulation 101.030 of CASR for discretion to issue NOTAMs, CASA **proposes** to retain flexibility to publish advice via alternate methods such as through an aeronautical chart or in a CASA-verified drone safety app/web application. Detail of this may be better placed in the MOS.

Key objectives

This amendment may not progress depending on whether proposed amendments in 3.8.4 and 3.8.5 of this policy proposal document, proceed in respect of replacing 'movement area' with '3 nautical miles from the centreline'.

3.8.4 Replace 'movement area' with '3 nautical miles from the centreline'

Reference(s)

- Regulation 101.238 of CASR
- Subregulation 101.300 (3) of CASR

Background / Issue

A digital, readily available, central source of data for the movement area of any aerodrome does not exist. While aerodrome operators are required to keep records for individual aerodromes, including the areas that fall within the movement area, that information is not held centrally and there is no requirement for it to be defined in a digital way (for example, it is not published as part of a standard Airservices Australia aerodromes dataset).

While [Airservices Australia has published charts](#) incorporate this movement area for a small number of aerodromes, the listing is incomplete and only includes static charts that cannot be easily updated or viewed to the resolution required for RPAS operations. It is also unclear if, or how, these charts are maintained and whether the movement area depicted is current or accurate.

Inaccurate data when defining areas that rely on the definition of a movement area is problematic. For example, RPA operations near controlled aerodromes must not operate within the no-fly zone of an aerodrome including areas 'within 3 NM of the movement area' of that aerodrome (definitions sections 4.02 and 9.02 of the MOS). Without a clearly defined aerodrome movement area, it is not possible to easily reproduce the 3 NM using the movement area as the starting point. This affects an operator's ability to accurately apply for and operate within the confines of the regulations.

Inaccurate definition also creates inconsistencies between CASA, Airservices and RPA operators when measuring the 3 NM boundary for other purposes, such as the CASA verified drone safety apps through the CASA RPAS platform and surveillance data analysis.

For example, when setting the operating rules, the RPAS platform developers were advised to represent an approximation of the movement area using runway threshold end points (available in Airservices' Product Group A Dataset 6) with a buffer of 100 m either side before applying the 3 NM radius. The buffer value is an arbitrary value and while it approximates a movement area it is not an exact representation of the MOS definition.

With a greater demand for data to be stored and accessed in a digital format and to establish consistency between information displayed in digital RPAS tools and the regulations, it would be preferable to define these areas using concepts that support digital representation, without reference to the movement area.

CASA has consulted with Airservices Australia, the Defence Aviation Safety Authority (DASA) and industry representatives through the TWG, to review the proposed approach, provide input and identify any consequences and issues.

Key objectives

CASA **proposes** to remove references to '*movement area*' throughout Part 101 of CASR (except for regulations 101.440 and 101.495 of CASR which are to remain as is) and instead reference '3 nautical miles from the centreline of the threshold of a runway' as follows:

- Subparagraph 101.238 (d) (v) of CASR:
(v) **within 3 nautical miles of the movement area of a controlled aerodrome; and**

Amend to:

within the no-fly zone of a controlled aerodrome.

Add new subparagraph to regulation 101.238 of CASR (i.e. (vi)):

Within the conditional zone of a non-controlled aerodrome whilst a relevant event is taking place.

Amend subregulation 101.300 (3) of CASR:

- (3) It is a condition of a remote pilot licence that the licence holder must not operate an RPA above 400 ft AGL in controlled airspace, or within 3 nautical miles of the movement area of a controlled aerodrome, unless he or she holds at least one of the following qualifications:
- (a) an aeronautical radio operator certificate;
 - (b) a flight crew licence;
 - (c) an air traffic control licence;
 - (d) a military qualification equivalent to a licence mentioned in paragraph (b) or (c);
 - (e) a flight service licence.

to words to the effect of:

(3) It is a condition of a remote pilot licence that the licence holder must not operate an RPA above 400 ft AGL in controlled airspace, or within the no-fly zone of a controlled aerodrome, unless the licence holder also holds at least one of the following qualifications:

- (a) an aeronautical radio operator certificate;
- (b) a flight crew licence;
- (c) an air traffic control licence;
- (d) a military qualification equivalent to a licence mentioned in paragraph (b) or (c);
- (e) a flight service licence.

CASA's preference is to provide the head of power in Part 101 of CASR and supporting standards in the MOS.

3.8.5 Replace 'movement area' with '3 nautical miles from the centreline of the runway'

Reference(s)

- Various Part 101 MOS sections

Background / Issue

Outlined in amendment 3.8.4 of this policy proposal document, CASA is proposing to amend the measurement of 3 NM from the movement area of an aerodrome, to instead use the reference '3 nautical miles from the centreline of the threshold of a runway'. This will provide CASA, Airservices, CASA-verified drone safety apps and operators, the ability to measure the distance more easily and accurately where operations may be conducted.

The no fly zones, and approach and departure paths would all still be valid and must be observed.

Issue 2

With the change from 'movement area' to 'runway threshold' as the point of measurement from which RPA cannot be operated, the definition of runway threshold will need to be added as an item of aeronautical knowledge (learning outcome).

Issue 3

With the amendment of regulation 101.075 of CASR to mirror regulation 101.072 of CASR, prescribed requirements in relation to operations near aerodromes will be detailed in the MOS (controlled and non-controlled aerodromes). Requirements are already prescribed in Chapters 4 and 9, however, the intention of Directions 5 and 6 of CASA Direction 55/20 will need to be incorporated into the relevant chapters of the MOS, in consideration of proposed changes above in reference to 'movement area'.

Key objectives

Issue 1

CASA **proposes** to insert in the Part 101 MOS the definition of 'threshold' or reference the definition in the [Part 139 \(Aerodromes\) Manual of Standards 2019](#)

threshold means the beginning of that portion of the runway usable for landing.

Further amendments would be to:

Repeal paragraph (b) in the definition of 'tethered operation' (section 1.04 MOS).

- (b) at least 500 m from the movement area of an aerodrome unless a provision of this MOS provides for a different distance.

Replace 'movement area' with 'threshold of each runway' in the following sections:

Section 4.02 no-fly zone of a controlled aerodrome

4.02 Definitions

In this Division:

area that is crosshatched has the same meaning as in section 4.06.

area that is shaded black has the same meaning as in section 4.06.

area that is shaded grey has the same meaning as in section 4.06.

defined unmanned aircraft means an unmanned aircraft operated in accordance with:

- (a) an approval of an approved area under regulation 101.030 of CASR; or
- (b) a permission mentioned in regulation 101.075 that permits operation of the aircraft within the no-fly zone of a controlled aerodrome.

no-fly zone of a controlled aerodrome means any areas and airspace that are below 400 ft and:

- (a) within 3 NM of the movement area of a controlled aerodrome; or
- (b) within the approach and departure paths referred to in section 4.05, whether or not they extend beyond 3 NM of the movement area of the controlled aerodrome.

RPA, for the purposes of this Division, means an RPA that is not a defined unmanned aircraft.

Paragraph 5.11 (2) (c):

- (c) if any part of the operation is conducted within 3 NM of the movement area of an aerodrome, including an aerodrome that is an HLS — the height of the RPA must be referenced to the aerodrome or HLS elevation as published in the AIP from time to time; and

Section 9.02 no-fly zone of a non-controlled aerodrome:

9.02 Definitions

In this Division:

area that is shaded black has the same meaning as in section 9.05.

area that is shaded grey has the same meaning as in section 9.05.

defined unmanned aircraft means any of the following:

- (a) a micro RPA;
- (b) an unmanned aircraft operated in accordance with an authorisation (however called) or exemption, granted under CASR, that permits operation of the aircraft within the no-fly zone of a non-controlled aerodrome during a relevant event;
- (c) an unmanned aircraft operated in accordance with an approval of an approved area under regulation 101.030 of CASR.

no-fly zone of an HLS means the area and airspace that is a cylinder:

- (a) whose centre is the centre of the HLS; and
- (b) which has a diameter of 1.5 NM; and
- (c) which has a vertical height of 400 ft.

no-fly zone of a non-controlled aerodrome means any areas and airspace that are:

- (a) within 3 NM of the movement area of the non-controlled aerodrome; or
- (b) within the approach and departure paths referred to in section 9.05, whether or not they extend beyond 3 NM of the movement area of the non-controlled aerodrome.

relevant airspace means each of the following:

- (a) the no-fly zone of a non-controlled aerodrome;
- (b) the no-fly zone of an HLS.

relevant event means that a manned aircraft is within relevant airspace, including when the aircraft is in the course of approaching, landing at, taking off from, or manoeuvring on the movement area of, the aerodrome.

RPA, for the purposes of this Division, means an RPA that is not a defined unmanned aircraft.

CASA proposes to place a note under sections 4.02 and 9.02 of the MOS that describes that for the purpose of measuring the distance from the threshold, a person should use the centre point of the end of the runway that can be used for landing.

It may be warranted under section 9.02 of the MOS to also explain that for runways such as grass landing strips, the same point of reference applies, and markers may indicate the end of the runway instead of piano key markings.

Issue 2:

Unit 6 RKOP of the MOS - This item fits best into the operations and procedures Unit item 8 which covers operation of RPA near an aerodrome.

Amend Item 8 (a) (i):

8	<i>Operation of RPA near aerodrome</i>	A
	(a) considerations in relation to operating an RPA near an aerodrome: (i) the location of the movement area of the aerodrome;	

to:

the location of the runway threshold and movement area of an aerodrome.

Figure 4.05 & 9.06: Remove from diagrams - the '3.85 km ...' (vertical text)
(as this is redundant due to the other instructions to draw this zone).

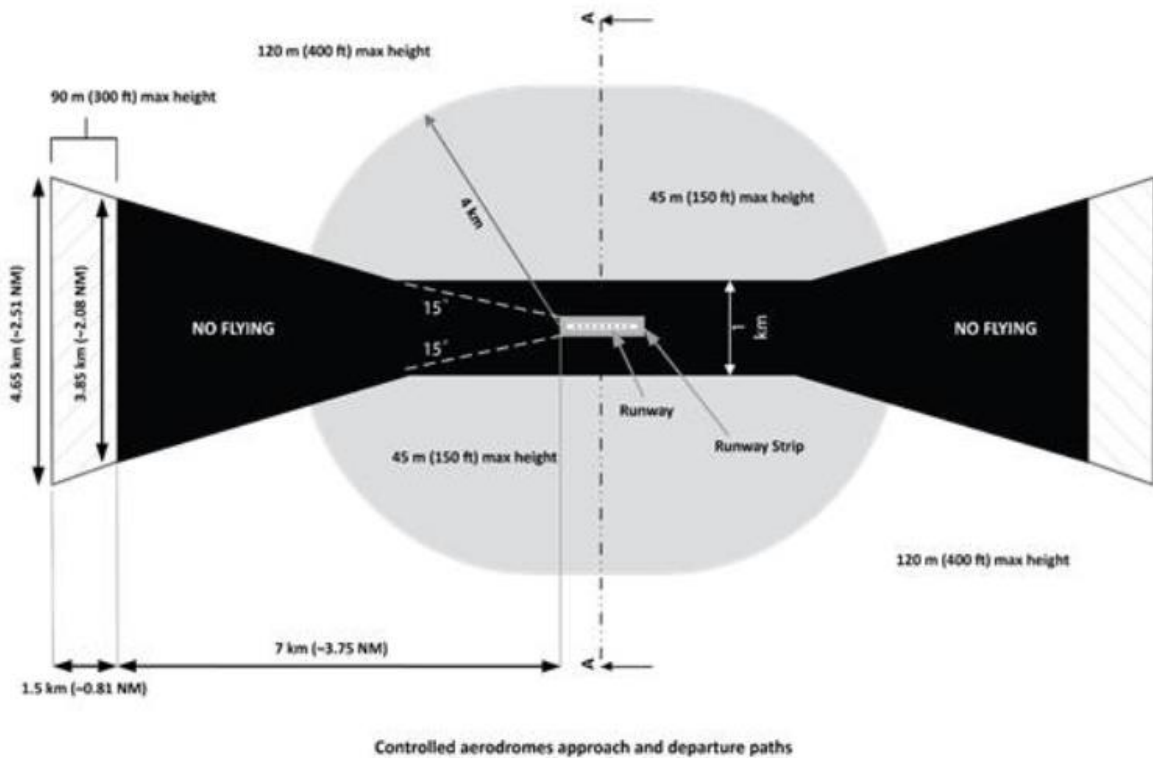


Figure 4.05 (1)-1: Controlled aerodromes approach and departure paths (shows matters)

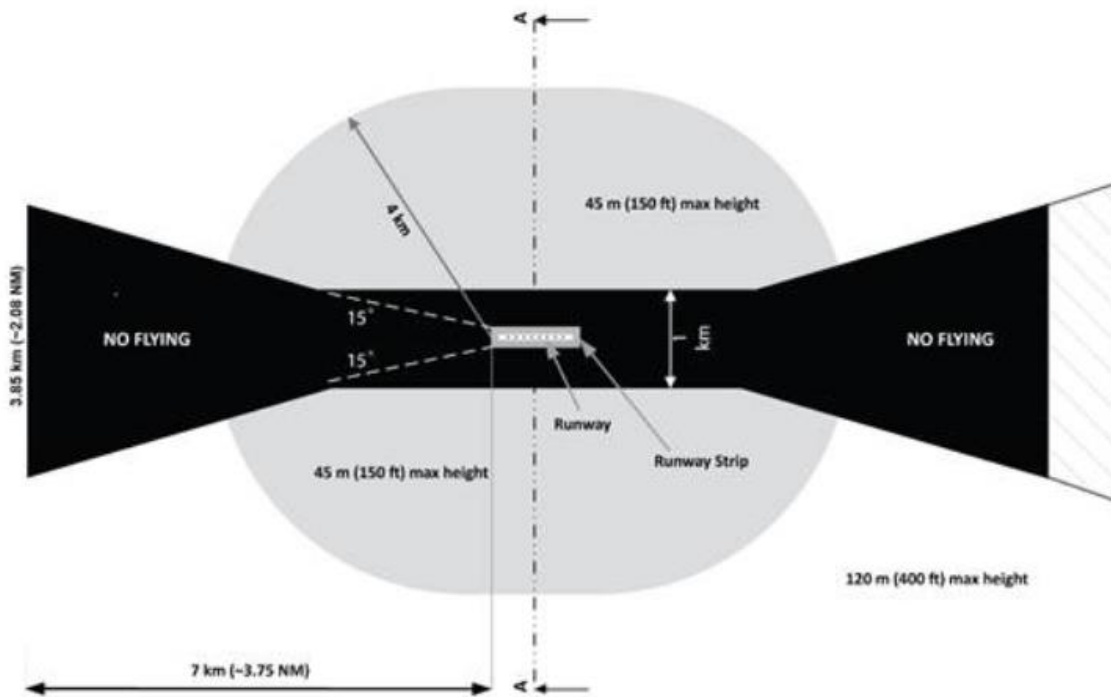
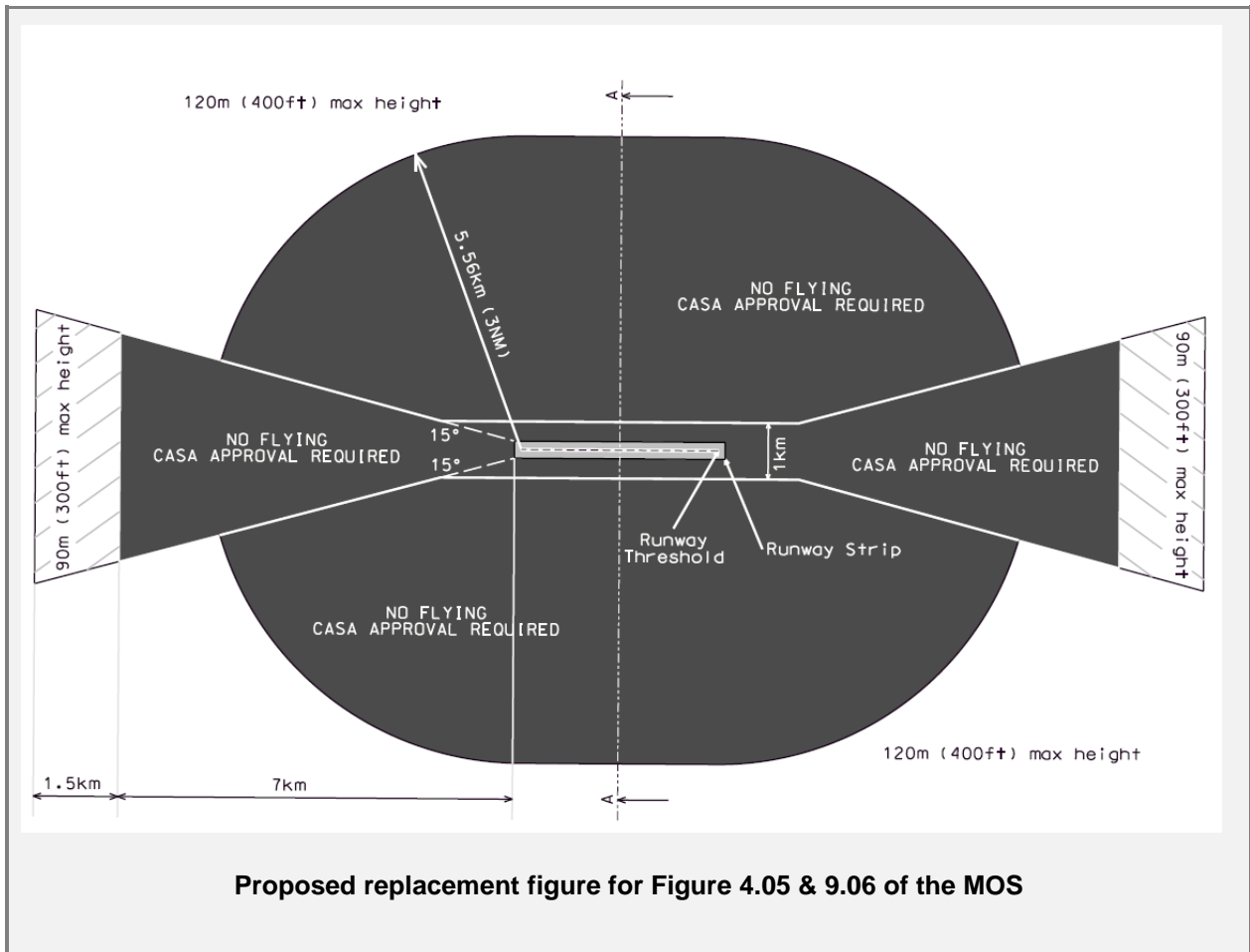


Figure 9.06 (1)-1 Non-controlled aerodromes approach and departure paths (shows matters)

Replace with image:



9.02 – no-fly zone of an HLS

no-fly zone of an HLS means the area and airspace that is a cylinder:

- (a) whose centre is the centre of the HLS; and
- (b) which has a diameter of 1.5 NM; and
- (c) which has a vertical height of 400 ft.

Amend to:

...means the area and airspace that is a cylinder:

- (a) whose centre is the centre of the HLS; and
- (b) which has a radius of 0.75 NM; and
- (c) which has a vertical height of 400 ft

4.02 – no-fly zone of a controlled aerodrome

no-fly zone of a controlled aerodrome means any areas and airspace that are below 400 ft and:

- (a) within 3 NM of the movement area of a controlled aerodrome; or
- (b) within the approach and departure paths referred to in section 4.05, whether or not they extend beyond 3 NM of the movement area of the controlled aerodrome.

Definition to change to describe the new measurement system:

no-fly zone of a controlled aerodrome means any areas and airspace that are below 400 ft and:

- (a) within 3 nautical miles of a centreline that spans from each threshold of a controlled aerodromes runway
- (b) within the approach and departure paths referred to in section 4.05

9.02 – no-fly zone of a non-controlled aerodrome

no-fly zone of a non-controlled aerodrome means any areas and airspace that are:

- (a) within 3 NM of the movement area of the non-controlled aerodrome; or
- (b) within the approach and departure paths referred to in section 9.05, whether or not they extend beyond 3 NM of the movement area of the non-controlled aerodrome.

Amend to:

Conditional zone of a non-controlled aerodrome means any areas and airspace that are:

- (a) within 3 nautical miles of a centreline that spans from each threshold of a non-controlled aerodromes runway; or
- (b) within the approach and departure paths referred to in section 9.05

9.02 – relevant airspace

relevant airspace means each of the following:

- (a) the no-fly zone of a non-controlled aerodrome;
- (b) the no-fly zone of an HLS.

Amend to:

- (a) the conditional zone of a non-controlled aerodrome;
- (b) the conditional zone of an HLS.”

Issue 3

CASA **proposes** to incorporate the intent of Directions 5 and 6 of CASA 55/20 into Chapters 4 and 9 of the MOS (and elsewhere if required). The intent of the direction will need to be worked through in line with proposed changes to the concept of 'movement area'.

Sections 4.01 and 9.01 of the MOS may need to be amended to also refer to regulation 101.075 of CASR.

3.8.6 No-fly zone of a controlled aerodrome

Reference(s)

- Part 101 MOS Section 4.04

Background / Issue

The light grey shaded area in Figure 4.05 (1) -1 does not provide the intended safety benefit.

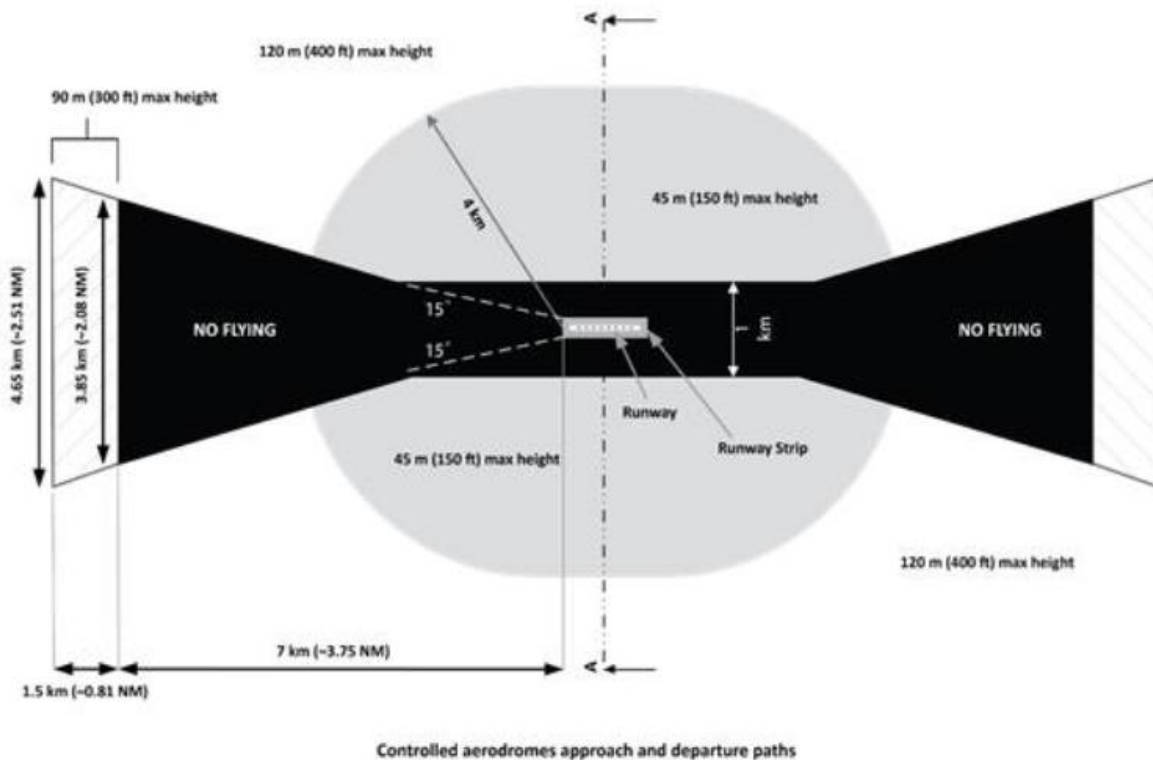


Figure 4.05 (1)-1: Controlled aerodromes approach and departure paths (shows matters)

It was identified during TWG discussions that change is required for greater clarity. The grey area is used to identify where and how high a micro RPA could fly around a controlled aerodrome. The height of 150 ft above aerodrome height is also the limit on the height of the RPA when a tether is attached, out to 3 NM from the aerodrome.

The cross-hatched area in section 4.04 of the MOS is irrelevant (see subparagraph 4.04 (3) (b) (iii) of the MOS); the approach and departure path cross-hatched areas start from 300 ft above aerodrome height. A person may operate any RPA up to the base of the cross-hatched areas.

In discussion with Airservices Australia, it was identified that the term *clearance* was not an appropriate term to use in relation to paragraph 4.04 (3) (e) of the MOS. If ATC were to provide a clearance to an RPA, there is an obligation on ATC to provide services to that operator, such as separation from other conventional aircraft.

Given that most RPAS do not carry the required equipment and systems on board to allow for the Air Navigation Service Provider (ANSP) to provide a clearance, the term will need to be substituted and provide CASA the ability to determine through policy what will need to be provided to the ANSP. This should also consider the future ability of the RPAS platform which may, allow for these types of operations.

A “notification” aims to cover multiple situations (examples below) and future proof for example approvals given via auto approval system:

- NOTAM issued through the NOF
- a phone call
- an email
- an auto approval system that displays info in the tower.

Key objectives

CASA **proposes** to replace subsection 4.04 (2) of the MOS

- (2) The requirements are that the RPA may only be operated in:
- (a) an indoors operation; or
 - (b) a tethered operation in accordance with subsection (3).

with:

(2) The requirements are that the RPA may only be operated in a tethered operation in accordance with subsection (3).

CASA **proposes** to replace subsection 4.04 (3) of the MOS

- (3) For paragraph (2) (b):
- (a) the tether must be 1 of the following:
 - (i) if the RPA is flown below 150 ft in the area that is shaded grey for the aerodrome —no longer than 150 ft;
 - (ii) if the RPA is flown within the area that is shaded black for the aerodrome and at least 3 NM away from the aerodrome — no longer than 150 ft;
 - (iii) if the RPA is flown within the area that is crosshatched for the aerodrome — no longer than 300 ft;
 - (iv) if the RPA is flown within the area that is within 3 NM from the aerodrome but outside the approach and departure paths — 150 ft; and
 - (b) the RPA must be flown within:
 - (i) the area that is shaded grey for the aerodrome and below 150 ft; or
 - (ii) the area that is shaded black for the aerodrome, provided that the flight is at least 3 NM from the aerodrome; or
 - (iii) the area that is crosshatched for the aerodrome; or
 - (iv) the area that is within 3 NM from the aerodrome but outside the approach and departure paths; and
 - (c) the RPA flight must be conducted within VLOS; and
 - (d) the RPA flight must be conducted in accordance with the certified RPA operator’s documented practices and procedures for operations under this Division; and
 - (e) ATC clearance must be obtained before the RPA takes off, and the RPA flight must be flown in accordance with the clearance and any related ATC instructions.

Note 1 Controlled aerodromes are in controlled airspace and have instrument approach procedures.

Note 2 The designation of controlled aerodromes and controlled airspace is made in the *Determination of airspace and controlled aerodromes etc.*, as in force from time to time. This is a legislative instrument revised and reissued by CASA approximately every 6 months. Controlled aerodrome information in the Determination in force at any particular time is also published by Airservices Australia in the *Designated Airspace Handbook*.

with:

- (3) For paragraph (2) (b):
- (a) the tether must limit the height of the RPA to not exceed 150 ft above aerodrome elevation; and
 - (b) the RPA may only not be flown within:
 - (i) the area that is shaded grey for the aerodrome; or
 - (ii) the approach and departure paths;
 - (c) the RPA flight must be conducted in accordance with the certified RPA operator’s documented practices and procedures for operations under this Division; and

(d) A notification (however called) must be provided to the applicable Air Navigation Service Provider prior to the operation.

Remove 'Note 1'.

The grey shaded area will be updated in line with the new requirements in subsection 4.04 (3) of the MOS above.

3.8.7 Operation of unmanned aircraft above 400 ft AGL

Reference(s)

- New Chapter Part 101 MOS

Background / Issue

Regulation 101.085 of CASR is proposed to be amended so that operations of unmanned aircraft above 400 ft are permitted, if operating in accordance with an authorisation or exemption issued by CASA, or in accordance with a MOS provision that permits the operation above 400 ft (proposed chapter 3 or 11 of the MOS).

101.085 Maximum operating height

- (1) A person may operate an unmanned aircraft above 400 feet AGL only:
 - (a) in an area approved under regulation 101.030 as an area for the operation of unmanned aircraft of the same class as the aircraft concerned, and in accordance with any conditions of the approval; or
 - (b) as otherwise permitted by this Part.

Penalty: 50 penalty units.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

Key objectives

See amendment 3.6.1 of this policy proposal document, incorporating Direction 7 of CASA Direction 55/20.

Operations above 400 ft AGL

Regulation 101.085 of CASR limits the operation of unmanned aircraft to 400 ft AGL, unless it is operated in an approved area or otherwise permitted by another provision in Part 101 of CASR. CASA **proposes** to incorporate the requirement in Direction 7 of CASA Direction 55/20 into the regulations but retain the Part 101 of CASR requirements relating to tethered balloons, kites, unmanned free balloons and rockets (regulation 101.085 of CASR). This gives effect to a blanket prohibition of unmanned aircraft operating above 400 ft AGL—unless operating in an approved area, in accordance with an exemption or licence privileges.

CASA requires the ability to authorise operations outside of approved areas. CASA intends to only allow operations above 400 ft AGL under a regulation 101.030 of CASR approval, or under a regulation 101.080 of CASR permission when a person operates in areas specified in

regulation 101.075 of CASR. Other areas where CASA may permit operations above 400 ft AGL outside of an approved area is open mine sites where the displaced earth creates a substantial increase in the AGL reference point but may not affect the AMSL reference point at all. Another example may include additional height around obstacles within a certain radius.

Regulation 101.400 of CASR states that a person may operate a model aircraft outside an approved area above 400 ft if it is kept in sight and clear of populous areas. CASA **proposes** to repeal this provision as model aircraft should not fly higher than 400 ft without CASA approval under regulation 101.085 of CASR.

CASA **proposes** to use regulation 101.085 of CASR as the single regulation for maximum operating height of unmanned aircraft. Prescribing requirements within the Part 101 MOS allows CASA flexibility to implement acceptable means of compliance or create alternate standards.

3.9 Record keeping/ Manuals/ Documentation

3.9.1 Requirement to keep records or give information to CASA

Reference(s)

- Regulation 101.272 of CASR
- New regulation '101.062' of CASR
- Part 101 MOS Chapter 10

Background / Issue

A new provision is proposed to provide head of power for the requirement to keep records or give information to CASA. It is also proposed this new regulation will replace regulation 101.272 of CASR which is referenced in Chapter 10 of the MOS.

It is proposed to move the head of power from subpart 101.F to subpart 101.C of CASR to provide for applicability to the operation of unmanned aircraft of all kinds, (except operations mentioned in subregulation 101.005 (3) of CASR, i.e., a model aircraft indoors).

For certified operators, most of the documentation relating to an operation (i.e., RPA flight) is to be kept by the operator. Maintenance and training conducted is also required to be recorded.

Remote pilots have record keeping requirements similar to a pilot's logbook.

Excluded operators of small RPA must keep some operational records and logbooks.

Chapter 10 of the MOS defines the record keeping requirements.

Key objectives

CASA **proposes** to repeal regulation 101.272 of CASR:

101.272 Certain RPA—requirement to keep records or give information to CASA

- (1) The Part 101 Manual of Standards may require a person who operates, or proposes to operate, RPA to do either or both of the following:
 - (a) keep records, in accordance with the requirements prescribed by the Part 101 Manual of Standards;
 - (b) give information to CASA, in accordance with the requirements prescribed by the Part 101 Manual of Standards.
- (2) A person commits an offence of strict liability if:
 - (a) the person is subject to a requirement under subregulation (1); and
 - (b) the person does not comply with the requirement.

Penalty: 50 penalty units.

and the following provision to be inserted:

101.062 Requirement to keep records or give information to CASA

- (1) The Part 101 Manual of Standards may require a person who operates, or proposes to operate, unmanned aircraft to do either or both of the following:
 - (a) keep records, in accordance with the requirements prescribed by the Part 101 Manual of Standards;
 - (b) give information to CASA, in accordance with the requirements prescribed by the Part 101 Manual of Standards.
- (2) A person commits an offence of strict liability if:
 - (a) the person is subject to a requirement under subregulation (1); and
 - (b) the person does not comply with the requirement.

Penalty: 50 penalty units.

Sections 10.02, 10.09, 10.13, 10.15 of the MOS would also be amended to include the new regulation reference.

3.9.2 Notification of changes operating very small RPA for hire or reward

Reference(s)

- Division 101.F.5 of CASR
- Regulation 101.373 of CASR

Background / Issue

The application of Division 101.F.5 of CASR was changed by the 2019 amendment to Part 101 of CASR, to apply to all excluded RPA, but the title of this regulation does not reflect the change.

Division 101.F.5—Operation of certain RPA for hire or reward

Key objectives

Amend the Division title and regulation to reflect the correct applicability of the Division:

Notification of changes in relation to operating excluded RPA’.

3.9.3 Amend ‘operator’s proposed documented practices and procedures’ and term ‘operates’

Reference(s)

- Subregulation 101.330 (1A) and (2) of CASR

Background / Issue

The use of the term *operates* in Part 101 of CASR often causes confusion about what an RPA operator certificate holder does and what the remote pilot does. Sometimes, to distinguish between the two, the term *conduct operations* is used in Part 101 of CASR, but there is no obvious link to this terminology in subregulation 101.330 (1A) of CASR.

The reference to ‘operator’s manuals’ in this subregulation would be better expressed as the ‘*applicant’s proposed documented practices and procedures*’. ‘*Documented practices and procedures*’ are a defined term in the Part 101 MOS which means the written practices and procedures of the operator that have been approved by CASA.

To avoid confusion as to whether an operator must have its practices and procedures approved by CASA *before* applying to CASA for certification as an RPA operator, the word ‘*proposed*’ should be inserted into subregulation 101.330 (2) of CASR.

Key objectives

CASA **proposes** to amend subregulation 101.330 (1A) of CASR:

101.330 Application for certification as RPA operator

(1A) A person may apply to CASA, in writing, for certification as an RPA operator.

to reflect the wording in subregulation 101.290 (1A) of CASR to say:

that a person may apply to CASA, in writing to ‘*conduct RPA operations*’.

It is proposed to also amend subregulation 101.330 (2) of CASR:

- (2) The application must be accompanied by a copy of each of the applicant's manuals relevant to the operation of RPA.

to reference:

the '*operator's proposed documented practices and procedures*', rather than '*manuals*'.

3.9.4 Clarify operator functions, consistent language for procedures, new provision for 'chief executive officer responsibilities and accountabilities'

Reference(s)

- Regulation 101.340 of CASR
- 101.342 (d) 'new' CASR provision

Background / Issue

As detailed in amendment 3.9.3 of this policy proposal document, CASA seeks consistency across the regulatory suite when referring to an operator's documented practices and procedures (DPPs). The wording in paragraph 101.342 (d) of CASR would be more consistent if it referenced the '*operator's documented practices and procedures*' rather than 'operational documents required by CASA under subregulation 101.355 (1) of CASR for the types of operations conducted by the operator'.

In Parts 141 and 142 of CASR, the Chief Executive Officer (CEO) of a Part 141/142 organisation has certain responsibilities and accountabilities as part of their role (i.e., regulation 141.120 of CASR). While responsibilities may be delegated within an organisation depending on the organisation's DPPs, the CEO retains accountabilities for all matters and holds an important position within the organisation. CASA **proposes** that the CEO of a ReOC should have certain prescribed functions and duties within Division 101.F.4 of CASR.

CASA **proposes** to include a new subregulation (before regulation 101.342 of CASR) to give effect to the 'functions and duties of chief executive officer' and include a list of functions and duties. CASA is also considering inserting a new paragraph to subregulation 101.340 (1) of CASR—to provide that an organisation 'maintains within its organisation a position of chief executive officer (however called), with the functions and duties set out in regulation 101.341 of CASR [new subregulation]'.

To avoid doubt, the regulation or a note should clarify that the positions of CEO and Chief Remote Pilot may be held by the same person at the discretion of CASA, where relevant.

Key objectives

Proposed amendment to paragraph 101.342 (d) of CASR:

- (d) maintaining a complete and up-to-date reference library of operational documents required by CASA under subregulation 101.335(1) for the types of operations conducted by the operator.

to:

maintain a complete and up-to-date set of documented practices and procedures required by CASA under subregulation 101.335 (1).'

Proposed new subregulation (before regulation 101.342 of CASR):

Chief executive officer responsibilities and accountabilities'

For paragraph 101.340 (new subregulation), the functions and duties of a chief executive officer are as follows:

- a. ensure the safe conduct of the operator's Part 101 activities in accordance with civil aviation legislation, authorisation, and operator-approved procedures;
- b. advise CASA of any changes to the operator's name or address;
- c. advise CASA of any change to the nominated personnel, including the nomination of new chief remote pilot or maintenance controller;
- d. respond to any safety related surveys or questionnaires as requested by CASA.

A note may also be inserted referencing regulation 11.072 of CASR (Conditions of authorisations—change of business status).

11.072 Conditions of authorisations—change of business status

- (1) It is a condition of an authorisation used in connection with an aviation-related activity of a business that its holder must tell CASA, in writing, of a change of any of the following kinds within the period mentioned in subregulation (3):
 - (a) if the holder carries on the business under a name that is registered as a trading or business name under the law of a State or Territory—the holder changes that name, ceases to use that name, or begins to use another name;
 - (b) the person changes the place at which he or she carries on the business;
 - (c) the holder ceases to be entitled to occupy the premises from which he or she carries on the business;
 - (d) the holder ceases temporarily or permanently to carry on the business;
 - (e) if the holder is an individual—the holder:
 - (i) is declared bankrupt; or
 - (ii) enters into an arrangement with his or her creditors under Part X of the *Bankruptcy Act 1966*; or
 - (iii) applies to take the benefit of any other law for the protection of debtors; or
 - (iv) becomes aware that he or she has an illness likely to render him or her unable to carry on the business for a period that is likely to exceed 3 months;
 - (f) if the holder is a member of a partnership—an event mentioned in paragraph (e) happens to any of the members;
 - (g) if the holder is a corporation:
 - (i) the holder:
 - (A) becomes a Chapter 5 body corporate (within the meaning given by section 9 of the *Corporations Act 2001*); or
 - (B) applies to take the benefit of any other law for the protection of insolvent corporations; or
 - (ii) an event mentioned in paragraph (e) happens to any of the holder's key personnel.
- (2) A person commits an offence if:
 - (a) the person is the holder of an authorisation; and
 - (b) the person uses the authorisation in connection with an aviation-related activity of a business; and
 - (c) a change mentioned in subregulation (1) happens in relation to the person; and
 - (d) the person does not tell CASA, in writing, of the change within the period mentioned in subregulation (3).

Penalty: 50 penalty units.
- (3) The period is:
 - (a) within 14 days after the change happens; or
 - (b) if another provision of these Regulations allows, in relation to that kind of authorisation, a different period within which the person must tell CASA of the change—within that period.
- (4) An offence against subregulation (2) in relation to a change mentioned in paragraph (1) (a), (b), (c) or (d), subparagraph (1)(e)(i), (ii) or (iii) or subparagraph (1)(g)(i) is an offence of strict liability.
- (5) In this regulation:

key personnel, in relation to a corporation that holds an authorisation, means the people holding, or carrying out the duties of, any positions that the holder is required by these Regulations to have in its organisation.

A proposed new paragraph to subregulation 101.340 (1) of CASR:

101.340 Conditions on certification

- (1) It is a condition of the certification of a person as an RPA operator that the person:
 - (a) maintains within its organisation a position of chief remote pilot having at least the functions and duties set out in regulation 101.342; and
 - (b) employs as its chief remote pilot a person who holds a remote pilot licence under Division 101.F.3 and who is competent to carry out those duties and perform those functions; and
 - (c) either:
 - (i) maintains a position within its organisation of maintenance controller, with the functions and duties set out in an advisory circular issued by CASA from time to time; or
 - (ii) has an arrangement with another qualified and competent person to carry out those functions and duties; and
 - (d) if it maintains within its organisation a position of maintenance controller—employs as its maintenance controller a person who is competent to carry out the duties and perform the functions of a maintenance controller; and
 - (e) complies with the operator’s documented practices and procedures.

to include:

maintains within its organisation a position of chief executive officer (however called), having at least the functions and duties set out in regulation 101.343 (a new subregulation).

Insert the definition of '*documented practices and procedures*' in the Part 101 MOS.

3.9.5 RPA operators to ensure operations are IAW their approved documented practices and procedures

Reference(s)

- Subregulation 101.340 (1) of CASR

Background / Issue

Regulation 101.340 of CASR requires the operator to comply with the operator’s documented practices and procedures, and regulation 101.370 of CASR requires a member of the operator’s personnel to comply. CASA is proposing amendment to ensure that the *operator* is responsible for ensuring that its personnel comply with the documented practices and procedures.

Key objectives

CASA **proposes** to insert at the end of subregulation 101.340 (1) of CASR:

ensures that each member of its personnel complies with the operator's approved documented practices and procedures.

3.9.6 Remove duplicated record-keeping requirements

Reference(s)

- Paragraph 101.342 (b) of CASR
- Various Part 101 MOS

Background / Issue

Multiple record keeping requirements exist throughout MOS chapters in addition to requirements prescribed in Chapter 10 of the MOS.

Key objectives

CASA **proposes** to remove duplicated record keeping requirements by centralising them as detailed below.

Amend section 10.03 of the MOS

10.03 Chief remote pilot records

(1) A certified RPA operator must ensure that its chief remote pilot keeps the following records:

- (a) records which reasonably demonstrate that the chief remote pilot is regularly and consistently performing his or her functions and duties mentioned in paragraphs 101.342 (a), (b), (c) and (d) of CASR (*chief remote pilot's duties records*);

Note Regulation 101.342 of CASR refers to the chief remote pilot: (a) ensuring the operator's RPA operations are conducted in accordance with the civil aviation legislation; (b) maintaining a record of the qualifications held by each person operating an RPA for the operator; (c) monitoring the operational standards and proficiency of each person operating RPA for the operator; and (d) maintaining a complete and up-to-date reference library of certain relevant operational documents.

- (b) the following *RPAS operational record* in relation to an RPA operation:
- (i) if a job safety assessment is carried out in relation to the operation — a copy of the assessment;
 - (ii) if a risk management plan is produced for the operation — a copy of the plan;
 - (iii) if an operational flight plan is issued for the operation — a copy of the plan;
 - (iv) a copy of any NAIPS, NOTAM, or AIS briefing, document produced for the operation;
 - (v) if the operation involves the carriage of cargo or payloads requiring special or unusual handling — a description of:
 - (A) the cargo or payloads; and
 - (B) the requirements for special or unusual handling of the cargo or payload;
- (c) if the certified RPA operator is a RePL training organisation — a record of the training course delivered (*RePL training course records*), including the following:
- (i) the full name of each individual who attended the training course;
 - (ii) the dates on which the training course was conducted;
 - (iii) the RePL training units covered in the training course;
 - (iv) the outcome of the course for each individual attending it;
 - (v) the chief remote pilot's certification that the RePL training course, and RePL training units covered, complied with this MOS.
- (d) if the certified RPA operator is not a RePL training organisation and conducts training that is not a RePL training course — a record of the training delivered and its outcome, including the following:
- (i) the full name of each individual who attended the training;
 - (ii) the dates on which the training was conducted;
 - (iii) the nature and outcome of the training covered.

to read:

1. The chief remote pilot must ensure the following records are kept for at least 7 years after the day the operation ends:

(a) any RPAS operational record in relation to an RPA operation:

- (i) if a job safety assessment is carried out in relation to the operation — a copy of the assessment, including the following:
- (ii) if a risk management plan is produced for the operation — a copy of the plan;
- (iii) if an operational flight plan is issued for the operation — a copy of the plan;

(b) if the certified RPA operator conducts training that is not a RePL training course — a record of the training delivered and its outcome, including the following:

- (i) the full name of persons who attended the training;
- (ii) the dates on which the training was conducted;
- (iii) the nature and outcome of the training covered.

CASA **proposes** to include paragraph 101.342 (b) of CASR in section 10.03 of the MOS:

(b) **maintaining a record of the qualifications held by each person operating RPA for the operator;**

Insert new section after 10.03 of the MOS:

Chapter 10.XX (NEW SECTION) “RePL Training Course Record”

1. The chief remote pilot must ensure the following information is recorded and kept for at least 7 years after the day the training is conducted:

- a. the full name of persons who attended the training course;
- b. the dates on which the training course was conducted;
- c. the RePL training units covered in the training course;
- d. the outcome of the course for each individual attending;
- e. the aeronautical knowledge examination as completed by each applicant and assessed by the RePL instructor or chief remote pilot;
- f. a record of the following for each examination that is attempted by an applicant:
 - i. the applicant’s name;
 - ii. the date of the examination;
 - iii. whether the examination was a resit;
 - iv. the applicant’s mark in the examination and whether the applicant passed the examination;
- g. A record of the following for each flight test that is attempted by an applicant:

- i. the list of questions asked of the candidate to demonstrate his or her knowledge of the items mentioned under clause 2 of the relevant Appendix (the items);
- ii. for each question in the list, a record of whether the candidate did, or did not, demonstrate a satisfactory level of knowledge;
- iii. if the examiner relied on subsection 2.31 (5) of this MOS with respect to any item, a record that this was the case for the item;
- iv. the overall assessment of the candidate's level of knowledge;
- v. against the list of units of competency, items and manoeuvres, and accuracies and tolerances in the practical flight standards in subsection 2.31 (3) of this MOS of the relevant Appendix, an indication of whether the candidate did, or did not, demonstrate competency;
- vi. the overall assessment of the candidate's level of practical competency.

Repeal - paragraph 2.12 (5) (b) of the MOS:

- (5) Despite subsection (1), a RePL training organisation:
 - (a) may, without CASA approval, modify not more than 10% of the total number of multiple-choice questions in any unique set in any 12-month period, to make the questions more effective for the examination; and
 - (b) must keep for 5 years written records recording:
 - (i) how any question has been modified under paragraph (a); and
 - (ii) the date of the modification; and
 - (iii) the reason for the modification.

Repeal section 2.14 of the MOS:

2.14 Examination records

- (1) The RePL training organisation must retain for not less than 12 months, the examination as completed by each applicant and assessed by the RePL instructor or chief remote pilot.
- (2) The RePL training organisation must make, and keep for at least 7 years, a record of the following for each examination that is attempted by an applicant:
 - (a) the applicant's name;
 - (b) the date of the examination;
 - (c) whether the examination was a resit;
 - (d) the unique identification code number of the examination;
 - (e) the applicant's mark in the examination and whether the applicant passed the examination;
 - (f) the name and position of the person who assessed the examination.

Repeal subsection 2.31 (8) of the MOS:

- (8) The examiner conducting the flight test must keep the following records for at least 7 years after the flight test:
- (a) the list of questions asked of the candidate to demonstrate his or her knowledge of the items mentioned under clause 2 of the relevant Appendix (the *items*);
 - (b) for each question in the list, a record of whether the candidate did, or did not, demonstrate a satisfactory level of knowledge;
 - (c) if the examiner relied on subsection (5) with respect to any particular item, a record that this was the case for the item;
 - (d) the overall assessment of the candidate's level of knowledge;
 - (e) against the list of units of competency, items and manoeuvres, and accuracies and tolerances in the practical flight standards in clause 3 of the relevant Appendix, an indication of whether the candidate did, or did not, demonstrate competency;
 - (f) the overall assessment of the candidate's level of practical competency.

3.9.7 Reduce record-keeping requirements for low-risk operations

Reference(s)

- Part 101 MOS Chapter 10

Background / Issue

Records required to be kept for an RPA operation can be burdensome for low-risk operations. For example, an operation conducted IAW standard operating conditions under a ReOC, require 4 different logs with approximately 25 items to be recorded. Compared to a very small/excluded operation (gross weight more than 250 g but not more than 2 kg) where the operator is assumed to not hold a licence, there is no requirement for record keeping in relation to the excluded operation.

In addition, the required Chief Remote Pilot records, such as operational releases and operational logs, are more rigorous than conventionally piloted aircraft operations, for a single RPAS operation. Records required to be kept in these cases do not appear proportionate to the (low) risk of the operation.

Record keeping requirements for RePL training organisations are in other areas of the MOS. It is proposed that all record keeping requirements be contained within Chapter 10 of the MOS.

Some of the record keeping requirements are overly burdensome and do not allow CASA staff to use discretion to approve alternate requirements where the safety margins are maintained, e.g., verbal approval for emergency operators. It should also be clearly noted that the record keeping requirements can be maintained within an electronic log which is unalterable after the record has been made.

Key objectives

CASA **proposes** the following:

Substitute subparagraph 10.04 (1) (e) (ii) of the MOS:

(ii) the height (AGL):

- (A) at which the RPA operation is to take place; and
- (B) that is the maximum permitted height for the operation in accordance with the regulations and this MOS;

with the following:

the maximum height (AGL) permitted for the operation

Amend paragraph 10.04 (1) (g) of the MOS:

- (g) if an individual who is not a remote pilot for the operation is assigned duty in relation to the operation — the individual's full name and the duties assigned to the individual;

with the following:

if an individual who is not a remote pilot for the operation is assigned duty in relation to the operation — the individual's full name and the position as per the operator's documented practices and procedures

Insert note after paragraph 10.04 (1) (g) of the MOS:

identifying the crew members position, provided the duties and responsibilities are identified in the operator's operations manual, will satisfy this requirement.

Substitute paragraph 10.04 (1) (j) of the MOS:

- (j) the certification:
 - (i) by the RPA's maintenance controller (if any); or
 - (ii) by a person within the meaning of subparagraph 101.340 (1) (c) (ii) of CASR;

that the RPA for the operation is serviceable for the purpose of the operation.

Note The requirement to record full details of the certification is met by including a copy of the certification with the record or identifying the relevant certification and its location.

with (words to the effect):

the serviceability of the RPA to be used for the operation

Amend subsection 10.04 (2) of the MOS:

- (2) An RPA operation must not commence until a copy of the approved RPAS operational release has been provided to the remote pilot of the RPA.

to read:

An RPA operation must not commence until the RPAS operational release has been approved by a person authorised under the certified operator's documented practices and procedures

Add a note at subsection 10.04 (2) of the MOS that explains:

the copy of the operational release can be provided via electronic means e.g., through a software program or email.

Repeal subsection 10.04 (4) of the MOS:

- (4) For subsection (2):
approved RPAS operational release means the RPA operational release approved in writing by the certified RPA operator or the chief remote pilot.

Repeal paragraph 10.05 (1) (i) of the MOS:

- (i) if the RPA was operated beyond VLOS — the route flown, including the turning points, identified by specific location or global Cartesian coordinates;

Amend paragraph 10.05 (1) (k) of the MOS

- (k) whether the RPA was serviceable after the final flight of the day, and the nature of any unserviceability;

to read:

Whether the RPA became unserviceable during the operation

Amend the note below paragraph 10.05 (1) (l) of the MOS:

Note The RPAS operational release under subsection 10.04 (1), and the RPAS operational log under subsection 10.05 (1), may all be kept in a single document. Elements of the RPAS operational record under paragraph 10.03 (1) (b) may also be in, or attached to, that document.

to read:

...the RPAS operational log may be a confirmation that no records had changed from the operational release; if records had changed, these may be identified individually as to the change and not require a separate operational log to be completed.

Amend paragraph 10.07 (c) (iii) of the MOS:

- (iii) the maximum and the minimum gross weight of the RPA for operations (including with payload where applicable);

to read:

the maximum gross weight of the RPA for operations (including with payload where applicable);

Amend paragraph 10.17 (3) (g) of the MOS:

- (g) the certified RPA operator's documented practices and procedures.

to read:

a significant change in the operator's documented practices and procedures.

3.9.8 New definition for 'significant change'

Reference(s)

- Part 101 MOS Section 10.17
- New Part 101 MOS definition

Background / Issue

There is some confusion as to what changes within an operator's documented practices and procedures require approval by CASA. CASA is proposing to define 'significant change', similar to conventionally piloted aircraft requirements in regulation 119.020 of CASR or in Part 138 of CASR. Subsection 10.17 (3) of the MOS (below) states that a certified RPA operator must inform CASA in writing of any changes in the information given to CASA for the purposes of its certification, which includes *any* changes to the documented practices and procedures.

- (3) For subsection (2), the information includes changes to any of the following:
- (a) if the certified RPA operator is an individual — the person's name;
 - (b) if the certified RPA operator has an operating or trading name — the operating or trading name;
 - (c) the certified RPA operator's street, postal and email addresses;
 - (d) the identity of the chief remote pilot;
 - (e) the identity of:
 - (i) the maintenance controller (if any); or
 - (ii) the person within the meaning of subparagraph 101.340 (1) (c) (ii) of CASR;
 - (f) the kinds of RPA operated by the certified RPA operator;
Note See paragraph (b) of the definition of *kind* in the CASR Dictionary.
 - (g) the certified RPA operator's documented practices and procedures.

As detailed in subsection 10.17 (5) of the MOS, CASA must review the changes and provide approval in writing.

- (5) For subsections (2), (3) and (4):
- (a) CASA may approve in writing the form and the manner in which the information is to be given to CASA; and
 - (b) if paragraph (a) applies, the information must be given to CASA in accordance with the approval.

Note The effect of subsection (5) is that the relevant information must be given to CASA whether or not CASA has issued an approval; if CASA has issued an approval, the giving of the information must comply with the approval.

Key objectives

CASA **proposes** a definition that identifies what a significant change is, in relation to an operation's manual. This will alleviate the requirement for certified operators to obtain approval from CASA of any non-significant changes, reducing the burden on operators and CASA. An operator will still need to provide to CASA copies of the parts of the manual that have changed that are not significant changes, but this won't require an approval.

Significant change for a certified RPA operator, means:

- a. A change in relation to any of the following:
 - i. The operators nominated personnel;
 - ii. The formal reporting line for managerial or operational position reporting directly to any of the nominated personnel;
 - iii. the qualifications, experience and responsibilities required by the operator for any of the nominated personnel;
 - iv. The operator's process for making changes to the documented practices and procedures;
 - v. The addition or removal of operational or managerial positions within the organisation;
 - vi. A change to the types of RPA being operated by the operator;
- b. A change to any of the following that does not maintain or improve, or is not likely to maintain or improve, aviation safety:
 - i. The procedures by which the operator performs an RPA operation;
 - ii. Training and checking conducted by the operator;
 - iii. The way the operator manages operational risk and the methodology for this process;
 - iv. The way the operator manages the risk of fatigue in its personnel;
 - v. The procedures by which the operator manages the maintenance of the RPA used;
- c. Any change that will result in the reissue of the RPA operator's certificate.

Add a Note for the proposed (c) of subsection 10.17 (5) of the MOS:

A change to the type or category of RPA that is listed on the ReOC, or a change to the type of operations such as RePL training, will require the ReOC to be reissued.

3.9.9 Incorporate gender neutral and plain English language

Reference(s)

- Various provisions in Part 101 of CASR

Background / Issue

Issue 1

CASA **proposes** to incorporate into Part 101 of CASR and the MOS gender neutral language, removing references to 'he or she' and replacing with 'a person' (or words to that effect). In line with the Office of Parliamentary Counsel (OPC) Plain English Manual, references to 'somebody' should be replaced with 'a person' to ensure language is consistent across Part 101 of CASR.

Issue 2

CASA also **proposes** to reduce or eliminate language that reflects intentional or unintentional bias such as with the term '*unmanned*'. The Federal Aviation Administration's (FAA) Drone Advisory Committee (FAA DAC) released a report on 23 June 2021 which addressed the use of gender-neutral language.

On 24 February 2021, the FAA DAC established a Task Group to develop recommendations for gender-neutral language as an alternative to gender-specific terms currently used in the unmanned aircraft industry and within the aviation community.

Recommendations in the report included adopting gender-neutral language (e.g., "person", "they" rather than the gender-binary "he or she") and replacing "unmanned" with "uncrewed" to maintain the "U" in acronyms to minimise disruption within the FAA and other groups.

On 2 December 2021, the FAA implemented a change to Federal Aviation Administration Order 7930.2S, moving from the term 'Notice to Airmen', otherwise known as NOTAM, to 'Notice to Air Missions', retaining the NOTAM acronym.

Key objectives

Issue 1

The following regulations of CASR will be amended to incorporate gender-neutral language:

101.025, 101.120, 101.295, 101.285, 101.295, 101.300, 101.395, 101.400, 101.140, 101.495 and 101.500.

Issue 2

CASA proposes to work with OPC on amending references of 'unmanned aircraft' in Part 101 of CASR to 'uncrewed aircraft' and clearly defining 'uncrewed aircraft'. This change may require amendments within the *Civil Aviation Act 1988*, the *Civil Aviation (Unmanned Aircraft Levy) Act*

2020 and associated regulations. CASA will consider any unintended consequences for other parts of the CASR in making such changes.

3.9.10 Amendments to include gender neutral language Part 101 MOS

Reference(s)

- Various provisions in Part 101 MOS

Background / Issue

In line with amendments to Part 101 of CASR to remove references to 'he or she' and replace with 'a person' or words to that effect, the Part 101 MOS also requires amendments to provide for gender-neutral language.

The MOS references 'he or she' appear in the definition of 'examiner', sections 2.09, 2.13, 2.30, 2.31, 5.04, 5.14, 10.01, 10.07, 10.12, 15.05, Schedule 6 (Appendix 1, 1.1, Appendix 2, 1.1, Appendix 3, 1.1).

Key objectives

CASA proposes various amendments by removing references to 'he or she' and replacing with 'a person' or words to that effect to ensure gender neutral language. Any reference to 'unmanned aircraft' may be amended to 'uncrewed aircraft' in line with advice from OPC. If such changes are made, CASA will ensure that 'uncrewed aircraft' is appropriately defined.

3.9.11 Clarify intent of 'gross weight' for types of RPA

Reference(s)

- Regulation 101.022 of CASR

Background / Issue

CASA has received feedback from industry regarding the definition and application of *gross weight* and *gross weight on take-off* as defined in Part 101 of CASR and the MOS, and *maximum take-off weight* (MTOW) as defined in Part 2 of CAR. Clarification has been sought as to whether an operator can operate a medium RPA (an RPA with a gross weight of more than 25 kg, but not more than 150 kg) with a small RPA (an RPA with a gross weight of more than 2 kg, but not more than 25 kg) category RePL, if the gross weight for the RPA is 25 kg or less.

The defined term '*gross weight*' in regulation 101.022 of CASR is intended to mean the RPA total gross weight at the time of take-off, including fuel, equipment and payloads (if any), or in other words, the maximum take-off weight (MTOW) for the aircraft to be within the safe limitations permitted by the manufacturer.

The defined term '*gross weight*' may be interpreted by some to mean the empty weight of the RPA which may blur the line between types of RPA. The term MTOW, as referred to in conventional aviation, is defined in Part 2 of CAR relating to the Certificate of Airworthiness (CofA) of the aircraft and its flight manual. A flight manual is a controlled document approved by CASA (see regulations 21.005, 21.006, 21.006A of CASR).

Part 2 of CAR definition

'maximum take-off weight', in relation to an aircraft, means the weight set out in the certificate of airworthiness of, or the flight manual for, the aircraft as the maximum take-off weight.

The definition of maximum take-off weight for conventionally piloted aircraft changed on 2 December 2021 (see <https://www.legislation.gov.au/Details/F2020C00958>).

maximum take-off weight, for an aircraft, means the maximum take-off weight for the aircraft permitted by:

- (a) for an aircraft that is type certificated—the flight manual for the aircraft; or
- (b) for an aircraft that is not type certificated:
 - (i) if a document, published by the manufacturer of the aircraft setting out the operating limitations for the aircraft, specifies a weight—that document; or
 - (ii) if the certificate of airworthiness for the aircraft specifies a different weight to the weight specified in the document mentioned in subparagraph (i)—the certificate of airworthiness for the aircraft; or
 - (iii) if no weight is specified in the document mentioned in subparagraph (i) or in the certificate of airworthiness for the aircraft and the aircraft is a Part 103 aircraft in relation to which a statement of acceptance for the aircraft has been issued by a Part 103 ASAO in accordance with regulation 103.030—the weight specified in the statement of acceptance.

MTOW was not used in Part 101 of CASR or its MOS because it has a defined meaning in CAR that is at odds with the more general meaning intended for Part 101 of CASR.

A future certified RPA with a Type Certificate (TC) and a Flight Manual could legitimately have its gross weight at take-off limited by the MTOW specified in its TC and flight manual. As such, gross weight on take-off has been used to encompass the total weight on take-off as prescribed by the manufacturer where there is no TC.

For example, if a drone is flown above the gross weight the manufacturer intended, it has no TC or flight manual to be violated; however, doing so may void warranty and in an extreme case may constitute a hazardous operation (regulation 101.055 of CASR). Operating a conventional aircraft above MTOW is an offence because it has a TC and Flight Manual specifying a limit which must be complied with.

There is a missing link in legislation to connect the potential highest gross weight at take-off of an RPA according to manufacturer documentation, to the RPA regardless of whether the gross weight for a particular flight is above the threshold that would put that RPA in a size defined in regulation 101.022 of CASR.

The policy intent is that the RPA type classifications (micro RPA, very small RPA, small RPA and medium RPA) should be based on whichever is the higher of:

- the gross weight of the RPA at take-off
- or
- the manufacturer's published maximum gross weight limitation at take-off for the RPA (if any).

The gross weight for an RPA operation is only relevant to the type classification of an RPA, and the required RePL endorsement for the remote pilot where the gross weight is more than the manufacturer’s published gross take-off weight, or where no manufacturer’s gross weight limitation is published.

Key objectives

Temporary Management Instruction (TMI) 2021-02 - RPA Gross Weight and Maximum Take-Off Weight was published by CASA on 29 September 2021 as an interim measure.

CASA will review the most appropriate way to amend regulation 101.022 of CASR to clearly express the intent of ‘gross weight’.

101.022 Types of RPA

The defined terms listed in the following table have the meaning indicated in the table.

Types of RPA		
Item	The term ...	means ...
1	<i>micro RPA</i>	an RPA with a gross weight of not more than 250 g.
2	<i>very small RPA</i>	an RPA with a gross weight of more than 250 g, but not more than 2 kg.
3	<i>small RPA</i>	an RPA with a gross weight of more than 2 kg, but not more than 25 kg.
4	<i>medium RPA</i>	(a) an RPA with a gross weight of more than 25 kg, but not more than 150 kg; or (b) a remotely piloted airship with an envelope capacity of not more than 100 m ³ .
5	<i>large RPA</i>	(a) a remotely piloted aeroplane with a gross weight of more than 150 kg; or (b) a remotely piloted powered parachute with a gross weight of more than 150 kg; or (c) a remotely piloted rotorcraft with a gross weight of more than 150 kg; or (d) a remotely piloted powered-lift aircraft with a gross weight of more than 150 kg; or (e) a remotely piloted airship with an envelope capacity of more than 100 m ³ .

Note: For the meaning of *excluded RPA*, see regulation 101.237.

The definition of ‘gross weight on take-off’ in the MOS may also need review considering any amendments to regulation 101.022 of CASR.

CASA may add a specific definition to the CASR Dictionary, i.e., “maximum take-of weight, for an RPA, means...”

3.9.12 Clarify where RPA can be operated

Reference(s)

- Regulation 101.250 of CASR

Background / Issue

Regulation 101.250 of CASR refers to operations outside of approved areas above 400 ft requiring CASA approval. It also requires a person to operate the RPA clear of populous areas.

Regulation 101.085 of CASR states that an unmanned aircraft must not be operated above 400 ft AGL without an approval under regulation 101.030 of CASR (or as otherwise permitted). Therefore, a person will always be required to hold an approval to operate above 400 ft AGL, and no instance exists where the operator may operate outside of an approved area above 400 ft AGL without an approval. There are no circumstances under which paragraph 101.250 (1) (a) of CASR applies, and it should therefore be repealed.

Paragraph 101.250 (1) (b) of CASR requires the RPA to remain clear of populous areas. Subregulation 101.280 (2) of CASR already requires that a person must not operate an RPA over a populous area, which makes paragraph 101.250 (1) (b) of CASR redundant. It should be repealed to remove duplication and ambiguity.

Key objectives

CASA **proposes** to repeal regulation 101.250 of CASR.

101.250 Where very small, small and medium RPA may be operated

- (1) A person may operate a very small RPA, a small RPA or a medium RPA outside an approved area only if:
 - (a) where the RPA is operated above 400 feet AGL, the operator has CASA's approval to do so; and
 - (b) the RPA stays clear of populous areas.

Penalty: 10 penalty units.

Note 2: CASA must publish details of the approval of an area (including any conditions) in NOTAM or on an aeronautical chart—see subregulation 101.030(5).

Note 3: This Subpart only applies to the operation of certain RPA: see regulation 101.235.

- (2) An offence against subregulation (1) is an offence of strict liability.

Note: For *strict liability*, see section 6.1 of the *Criminal Code*.

3.9.13 Remove the term 'restricted aerodrome'

Reference(s)

- Part 101 MOS Section 9.06

Background / Issue

The MOS provision uses the term 'restricted aerodrome' (non-controlled). Part 139 of CASR only refers to 'certified' aerodromes.

Key objectives

CASA **proposes** to align the terminology by amending 9.06 (1) of the MOS:

9.06 Non-controlled aerodromes — approach and departure paths

- (1) Figure 9.06 (1) shows the approach and departure paths of a non-controlled certified or restricted aerodrome.

to read:

Figure 9.06 (1) shows the approach and departure paths of a non-controlled certified aerodrome.

3.10 RePL holders/ Instructors

3.10.1 Amend regulation to reflect policy requirement that applies to medium excluded RPA (i.e., a RePL is required under regulation 101.237 (7) or CASR)

Reference(s)

- Regulation 101.237 of CASR
- Regulation 101.252 of CASR

Background / Issue

Regulation 101.252 of CASR determines that a RePL is not required to operate an excluded RPA; however, paragraph 101.237 (7) (b) of CASR requires a person to hold a RePL to operate an excluded medium RPA.

Key objectives

CASA **proposes** to retain paragraph 101.237 (7) (b) of CASR requiring a RePL to operate a medium excluded RPA but **proposes** to clarify in regulation 101.252 of CASR that a RePL is required for operation of a medium RPA whether as an excluded RPA, or under a ReOC.

CASA **proposes** to amend regulation 101.252 of CASR:

101.252 Certain RPA—requirement for remote pilot licence

- (1) This regulation does not apply in relation to the operation of an excluded RPA.
- (2) A person commits an offence of strict liability if:
 - (a) the person operates an RPA; and
 - (b) the person does not hold a remote pilot licence that authorises the person to operate the RPA.

Penalty: 50 penalty units.

- (3) A person (the *offender*) commits an offence of strict liability if:
 - (a) the offender operates an RPA; and
 - (b) one of the following persons demands the offender to produce, for inspection by the person, a remote pilot licence that authorises the offender to operate the RPA:
 - (i) an authorised person;
 - (ii) a member or special member of the Australian Federal Police;
 - (iii) a member of a police force or a police service of a State or Territory; and
 - (c) the offender fails to comply with the demand.

Penalty: 5 penalty units.

- (4) Subregulation 302(1) of CAR does not apply in relation to a remote pilot licence.

to include after:

...excluded RPA', 'other than an excluded RPA under 101.237 (7)

The note under subregulation 101.237 (1) of CASR will be amended to include this concept.

Note: A remote pilot licence is not required to operate an excluded RPA. An accreditation is sufficient—see regulation 101.252 and Subpart 101.FA.

3.10.2 Eligibility requirements for RePLs: remove outdated provisions; experience requirement and recognition of qualifications are limited to relevant category of RPA

Reference(s)

- Regulation 101.295 of CASR

Background / Issue

Issue 1

Paragraph 101.295 (2) (b) (ii) of CASR provides a person is eligible for a remote pilot licence if, before 1 June 2017, the person completed a training course in the operation of a category of

RPA that the person proposes to operate, conducted by the RPA's manufacturer or agent of the manufacturer.

The intended operation of this paragraph was to provide a limited window (between 29 September 2016 and 1 June 2017) for a person to apply to CASA for remote pilot licences. Given the passage of time, and additional requirements in relation to RePL training requirements, CASA **proposes** to repeal this paragraph.

Issue 2

The current flight experience requirements, in paragraph 101.295 (2) (c) of CASR, require applicants to have at least 5 hours experience operating an RPA under standard operating conditions. CASA **proposes** to clarify this subregulation further by changing "an" to "any".

An issue arises when a person upgrades their RePL; CASA requires 5 hours on the type or category of which is being upgraded. A person who has received a RePL initial issue and met the requirement of 5 hours, should be deemed competent on the type or category for the upgrade (this may be less than 5 hours or greater for more complex systems).

The upgrade process does not consider whether the holder of an existing RePL is already deemed competent on a new system and subsequently, may not require 5 hours.

Changing the wording to 'any RPA' clarifies that a person must have 5 hours of RPA general aeronautical experience, but not necessarily 5 hours on the type or category applied for; the determination for the type or category applied for is identified during the assessment of competency of the individual.

Key objectives

Issue 1

CASA **proposes** to repeal subparagraph 101.295 (2) (b) (ii) of CASR:

- (ii) before 1 June 2017, a training course in the operation of a category of RPA that he or she proposes to operate, conducted by the RPA's manufacturer or an agent of the manufacturer; or

In the interests of safety and more rigorous RePL training course requirements, it would not be appropriate for an associated transitional provision in relation to the removal of this paragraph.

Issue 2

CASA **proposes** to amend paragraph 101.295 (2) (c) of CASR:

- (c) has at least 5 hours experience in operating an RPA under standard RPA operating conditions.

to read:

has at least 5 hours experience logged in operating any RPA or model aircraft under standard RPA operating conditions.

3.10.3 General competency requirements for RePL holders

Reference(s)

- Regulation 101.300 of CASR
- Part 101 MOS new

Background / Issue

Currently there is no regulatory requirement for RePL holders to be competent or to maintain competency to exercise the privileges of an RePL. A ReOC holders operations manual has a soft requirement for remote pilots to be competent and recent, but this doesn't affect RePL holders not working for a ReOC, i.e., medium category excluded RPA.

Key objectives

CASA **proposes** to add a requirement, consistent with regulation 61.385 of CASR for conventional pilot licences, that a RePL holder must be competent and current on an RPAS they operate commercially. CASA **proposes** to include this requirement in regulation 101.300 of CASR and for the requirement to be the responsibility of the RePL holder. A penalty provision would also apply.

101.300 Conditions on remote pilot licences

- (2) Without limiting regulations 11.056 and 11.067, a condition may:
 - (a) allow the person to operate RPA of only specified kinds; or
 - (b) limit the areas where he or she may operate RPA; or
 - (c) allow him or her to operate RPA only in VMC.
- (3) It is a condition of a remote pilot licence that the licence holder must not operate an RPA above 400 ft AGL in controlled airspace, or within 3 nautical miles of the movement area of a controlled aerodrome, unless he or she holds at least one of the following qualifications:
 - (a) an aeronautical radio operator certificate;
 - (b) a flight crew licence;
 - (c) an air traffic control licence;
 - (d) a military qualification equivalent to a licence mentioned in paragraph (b) or (c);
 - (e) a flight service licence.
- (4) It is a condition of a remote pilot licence that an RPA must be operated within the visual line of sight of the licence holder unless he or she:
 - (a) has passed:
 - (i) an aeronautical knowledge examination (within the meaning of Part 61) for the grant of an instrument rating under Part 61; or

- (ii) an aviation licence theory examination before 1 September 2014 that is taken to be an equivalent requirement for the grant of an instrument rating under regulation 202.274; or
 - (iii) an approved examination; and
- (b) either:
- (i) holds both a certificate as an RPA operator under Division 101.F.4 and an approval under regulation 101.029 to operate the RPA beyond the person's visual line of sight; or
 - (ii) is a member of an RPA operator's personnel and the RPA operator holds both a certificate as an RPA operator under Division 101.F.4 and an approval under regulation 101.029 for the operator's personnel to operate RPA beyond their visual line of sight.
- (5) It is a condition of a remote pilot licence that the licence holder must not operate more than 1 RPA at a time unless:
- (a) he or she holds an approval under regulation 101.029 to operate more than 1 RPA at a time; and
 - (b) the conditions (if any) imposed on the approval are complied with.
- (6) The holder of a remote pilot licence commits an offence of strict liability if the holder contravenes a condition mentioned in subregulation (3), (4) or (5).

Penalty: 50 penalty units.

Draft new CASR amendment:

101.XXX Limitations on exercise of privileges of remote pilot licences—general competency requirement

(1) The holder of a remote pilot licence is authorised to exercise the privileges of the RePL only if the holder is competent in operating the RPAS to the standards specified in the Part 101 MOS.

Insert new subregulation to 101.300, to words to the effect of:

(1A) Subregulation (1B) applies if the holder of a remote pilot licence also holds a type rating for a medium of large RPA.

(1B) The holder is authorised to exercise the privileges of their remote pilot licence in an activity involving an RPAS only if the holder is competent in operating the RPA in the activity to the standards mentioned in the Part 101 Manual of Standards (if any) for:

- (a) the class or type to which the RPA belongs; and
- (b) the activity.

Part 101 MOS

CASA **proposes** a new provision, empowered by amendment to regulation 101.300 of CASR:

The standards for competency for an RePL holder to operate an RPA are the standards prescribed in the Part 101 MOS for the category and type to which the aircraft belongs, including in all the following areas:

- (a) operating the aircraft's navigation and operating systems;
- (b) conducting all normal, abnormal, and emergency flight procedures for the aircraft;
- (c) applying operating limitations;
- (d) weight and balance requirements;
- (e) applying aircraft performance data, including take-off and landing performance data, for the aircraft.

3.10.4 Remove condition requirements on a RePL

Reference(s)

- Part 101 MOS 2.06 (1) Note

Background / Issue

Section 2.06 (1) Note states:

Note A condition to the effect of the relevant operational mode limitation will be imposed on the RePL under regulation 11.056 and paragraph 101.300 (2) (a) of CASR. If a RePL for a category of RPA is granted with a condition limiting RPA operations to automated operation only, the condition may be removed and the limitation lifted only if the applicant successfully completes the practical competency component of a RePL training course for the same RPA category.

CASA seeks to explore industry viewpoint on RePL conditions. CASA **proposes** to introduce a competency obligation on the RePL holder in CASR which will capture non-ReOC operations. ReOC holders have a requirement in their documented practices and procedures to conduct type training and maintain the recency and competency of all remote pilots.

CASA **proposes** to introduce requirements for conditional information (i.e., automated operation only) to be added to the certificate of course completion to allow RePL training providers, remote pilot students and ReOCs to hold a record of the exact training a remote pilot completed as part of a RePL training course. This is standard practice for Registered Training Organisations.

Key objectives

Remove section 2.06 (1) Note of the MOS.

3.10.5 Requirements for RePL training units based on length of time since last RePL was issued

Reference(s)

- Part 101 MOS sections:
- 2.05 (6) - (8)

Background / Issue

CASA is proposing to remove subsections 2.05 (6), (7) and (8) of the MOS that relates to an involved RPA participant.

The requirement for an applicant to re-sit all theory components of a RePL course for the purposes of currency is not reasonable or practical. A private pilot or commercial pilot is not required to re-sit examinations once they have successfully passed.

The MOS provisions relate practical currency to satisfy a theoretical component of a course. A person who holds a RePL is required to conduct induction training prior to performing operations under the authority of a ReOC—this includes theoretical and practical induction training. In comparison, an excluded operator may operate an RPA without any requirements for currency (excluded operations also include small and medium RPA operated for specific purposes).

Where an applicant does not need to sit theory training or an aeronautical exam for a particular rating, the flight test is intended to identify applicants who do not hold an appropriate level of practical currency; the practical training delivered by the training organisation would also address this delta. CASA is proposing to remove these sections with any deltas covered by amendment 3.10.3 General competency requirements in this policy proposal document.

Key objectives

The common units of training required by these MOS sections, to be re-taught during a RePL training course are general knowledge and general aviation competency units. They cover basic RPAS ground school and include training in aviation terminology and principles, meteorology theory, competency in flight/RPAS operational planning and risk assessment methodologies, etc. Most of the training is similar to recreational pilot licence ground school training in which content of the subjects covered does not change rapidly over time (a large amount of this training is the same as was delivered to pilots several decades ago). We do not require conventional pilots to re-sit the same theory training they have completed for a previous licence rating.

CASA **proposes** to remove restrictions completely. There is no requirement to replace them as any gap would be covered by other MOS and CASR requirements such as flight tests.

CASA would ensure that irrespective of how long ago a person received their RePL, a flight assessment is required.

CASA **proposes** to repeal:

Subsections 2.05 (6), (7) and (8) of the MOS:

- (6) If:
- (a) on a particular date — a person was granted a RePL in a category of RPA; and
 - (b) not more than 3 years after the particular date — the person is an applicant for a RePL in a different category or for a medium or large RPA;
- then, the person is deemed to have completed training and assessment in the common units of the aeronautical knowledge component for the RePL training course.
- (7) If:
- (a) on a particular date — a person was granted a RePL in a category of RPA; and
 - (b) more than 5 years after the particular date — the person is an applicant for a RePL in a different category or for a medium or large RPA; and
 - (c) the person is an involved RPA participant;
- then, the person is deemed to have completed training and assessment in the common units of the aeronautical knowledge component for the RePL training course.
- (8) For subsection (7):
- involved RPA participant*** means a person whose logbooks and RPA operator records show that the person, as a chief remote pilot or RePL holder, has performed chief remote pilot duties or flown RPA, during not less than 50% of the total number of completed weeks between:
- (a) first qualifying for the RePL; and
 - (b) the date of application for a RePL in a different category or for a medium or large RPA.

3.10.6 Ability for CASA to approve a sub-set of flight test standards

Reference(s)

- Part 101 MOS Section 2.31

Background / Issue

There is no avenue for CASA to accept a flight-testing process which does not meet the flight test standards prescribed in Schedule 6 of the MOS. The flight test standards have been derived from the practical training competencies for the relevant category of RPA which are listed in Schedule 5 of the MOS.

There are cases where the RPAS used for training will not be able to perform some of the behaviours required to demonstrate these competencies. For example, where an aeroplane category RPAS control system will not allow the operator to put the aircraft in a position which could lead to a stall, and should the system detect the aircraft is about to stall, it will automatically make corrections and manoeuvre to prevent it.

These flight systems may not allow the student to perform a behaviour which is a required competency, such as RA4(1)(c) of the MOS or demonstrate competency for the associated flight test standard '*Recover from aerodynamic stall in different configurations*' (Schedule 6, Appendix 1 of the MOS).

In other cases, some competencies are not relevant to the operation of the RPAS. For example, where the RPAS meets the definition of '*automated operation*' in the MOS. These systems would be unable to conduct standard or steep turns as required by practical flight standard 7 for the aeroplane category flight test (Schedule 6, Appendix 1 of the MOS).

CASA **proposes** a mechanism for accepting alternate practical competency standards for RePL training and the ability to accept alternate flight test standards derived from these alternate training standards. Where alternate standards are proposed, the training standards may initially need to be assessed and accepted as appropriate and meet the same or higher level of safety.

The alternate flight test standards would then be assessed to ensure they cover the relevant training standards under test conditions. CASA would need to develop policy for assessing non-standard training and guidance for industry to manage expectations.

Key objectives

Flight test

CASA **proposes** to insert a new paragraph after subsection 2.31 (2) of the MOS:

- (2) The competency standards for a flight test for a RePL in an aircraft category are as set out in the Appendix in Schedule 6 that is for the licence in the relevant category (the *relevant Appendix*).

CASA may approve an alternative of the flight test standards as required by this section, or an alternative flight test where it is satisfied that an equivalent or higher level of aviation safety would be achieved.

3.10.7 New - CASA to set aeronautical knowledge examinations; BVLOS exam

Reference(s)

- New Part 101 CASR provision/s

Background / Issue

CASA requires the ability to set aeronautical knowledge examinations for the issue of remote pilot licences, ratings and endorsements. CASA is currently working through the development of an exam for the issue of a beyond visual line of sight (BVLOS) rating. The BVLOS exam (or however called) is expected to be set by CASA. Currently, CASA does not have a regulatory mechanism that allows CASA to set an exam for the purpose of testing remote pilot licence holders.

In the future CASA may wish to explore the ability for the remote pilot licence test to be set by CASA and administered through RePL training organisations.

CASA considers the construct of Part 61 of CASR to be appropriate for use as a basis in the creation of these regulations.

Key objectives

CASA **proposes** the following (draft) provisions be inserted in the MOS:

1. Insert definitions:

aeronautical knowledge examination, for a remote pilot licence, rating, or endorsement, means an examination set under regulation 101.3XX for the grant of the licence, rating or endorsement.

remote pilot endorsement means an endorsement granted under this Part on a remote pilot licence.

remote pilot rating means a rating granted under this Part on a remote pilot licence.

2. New regulations for CASA to set aeronautical knowledge examinations:

101.301 Aeronautical knowledge examinations—general

(1) CASA may set aeronautical knowledge examinations for the grant of a remote pilot licence, rating, or endorsement in accordance with the aeronautical knowledge standards mentioned in the Part 101 Manual of Standards for the licence, rating or endorsement.

(2) A RePL training organisation may invigilate aeronautical knowledge examinations for the grant of:

- (a) a remote pilot licence; or
- (b) a remote pilot rating; or
- (c) a remote pilot endorsement.

(3) However, a RePL training organisation may invigilate an aeronautical knowledge examination only if:

- (a) the examination is set in accordance with the aeronautical knowledge standards mentioned in the Part 101 Manual of Standards for the licence, rating, or endorsement; and
- (b) the operator holds an approval under regulation 101.029 to invigilate the examination.

(4) The examinations may be conducted at the times and places, and in accordance with arrangements, decided by the body setting or invigilating the examination.

101.302 Aeronautical knowledge examinations—pass standards

(1) A requirement in this Part for a person to have passed an aeronautical examination for a remote pilot licence, rating or endorsement is met if the person meets the standards mentioned in the Part 101 Manual of Standards for the examination.

(2) However, a person is taken to have passed an aeronautical knowledge examination only if the person passes all parts of the examination within a period of 2 years.

(3) If on 3 occasions a person attempts, but fails to pass, an aeronautical knowledge examination, or a part of an examination, the person is not permitted to attempt the

examination or part again within 3 months beginning on the day the person attempts the examination or part for the third time.

(4) If on 4 occasions a person attempts, but fails to pass, an aeronautical knowledge examination, or a part of an examination, the person is not permitted to attempt the examination or part again until CASA is satisfied that the person has completed appropriate training.

101.303 Aeronautical knowledge examinations—knowledge deficiency reports

(1) This regulation applies if a candidate for an aeronautical knowledge examination:

- (a) passes the examination with a score of less than 100%; or
- (b) fails the examination with a score of at least 51%.

(2) The body that conducts the examination must:

- (a) prepare a report about the competency standards in which the candidate's knowledge is deficient; and
- (b) give a copy of the report to the candidate; and
- (c) if the examination was not conducted by the candidate's training provider—give a copy of the report to the candidate's training provider.

Regulation 101.295 of CASR will require amendment to require an exam. Further amendments will also be required to Part 101 of CASR to insert provisions that set out that certain activity isn't permitted without a rating/ endorsement, and the eligibility requirements for the rating/ endorsement.

CASA may also seek to retain the ability to conduct the examinations.

3.10.8 BVLOS examination competencies and syllabus

Reference(s)

- New Part 101 MOS provision/s

Background / Issue

In line with amendment 3.10.10 of this policy proposal document, the MOS will require amendment to include:

- RPA BVLOS competency unit component
- RPA BVLOS examination syllabus as an Appendix (syllabus to be confirmed).

Key objectives

CASA is continuing a review on the competency unit component and examination syllabus.

3.10.9 Remove Division 2.5 'Chief Remote Pilot of a certified RPA operator may assess competency for RePL upgrade'

Reference(s)

- Division 2.5 Part 101 MOS

Background / Issue

To conduct a RePL training course to upgrade a RePL, a training organisation must submit to CASA for approval, the associated documented practices and procedures in accordance with Division 2.5 of the MOS.

Subsection 2.20 (4) of the MOS details the requirements of the person who supervises flying and assesses competency for the course.

Paragraph 2.20 (4) (b) of the MOS provides that if the person is not supervising flying or assessing competency for an RPL training course, the person must be the chief remote pilot (CRP) of a certified RPA operator who has documented practices and procedures for the purposes of the section.

There is no mechanism or functionality in CASA's client system ([myCASA portal](#)) for the CRP of a certified operator, that is not a RePL training organisation, to submit applications to upgrade a person's RePL.

CASA already provides a pathway for certified operators to become a RePL training organisation for upgrade only courses as an 'operation only' training organisation following approval of the operator's associated documented practices and procedures. Once approved, the operator will gain access to the [myCASA portal](#) to be able to submit applications to upgrade a person's RePL.

CASA requires RePL training instructors, for RePL training organisations, to hold additional qualifications. These same qualifications are currently not required of CRPs who wish to conduct RePL upgrade training and assessment.

In summary, it is not equitable for CASA to accept a different set of standards for a RePL upgrade course when a person conducts it through an ReOC holder, compared to a RePL training organisation.

Key objectives

CASA **proposes** to repeal Division 2.5 of the MOS, ensuring all consequential issues and relevant provisions are saved.

The definition of 'relevant RPA' would be retained and moved to the definitions in Chapter 2 of the MOS.

3.10.10 Move definition of 'relevant RPA' to definitions in Chapter 2

Reference(s)

- Part 101 MOS Section 2.19

Background / Issue

In alignment with the proposed removal of Division 2.5 of the MOS, the definition of 'relevant RPA' is proposed to be moved to definitions in Chapter 2 of the MOS.

Key objectives

Definition of 'relevant RPA' proposed to be moved to Chapter 2 of the MOS.

2.19 Meaning of relevant RPA

- (1) In a section of this Chapter, reference to a *relevant RPA* means the particular type of RPA for which the applicant seeks an upgraded RePL.
- (2) Without affecting anything else in this Division, for a particular type of medium or large RPA for which the applicant seeks the upgraded RePL, the following:
 - (a) the practical competency component of a RePL training course;
 - (b) the training course flight test;must be for the particular type of medium or large RPA only.

CASA would confirm there are no unintended consequences in moving the definition as 'relevant RPA' is referred to in sections 2.02A and 2.28 of the MOS (and possibly elsewhere).

3.10.11 New regulation for Chief RePL Instructor role

Reference(s)

- New Part 101 CASR provision

Background / Issue

CASA requires the CRP of a RePL training organisation to ensure the records relating to RePL training courses are maintained and that all activities are conducted in accordance with regulations. However, there are additional responsibilities relevant to a RePL training provider which are not covered by the defined CRP role.

During the on-site assessment of an organisation seeking an initial grant of RePL training approval, CASA considers the operator's experience and competency in delivering training. The operator may nominate a person, who may or may not be the CRP, to demonstrate this competency.

If it is not the CRP, CASA recognises the nominated person as the operator's SME in training delivery, however, this role is not a position recognised in legislation and CASA **proposes** to formalise the role to ensure oversight is maintained.

To formalise the role CASA **proposes** to include the role in the CASR under the nominated personnel for a ReOC, while the responsibilities of the role would be listed in the MOS so it may be updated as required.

The responsibilities would involve maintaining the documented RePL training course and oversight of the delivery of RePL training to maintain the competency of the RePL Instructors through operational RPAS currency checks and checking of training delivery competency.

Key objectives

CASA **proposes** to create a Chief RePL Instructor role for ReOC holders who hold an approval to conduct RePL training. The nominated person may be the CRP or another suitably experienced person. The nominated person must be approved by CASA.

CASA **proposes** the following qualifications for the Chief RePL Instructor (CRI):

- Meet the standards in paragraphs 2.30 (2) (a), (b), (d), (e) and (f) of the MOS.
- Hold a qualification listed in subparagraph 2.30 (2) (c) (i), (ii) or (iii) of the MOS.

2.30 Requirements for RePL training instructors

- (1) A RePL training course for a type of RPA may only be conducted by a RePL training instructor who satisfies the requirements of this section.
- (2) The RePL training instructor must comply with the following requirements:
 - (a) be employed by the RPA training organisation which is delivering the RePL training course;

(b) hold a RePL for the type of RPA for which he or she instructs;

Note Under regulation 202.455 and subregulation 202.461 (3) of CASR, if before 29 September 2016, a person was certified as a UAV controller, the certification has effect as if it were the grant of a RePL.

(c) have 1 or more of the following:

(i) a pilot instructor rating issued under Part 61 of CASR;

(ii) a Certificate IV in Training and Assessment issued by an approved educational institution;

(iii) a tertiary level qualification in teaching that is recognised as such by a State or Territory government;

(iv) a certificate of successful completion of a training program in the principles of instruction issued by a person approved in writing by CASA.

Note In approving a person to deliver a program and issue a certificate under subparagraph (2) (c) (iv), CASA will be guided by the extent to which the program satisfies the requirements of clause 3, *Principles and methods of instruction*, in Section 2.4 of Schedule 3 of the Part 61 Manual of Standards.

(d) for delivery of the practical competency component of an RPL training course — have at least the number of hours of experience in the operation of unmanned aircraft required for the RePL training course under the RPA training organisation's documented practices and procedures;

Note Unmanned aircraft include model aircraft but not rockets, fireworks or balloons. See regulation 101.005 of CASR.

(e) for delivery of the practical competency component of an RPL training course — have satisfied any currency and recency requirements for operation of the relevant RPA in accordance with the RePL training organisation's documented practices and procedures;

(f) for delivery of the practical competency component of an RPL training course — have at least 20 hours of non-training operational experience in RPA operations, for an ReOC holder, in the same category of RPA as that for which the practical competencies are to be delivered.

CASA **proposes** the following functions and duties of a CRI in the MOS:

- conducts periodic review of documented RePL training course;
 - reviews all changes to the documented RePL training course;
 - conducts regular checks (every 6 months) of nominated instructors in both theory and operational aspects; and
- adheres to any requirements set out in the Part 101 MOS.

3.10.12 Delay commencement of RePL training instructor requirements

Reference(s)

- Part 101 MOS Section 1.03

Background / Issue

CASA requires the CRP of a RePL training organisation to ensure records are maintained relating to RePL training courses, and all activities are conducted in accordance with the regulation. However, there are additional responsibilities relevant to a RePL training provider which are not covered by the defined CRP role.

During the on-site assessment of an organisation seeking an initial grant of RePL training approval, CASA assesses the operator's experience and competency in delivering training. The operator may nominate a person, who may or may not be the CRP, to demonstrate this competency.

If it is not the CRP, CASA recognises the nominated person as the operators SME in training delivery. However, this position is not formally recognised in the regulations. CASA **proposes** to formalise the role to ensure oversight is maintained.

The role would be listed in the CASR under the nominated personnel for a ReOC while the responsibilities of the role would be listed in the MOS to be updated as required.

The responsibilities would include to maintain the documented RePL training course and delivery oversight of RePL training. The position would also oversee the competency of the RePL instructors through operational RPAS currency checks and checking of training delivery competency.

The qualifications required for RePL instructors are not appropriate for the type of training being delivered. Subparagraphs 2.30 (2) (b) (i)-(iii) of the MOS are beyond what is necessary or requested by an employer for each person in the role. However, to maintain standards, at least one person within the organisation should have such a qualification.

As part of proposed amendment 3.10.4 of this policy proposal document, CASA **proposes** the creation of a Chief RePL Instructor (CRI) who would have the responsibility of maintaining the standards of all competency based RePL training. This role would require a qualification such as those listed in section 2.30 of the MOS.

For all other RePL instructors, if experience requirements listed in the MOS are met, internal training as documented in the organisation's procedures would be acceptable.

A staged commencement to implement these changes is recommended.

Key objectives

CASA **proposes** to amend the delayed commencement date of item 1A under section 1.03 of the MOS to 24 months from the commencement of the MOS amendment instrument (reference subsection 2.30 (2) of the MOS).

1.03 Provisions which take effect later than on commencement

A provision of this MOS mentioned in column 1 of an item in the following Table takes effect on the day mentioned in column 2 for the item.

Item	This provision: (Column 1)	Takes effect on: (Column 2)
1	Chapter 2, other than paragraph 2.30 (2) (c) in Division 2.7	10 October 2020
1A	Paragraph 2.30 (2) (c) in Division 2.7 of Chapter 2	10 April 2022

Note: As the requirements in section 1.03 is due to commence on 10 April 2022 and regulatory change for this amendment package will not occur before this date, a MOS amendment instrument would need to be made to extend the date.

CASA **proposes** to insert item 1B to section 1.03 of the MOS to delay commencement of the new provision to 18-24 months from the commencement of the MOS amendment instrument (reference subsection 2.30 (2) of the MOS).

Proposed Chief Remote Instructor and RePL Instructor qualifications requirements timeline.

Stages	Dates/ commencement period	Role	Role Requirements
0	As at today	CRI	None – Role not in effect
		RePL Instructor	RePL instructors must meet requirements in Part 101 MOS paragraph 2.30(2)(a)(b)(d)(e)(f). <ul style="list-style-type: none"> Commencement date of Part 101 MOS paragraph 2.30(2)(c) proposed to be extended beyond current legislated date of 10 April 2022 to 10 April 2024. MOS amendment required before 10 April 2022 to extend the commencement date by 24 months (or settled timeframe)
1	Make date of the MOS amendments (approximately September 2022)	CRI	Introduction of CRI role <ol style="list-style-type: none"> Nominated person must be added to Schedule 1 of the Operators operations manual in the key role of Chief RePL Instructor. Nominated person must meet requirements in Part 101 MOS paragraph 2.30(2)(a)(b)(d)(e)(f)
		RePL Instructor	No change to requirements
2	Make date of Part 101 CASR/MOS amendment) +12 months	CRI	Nominated person in the CRI role must comply with 101 MOS paragraph 2.30 (2). Nominated person must hold 1 or more of the following qualifications: <ol style="list-style-type: none"> a pilot instructor rating issued under Part 61 of CASR; a Certificate IV in Training and Assessment issued by an approved educational institution; a tertiary level qualification in teaching that is recognised as such by a State or Territory government.
		RePL Instructor	No change to requirements
3	10 April 2024	CRI	No change to requirements
		RePL Instructor	Commencement of requirement for RePL instructors to comply with Part 101 MOS paragraph 2.30 (2) (c) and hold one of the following qualifications: <ol style="list-style-type: none"> a pilot instructor rating issued under Part 61 of CASR; a Certificate IV in Training and Assessment issued by an approved educational institution; a tertiary level qualification in teaching that is recognised as such by a State or Territory government; a pass in a RPAS instructor course as approved in writing by CASA.

3.10.13 RePL Instructor qualification requirements

Reference(s)

- Part 101 MOS Section 2.30

Background / Issue

CASA **proposes** to amend subparagraph 2.30 (2) (c) (iv) and the Note of the MOS, removing references to principles and methods of instruction (PMI).

Currently, there are limited pathways available to a RePL holder to complete a PMI course.

PMI is not designed as a stand-alone course but is a teaching methodology that is integrated into a particular course. It is rarely offered as a standalone course by (conventional aviation) flying schools. Conventional aviation (pilot) instructor courses are almost all practical in nature and are guided by the principles of PMI.

After some feedback and consideration, CASA appreciates it may not be feasible for most instructors in industry to already hold or be able to gain one of the qualifications required at paragraph 2.30 (2) (c) of the MOS.

In respect of the training program described at subparagraph 2.30 (2) (c) (iv) of the MOS, CASA development of this instructor course has been delayed due to other priorities (such as RPA registration and accreditation and the review of Part 101 of CASR) and will take considerable time and resources to develop.

Considering the impost on industry, it may not be appropriate for all instructors to have one of the qualifications listed in subparagraphs 2.30 (2) (c) (i) to (iii) of the MOS; however, it would be reasonable that the Chief RePL Instructor (however called), would hold one of the qualifications within this provision.

CASA **proposes** to address these issues by not requiring RePL instructors to hold any of these qualifications, but to require a Chief RePL Instructor to hold one of the following MOS prescribed qualifications (from a determined implementation date):

- Certificate IV Training
- Part 61 instructor rating
- Degree in Education

For an 'approved position' of Chief RePL Instructor (or Senior RePL training instructor, however worded), CASA **proposes** to approve this position after conducting an assessment process.

Issue 1

Amendment 3.10.4 of this policy proposal document for the introduction of the Chief RePL instructor (CRI) role as a nominated person, they would be assessed and approved by CASA for RePL training operations under the authority of the ReOC. CASA currently requires the CRP to fulfill responsibilities relating to RePL training organisations; however, CASA **proposes** to move these responsibilities onto the Chief RePL instructor. It is important to note this position may also be held by the CRP of the organisation for smaller operators.

The qualification requirements and responsibilities for the role would be inserted into section 2.30 of the MOS.

Issue 2

To remain consistent with the proposed position of Chief RePL Instructor, CASA **proposes** to amend the current term of RePL Training Course Instructor to a simpler term e.g., RePL Instructor.

Issue 3

The list of qualifications for RePL instructors doesn't include a qualification that covers the competencies necessary to conduct the responsibilities and duties of the role. The option in subparagraph 2.30 (2) (c) (iv) of the MOS doesn't describe a qualification that is widely available (for example, the certificate of completion of training program in PMI). The RePL instructor would undergo an internal training course for delivering the organisations RePL training course and the Chief RePL Instructor would be the person with a higher qualification responsible for overseeing training delivery and instructor competency checks.

CASA **proposes** to collaborate and work with industry on developing the appropriate standards and principles for an RPAS instructor course. This will present an opportunity for RPAS training organisations to increase the courses they have on offer. Once course guidelines are finalised, CASA will encourage training organisations to work with CASA to develop and submit a course for approval.

Key objectives

Issue 1 & 3

CASA **proposes** to amend *Chief Remote Pilot* to *Chief RePL Instructor* in the following sections of the MOS:

- 1.04 definition of examiner
- 2.09 (2) (b)
- 2.14 (1)
- 2.16 (3) (a)
- 2.29 (1) (c)

CASA **proposes** to amend section 2.30 of the MOS to (or words to the effect):

2.30 Requirements for RePL instructors

(1) A RePL training course for a type of RPA may only be conducted by the chief RePL instructor or a RePL instructor who is employed by the RPA training organisation which is delivering the RePL training course and who satisfies the requirements of this section

[CASA will confirm if it will be a requirement to be employed by the RPA training org].

(2) The Chief RePL instructor must hold 1 or more of the following:

- (i) a pilot instructor rating issued under Part 61 of CASR;
- (ii) a Certificate IV in Training and Assessment issued by an approved educational institution;
- (iii) a tertiary level qualification in teaching that is recognised as such by a State or Territory government;

NEW

(3) An RePL instructor (including the Chief RePL instructor) must comply with the following requirements:

- (a) be employed by the RePL training organisation which is delivering the RePL training course;
- (b) hold a RePL for the type and category of RPA for which they instruct;

Note: Under regulation 202.455 and subregulation 202.461 (3) of CASR, if before 29 September 2016, a person was certified as a UAV controller, the certification has effect as if it were the grant of a RePL.

- (c) have 1 or more of the following:
 - (i) a pilot instructor rating issued under Part 61 of CASR;
 - (ii) a Certificate IV in Training and Assessment issued by an approved educational institution;
 - (iii) a tertiary level qualification in teaching that is recognised as such by a State or Territory government;
 - (iv) a pass in a RPAS instructor course as approved in writing by CASA.

NEW

(4) In addition to the requirements for a RePL instructors listed in subsection (3),

The Chief RePL Instructor must comply with the following requirements:

(a) be responsible for conducting the functions and duties of a Chief RePL instructor, which must include the following:

- i. conduct periodic review of the documented practices and procedures for the RePL training course;
- ii. review all changes to the documented practices and procedures for the RePL training course;
- iii. conduct regular checks (every 6 months) of nominated instructors in both theory and operational aspects;
- iv. adhere to any requirements set out in the Part 101 MOS.

(b) hold 1 or more of the following:

- v. a pilot instructor rating issued under Part 61 of CASR;
- vi. a Certificate IV in Training and Assessment issued by an approved educational institution;
- vii. a tertiary level qualification in teaching that is recognised as such by a State or Territory government;

(3) The RePL instructor must comply with the following requirements:

- (a) hold a RePL for the type of RPA for which they instruct;
- (b) have completed RePL instructor training as detailed in the ReOC holders documented practices and procedures;
- (c) for delivery of the practical competency component of an RPL training course — have at least the number of hours of experience in the operation of unmanned aircraft required for the RePL training course under the RPA training organisation's documented practices and procedures;

Note: Unmanned aircraft include model aircraft but not rockets, fireworks or balloons. See regulation 101.005 of CASR.

- (d) for delivery of the practical competency component of an RPL training course — have satisfied any currency and recency requirements for operation of the relevant RPA in accordance with the RePL training organisation's documented practices and procedures;
- (e) for delivery of the practical competency component of an RPL training course — have at least 20 hours of non-training operational experience in RPA operations, for an ReOC holder, in the same category of RPA as that for which the practical competencies are to be delivered.

Issue 2

CASA **proposes** to amend “*RePL Training Course Instructor*” and “*RePL training instructor*” to “*RePL Instructor*” in the following sections of the MOS:

- 1.04 definition of examiner and title of RePL Training Course Instructor
- 2.09 (2) (a)
- 2.18 (3) (a) (b), (5) (6)
- 2.26 (1), (2), (4)
- 2.27 (1).

CASA will consider a transition period for the nominated position of Chief RePL Instructor to ensure sufficient time to process nominations for RePL training schools that already have this position in place but not approved by CASA.

3.11 RePL Training/ Schedules

3.11.1 Meaning of RePL training course

Reference(s)

- Regulation 101.026 of CASR
- CASR Dictionary

Background / Issue

CASA uses the acronym ‘RePL’ to describe the remote pilot licence to avoid confusion with the traditionally piloted aircraft recreational pilot licence ‘RPL’ qualification.

Key objectives

CASA **proposes** a new definition for '*RePL training course*' which would remove ambiguity. The following is proposed:

101.026 Meaning of RePL training course

For this Part, RePL training course means training in the operation of RPA for the grant of a remote pilot licence that is conducted:

- by a person who is certified under regulation 101.335 and whose operations include conducting training; and
- in accordance with any standards or requirements prescribed by the Part 101 Manual of Standards.

CASA also proposes to amend CASR Dictionary definition of *RPL training course*:

RPL training course means training in the operation of RPA for the grant of a remote pilot licence that is conducted:

- (a) by a person who is certificated under regulation 101.335 and whose operations include conducting training; and
- (b) in accordance with any standards or requirements prescribed by the Part 101 Manual of Standards.

to:

RPL training course: see RePL training course

And add a new definition to the CASR dictionary:

RePL training course: see regulation 101.026.

3.11.2 Definition of examiner and examiner requirements

Reference(s)

- Part 101 MOS sections:
 - 1.04
 - 2.09 (2)
 - 2.16 (3) (a)

Background / Issue

The definitions for examiner in section 1.04 of the MOS are detailed below:

examiner, for a medium or large RPA, means 1 of the following:

- (a) the chief remote pilot of a certified RPA operator who is qualified as a RePL training instructor;
- (b) a RePL training instructor who is authorised by the chief remote pilot in accordance with the RPA operator's documented practices and procedures; provided that he or she:
- (c) is identified in the operator's documented practices and procedures as an examiner for a medium or large RPA (a *relevant examiner*); and
- (d) has the length of experience in RPA operations stated in the operator's documented practices and procedures as required to be a relevant examiner; and
- (e) meets the other requirements stated in the operator's documented practices and procedures as necessary to be a relevant examiner; and
- (f) has not been the RePL training instructor for the applicant.

examiner, for a small or very small RPA, means 1 of the following:

- (a) the chief remote pilot of a certified RPA operator who is qualified as a RePL training instructor;
- (b) a RePL training instructor who is authorised by the chief remote pilot in accordance with the RPA's documented practices and procedures; provided that he or she:
- (c) is identified in the operator's documented practices and procedures as an examiner for a small or very small RPA (a *relevant examiner*); and
- (d) has the length of experience in RPA operations stated in the operator's documented practices and procedures as required to be a relevant examiner; and
- (e) meets the other requirements stated in the operator's documented practices and procedures as necessary to be a relevant examiner.

Issue 1

CASA seeks to define the requirements for examiners in RePL training organisations within Chapter 2 rather than Chapter 1 of the MOS where it can be easily missed.

The requirement for experience and documented practices and procedures in subsections 2.30 (c) to (f) of the MOS can also be easily overlooked.

CASA **proposes** to include the following in section 2.30 of the MOS:

- (3) A RePL training instructor can undertake responsibilities as an examiner if they:
 - (a) are identified in the operator's documented practices and procedures as an examiner for a small or very small RPA (a *relevant examiner*); and
 - (b) has the length of experience in RPA operations stated in the operator's documented practices and procedures as required to be a relevant examiner; and

(c) meets the other requirements stated in the operator's documented practices and procedures as necessary to be a relevant examiner.

For the definition of examiner for medium and large RPA, the requirement in paragraph 1.04 (f) of the MOS to have '*not been the RePL training instructor for the applicant*' should be removed to align with other training procedures. It is not reasonable to require operators' to have a minimum of two qualified personnel on staff to conduct the training and assessment for each medium or large RPAS. The residual risk in removing this requirement is considered low as the authorised examiner is still responsible for the applicant's standard of knowledge and competency, while the CRP is accountable for giving the applicant a certificate of completion in accordance with the documented practices and procedures for the course.

Issue 2

An examiner position allows the RePL instructor to conduct General English Language Proficiency (GELP) assessments. CASA considers it would be appropriate to include a requirement for the examiner position/ person to undergo internal training or be held to a standard.

CASA **proposes** to insert a note under subsection 2.03 (3) of the MOS:

- (3) *Despite subclause 5.1.1 of Section 1 of Schedule 2 of the Part 61 MOS, the assessment mentioned in subclause 5.1.1 must be made by an examiner.*

words to the effect of:

The examiner is expected to have undergone training to correctly assess the required standards for GEL — General English language proficiency.

Issue 3

The term examiner is in Division 2.3 (Examinations) of the MOS uses a different definition. Section 2.09 of the MOS states the aeronautical knowledge exam must be assessed by either a RePL training instructor or the chief remote pilot for the RePL training organisation. This assessor is referred to as the examiner.

Key objectives

Issue 1

CASA **proposes** to add notes in places where appropriate to refer to the relevant definition and the following:

In the definition of examiner for medium and large RPA, at section 1.04 remove paragraph (f).

- Bring the relevant detail from the definition of examiner (section 1.04) into section 2.30 (Division 2.7 of the MOS).
- Move everything after and including 'provided that he or she:' from the examiner definitions in section 1.04 to a new subsection of 2.30 in Division 2.7 of the MOS.

Proposed example:

- (3) An RePL training instructor who is authorised by the chief remote pilot as an examiner must comply with the following requirements:
- (a) is identified in the operator's documented practices and procedures as an examiner for a very small, small, medium, or large RPA (a relevant examiner); and
 - (b) has the length of experience in RPA operations stated in the operator's documented practices and procedures as required to be a relevant examiner; and
 - (c) meets the other requirements stated in the operator's documented practices and procedures as necessary to be a relevant examiner; and

Issue 2

Amendment to Division 2 of the MOS (or elsewhere if required) to include a requirement for RePL instructors to have received internal training to conduct GELP assessments, or to be held to a standard.

Issue 3

For consistency:

Amend subsection 2.09 (2) of the MOS:

- (2) The examination must be assessed by:
- (a) a RePL training instructor; or
 - (b) the chief remote pilot for the RePL training organisation.

to:

The examination must be supervised by an examiner.

Change heading of section 2.09 of the MOS:

2.09 Examination pass mark, examiner and resits

to:

Examination pass mark, assessor and resits.

Amend paragraph 2.16 (3) (a) of the MOS:

- (a) the student has satisfied either the RePL training course instructor or the chief remote pilot (the *examiner*) that the knowledge that was the subject of the KDR has been remedied; and

to:

the student has satisfied an assessor that the knowledge that was the subject of the KDR has been remedied.

Amend paragraph 2.16 (3) (b) of the MOS:

(b) this satisfaction has been recorded in writing by the examiner.

to

the examiner' to 'the assessor

3.11.3 Aeronautical radio operator — knowledge and competency standards

Reference(s)

- Part 101 MOS Section 2.04

Background / Issue

Aeronautical Radio Operator Certificates (AROC) are granted under Part 64 of CASR. No provision in Part 64 of CASR precludes the training and issuing of an AROC to a non-flight crew licence holder or student (as referenced in subsection 2.04 (4) of the MOS).

CASA **proposes** to repeal section 2.04 of the MOS, which outlines extant legislation that is not applicable to a RePL training course. A RePL student does not require an AROC to be issued the licence. AROC is a standalone course and should not be included in the RePL training syllabus.

Key objectives

CASA **proposes** to repeal section 2.04 of the MOS and provide a note for the reader, advising where information can be found on obtaining an AROC.

2.04 Aeronautical radio operator — knowledge and competency standards

- (1) A RePL training course may include training and assessment in the operation of an aeronautical radio.
- (2) The aeronautical radio operator knowledge standards are as set out in Unit 1.2.1 — RARO, in Section 1.2 of Appendix 1 in Schedule 3 of the Part 61 MOS, which is hereby incorporated into this MOS.
- (3) The aeronautical radio operator competency standards are as set out in Part C3 in Section 2: Common Standards, in Schedule 2 of the Part 61 MOS, which is hereby incorporated into this MOS.
- (4) A person is eligible for the grant of an AROC only if each of the requirements in Subpart 64.B of CASR are complied with as if they applied to an applicant for a RePL.

3.11.4 Clarify aeronautical knowledge standards and practical competency standards

Reference(s)

- Part 101 MOS sections:
 - 2.05 (1)
 - 2.06 (1)

Background / Issue

Issue 1

Aeronautical knowledge standards

Subsection 2.05 (1) of the MOS- CASA has received feedback from training organisations there is confusion of which units must be delivered for the theory component of a RePL training course.

2.05 Aeronautical knowledge standards

- (1) A RePL training course for a category of RPA must include training and assessment in the units of aeronautical knowledge (including common units) that are for the category in accordance with the standards and requirements in Schedule 2.

Schedule 2 of the MOS lists the theory units and does not specify which are relevant for an initial or upgrade RePL training course for each category/type of RPA. It is recommended that subsection 2.05 (4) of the MOS is amended to define the exact training units required for each type of course.

Issue 2

Subsection 2.06 (3) states Schedule 3 of the MOS lists the required units for a course; however, the schedule does not specify which are relevant for an initial or upgrade RePL training course or for each category/type of RPA.

The CASA RePL Upgrade Supplement should be integrated into the Part 101 MOS. The MOS should provide for operators delivering medium/large RePL training, to use either the Part 101 MOS training standards, the training standards for complex RPA included in a separate successor document to the Upgrade Supplement, or training standards proposed by the training provider and assessed and approved by CASA.

Issue 3

CASA requires a mechanism to be able to approve unique courses that do not otherwise satisfy the specified requirements. CASA will require an organisation to use standard items where appropriate.

Key objectives

Issue 1

CASA **proposes** to repeal subsections 2.05 (5), (6), (7) and (8). CASA will review whether these provisions are required for the purpose of defining terms. If not, they may be provided in Advisory Circular 101-01.

CASA **proposes** to amend subsection 2.05 (1) to state:

The aeronautical knowledge component of a RePL training course for a category of RPA must include training and assessment in the relevant units of aeronautical knowledge that are for the category as per paragraph (4), and in accordance with the standards and requirements in Schedule 2.

Alternatively, subsection 2.05 (1) may be repealed and integrated into subsection 2.05 (4) of the MOS.

Amend subsection 2.05 (4) of the MOS:

- (4) A RePL training course for a category of RPA must require the applicant to complete all of the matters, in all of the items, of the following units of knowledge:
- (a) for any RPA category — the units in Appendix 1 of Schedule 4, Common units, except when the RePL training course is for a RePL upgrade provided for in section 2.21, 2.23 or 2.25;
 - (b) for an RPA that is in the aeroplane category — the units in Appendix 2 of Schedule 4;
 - (c) for an RPA that is in the helicopter (multirotor class) category — the units in Appendix 3 of Schedule 4;
 - (d) for an RPA that is in the helicopter (single rotor class) category — the units in Appendix 4 of Schedule 4;
 - (e) for an RPA that is in the powered-lift category — the units in Appendix 5 of Schedule 4;
 - (f) for any RPA in any RPA category, whether operated under a manual or an automated flight management system — the units in Appendix 6 of Schedule 4;
 - (g) for any medium or large RPA in any RPA category, with a liquid-fuel system — the units in Appendix 7 of Schedule 4.

to:

(4) A RePL training course for a category of small RPA must require the applicant to complete training and assessment in, in all the items, of the following units of knowledge:

- (a) for any RPA category — the units in Appendix 1 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL;
- (b) for an RPA that is in the aeroplane category — the units in Appendix 2 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL with an aeroplane category rating;

- (c) for an RPA that is in the helicopter (multirotor class) category — the units in Appendix 3 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL with a helicopter (multirotor class) category rating;
- (d) for an RPA that is in the helicopter (single rotor class) category — the units in Appendix 4 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL with a helicopter (single rotor class) category rating;
- (e) for an RPA that is in the powered-lift category — the units in Appendix 5 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL with a powered-lift category rating;

And insert after subsection 2.05 (4) of the MOS a new subsection:

- (4a) A RePL training course for a medium or large RPA must require the applicant to complete training and assessment, in all the items, of the following units of knowledge:
- (a) for any RPA category — the units in Appendix 1 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL;
 - (b) for an RPA that is in the aeroplane category — the units in Appendix 2 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL with an aeroplane category rating;
 - (c) for an RPA that is in the helicopter (multirotor class) category — the units in Appendix 3 of Schedule 2, except when the RePL training course is for an applicant who holds an RePL with a helicopter (multirotor class) category rating;
 - (d) for an RPA that is in the helicopter (single rotor class) category — the units in Appendix 4 of Schedule 2, except when the RePL training course is for an applicant who holds an RePL with a helicopter (single rotor class) category rating;
 - (e) for an RPA that is in the powered-lift category — the units in Appendix 5 of Schedule 2, except when the RePL training course is for an applicant who holds an RePL with a powered-lift category rating;
 - (f) for an RPA with a liquid-fuel system — the units in Appendix 6 of Schedule 2, except when the RePL training course is for an applicant who holds a RePL rating for a medium or large RPA with a liquid-fuel system;
 - (g) for any RPA category — the units of aeronautical knowledge specific to the relevant RPAS as set out in the training providers documented practices and procedures.

This proposal would move the requirement to have a unit (or units) of aeronautical knowledge specific to the relevant RPAS, from the CASA RePL Upgrade supplement into the MOS.

Issue 2

CASA **proposes** to amend subsection 2.06 (3) of the MOS:

- (3) A RePL training course for a category of RPA must include training and assessment in the units of practical competency that are for the category in accordance with the standards and requirements in Schedule 3.

to:

The practical competency component of a RePL training course for a category of RPA must include training and assessment in the relevant units of practical competency that are for the category as per paragraph (6), and in accordance with the standards and requirements in Schedule 3.

Alternatively, subsection 2.06 (3) may be repealed and integrated into subsection 2.06 (6) of the MOS.

CASA **proposes** to substitute subsection 2.06 (6) of the MOS:

- (6) A RePL training course for a category of RPA must require the applicant to complete the following units of practical competency:
 - (a) for any RPA category — the units in Appendix 1 of Schedule 5, Common units, except when the RePL training course is for a RePL upgrade provided for in section 2.21, 2.23 or 2.25;
 - (b) for an RPA that is in the aeroplane category — the units in Appendix 2 of Schedule 5;
 - (c) for an RPA that is in the helicopter (multirotor class) category — the units in Appendix 3 of Schedule 5;
 - (d) for an RPA that is in the helicopter (single rotor class) category — the units in Appendix 4 of Schedule 5;
 - (e) for an RPA that is in the powered-lift category — the units in Appendix 5 of Schedule 5;
 - (f) for any medium or large RPA in any RPA category, with a liquid-fuel system — all of the units in Appendix 6 of Schedule 5.

with:

A small RePL training course for a category of RPA must require the applicant to complete training and assessment in the following units of practical competency:

- (a) for any RPA category — the units in Appendix 1 of Schedule 3, except when the RePL training course is for an applicant who holds a RePL;
- (b) for an RPA that is in the aeroplane category — the units in Appendix 2 of Schedule 3;
- (c) for an RPA that is in the helicopter (multirotor class) category — the units in Appendix 3 of Schedule 3;

- (d) for an RPA that is in the helicopter (single rotor class) category — the units in Appendix 4 of Schedule 3;
- (e) for an RPA that is in the powered-lift category — the units in Appendix 5 of Schedule 3;

and insert after subsection 2.06 (6) of the MOS:

(new) A RePL training course for a category of medium or large RPA must require the applicant to complete training and assessment in the following units of practical competency:

- (a) for any RPA category — the units in Appendix 1 of Schedule 3 except when the RePL training course is for an applicant who holds an RePL;
- (b) for an RPA that is in the aeroplane category — either:
 - (i) the units in Appendix 2 of Schedule 3; or
 - (ii) the units in [SECTION & DOCUMENT HOLDING COMPLEX RPAS PRACTICAL TRAINING STANDARDS];
- (c) for an RPA that is in the helicopter (multirotor class) category — either:
 - (i) the units in Appendix 2 of Schedule 3; or
 - (ii) the units in [SECTION & DOCUMENT HOLDING COMPLEX RPAS PRACTICAL TRAINING STANDARDS];
- (d) for an RPA that is in the helicopter (single rotor class) category — either:
 - (i) the units in Appendix 2 of Schedule 3; or
 - (ii) the units in [SECTION & DOCUMENT HOLDING COMPLEX RPAS PRACTICAL TRAINING STANDARDS];
- (e) for an RPA that is in the powered-lift category — either:
 - (i) the units in Appendix 2 of Schedule 3; or
 - (ii) the units in [SECTION & DOCUMENT HOLDING COMPLEX RPAS PRACTICAL TRAINING STANDARDS];
- (f) for an RPA with a liquid-fuel system — the units in Appendix 6 of Schedule 3.

Document for Complex RPAS Technical Training Standards

CASA is proposing a document to replace the CASA RePL Upgrade Supplement. The document would contain the units specifically designed to identify the items and performance criteria, range of variables and underpinning knowledge required for each phase of RPA operation and for non-normal and emergency operating states.

CASA seeks the ability to approve a different set of required practical competency unit items/manoeuvres in this proposed document however called.

CASA **proposes** to amend subsection 2.06 (7) of the MOS:

- (7) For an item mentioned in a Table of an Appendix of Schedule 5 (the *practical competency units*), the training and assessment of the subject matter mentioned in column 2 of the item must be within the tolerances mentioned in column 3 of the item, and across the range of variables mentioned in column 4 of the item.

after item ‘, unless otherwise approved in writing by CASA.’ In column 4:

Insert new paragraph after subsection 2.06 (7) of the MOS:

(New) For an item mentioned in a unit of [SECTION & DOCUMENT HOLDING COMPLEX RPAS PRACTICAL TRAINING STANDARDS], (the practical competency units), the training and assessment of the subject matter mentioned in the elements and performance criteria section of the relevant unit must be conducted across the range of variables prescribed, unless otherwise approved in writing by CASA.

CASA will indicate in writing that the RePL training course is acceptable.

Repeal subsection 2.06 (8) of the MOS.

- (8) To avoid any doubt, the requirements under the following:
- (a) paragraph (6) (a);
 - (b) paragraph (6) (f);
- are in addition to any requirement expressed in paragraphs (6) (b) to (e), as the case requires.

Issue 3

Insert new subsection in section 2.06 of the MOS:

CASA may approve a subset of the practical competency standards as required by this section, or an alternative set where it is satisfied that an equivalent or higher level of aviation safety would be achieved.

3.11.5 Clarify resit requirements

Reference(s)

- Part 101 MOS sections:
 - 2.09 (3)
 - 2.13 (b)

Background / Issue

Subsection 2.09 (3) of the MOS provides that a student can attempt a RePL exam three times; however, before a fourth attempt can be made, the student must repeat the aeronautical knowledge component of the RePL training course.

- (3) If an applicant does not pass the examination at the first attempt, or at a second attempt, or at a third attempt, he or she must not make a fourth attempt to pass the examination unless:
- (a) he or she has repeated the aeronautical knowledge component of the RPL training course; and
 - (b) at least 14 days have elapsed since the third attempt.

Subsection 2.13 (b) of the MOS provides that if an applicant has not passed the examination, the examination may be resat only once without having to repeat the aeronautical knowledge component of the RePL training course.

Key objectives

To clarify the intent of these provisions, CASA **proposes** to amend subsection 2.13 (b) of the MOS:

- (b) if the applicant has not passed the examination — that the examination may be resat only once without having to repeat the aeronautical knowledge component of the RePL training course.

to:

(b) if the applicant has not passed the examination on the second attempt—the examination may be resat only once without having to repeat the aeronautical knowledge component of the RePL training course.

As the number of attempts is clarified in subsection 2.09 (3), subsection 2.13 (b) of the MOS will either be amended as above or removed to provide clarity.

3.11.6 Definitions for ‘operation only’ training and ‘theory and operation’ training

Reference(s)

- Section 1.04 of the MOS
- Definitions

Background / Issue

The endorsements on a ReOC authorising RePL training should be defined either in an official CASA policy manual or in section 1.04 of the MOS, as appropriate.

The intent for ‘Operation only’ training was originally designed for larger organisations to conduct internal staff RePL upgrade training, or for an RPAS manufacturer to conduct manufacturers type specific RePL upgrade training.

Without a clearly defined regulatory authorisation, these types of RePL upgrades are required to be assessed as CASA flight tests, which can create resource related stress and red tape for both industry and CASA. The new structure of the RePL training course means that ‘Operation

only' as currently defined, does not allow training providers to conduct the majority of RePL training courses.

There are several operators endorsed for 'Operation only' who are no longer able to conduct their previously approved training due to the requirements to include an aeronautical knowledge component in the RePL training they wish to conduct.

Key objectives

The terms '*Operation Only*' and '*Theory and Operation*' are only partially defined in an internal CASA RPAS manual. 'Operation Only' is described as an authorisation to conduct RePL training which consists of the practical competency component. 'Theory and Operation' is described as authorising the delivery of RePL training which includes both an aeronautical knowledge and practical competency component.

CASA has proposed under amendment 3.11.1 of this policy proposal document, a new regulation 101.026 of CASR 'Meaning of RePL training course' which details that a course may be conducted by a suitably certified training organisation in accordance with any standards or requirements in the MOS.

CASA **proposes** to define these terms based on the following:

- An 'Operational only' endorsement to allow a ReOC holder to conduct training to upgrade (vary) an existing RePL.
 - The advantage to this limited authorisation is that the operator would not need to submit training and exam questions covering the common aeronautical knowledge and practical competency units.
- A 'theory and operation' endorsement to allow a ReOC holder to conduct training to issue an initial RePL and upgrade (vary) an existing RePL.

CASA will review if subsection 2.05 (1) of the MOS or Part 101 of CASR would require amendment as an outcome of the above amendment.

3.11.7 Clarify student contact time requirements

Reference(s)

- Part 101 MOS Section 2.26

Background / Issue

CASA **proposes** to clarify the 15 hours of contact time with a RePL training instructor must be conducting theory training, and not a mixture of theory and practical. This provision is only clearly stated in the Note of (3). The intent of the section is to provide for more time delivering the theory components, which was and still is the biggest deficiency among RePL holders.

The NOTE in Subsection 2.26 (3) of the MOS:

Note The minimum of 15 hours' contact time may be reached through an accumulation of physical presence, virtual presence or a mixture of both. However, CASA will not certify a person to be a certified RPA operator for the purpose of conducting a RePL training course unless CASA is satisfied that the operator's documented practices and procedures ensure that the minimum of 15 hours focuses on Priority A syllabus items.

Operators should have the ability to determine which topics are to be covered in the physical/virtual lessons of the aeronautical knowledge component, so long as there is 15 hours being allocated to the physical/ virtual training.

It is not stated clearly elsewhere in the MOS that the minimum of 15 hours is required to be allocated to the aeronautical knowledge component only when the common units are included.

The "Priority A syllabus items" in the note has been reported to be difficult to implement as operators are splitting logical lesson topics and combining priority A items into lessons that were a mix of subjects and topics.

Key objectives

CASA **proposes** to repeal the subsection 2.26 (3) note and move subsection 2.26 (3) and place into Chapter 2 definitions of the MOS.

- (3) For subsections (1) and (2), **contact time** with a student is accumulated through 1 or both of the following, namely, the instructor being:
- (a) physically present, instructing and responding in a class room;
 - (b) virtually present, instructing and responding online in real time.

Note The minimum of 15 hours' contact time may be reached through an accumulation of physical presence, virtual presence or a mixture of both. However, CASA will not certify a person to be a certified RPA operator for the purpose of conducting a RePL training course unless CASA is satisfied that the operator's documented practices and procedures ensure that the minimum of 15 hours focuses on Priority A syllabus items.

For subsections (1) and (2), contact time with a student is accumulated through 1 or both of the following, with the instructor being:

- (a) physically present and able to interact in real time with the student
- (b) virtually present and able to interact in real time with the student.

Substitute subsections 2.26 (1) and (2) of the MOS:

2.26 Student class time

- (1) Subject to subsection (2), to deliver the *aeronautical knowledge component* of a RePL training course for a category of RPA, a RePL training organisation must ensure that each student has not less than 15 hours of contact time with a RePL training instructor.
- (2) For a student who is receiving the *aeronautical knowledge component* of a RePL training course simultaneously for 1 category of RPA and for 1 or more additional categories, the RePL training organisation must ensure that the student has not less than the following hours of contact time with a RePL training instructor:
 - (a) 15 hours; and
 - (b) 4 additional hours for each additional category.

with the following (or words to the effect):

When delivering an initial RePL training course for a category of RPA, a RePL training organisation must ensure that each student has the following minimum contact time during the delivery of the aeronautical knowledge component; a minimum of 15 hours; and an additional 4 hours for each additional category.

Substitute subsection 2.26 (4) of the MOS:

- (4) No part of the **practical competency component** of a RePL training course may be delivered by a RePL training instructor who is not in the physical presence of the person being trained.

with the following (or words to the effect):

The practical competency component of a RePL training course must be delivered by a RePL training instructor who is in the physical presence of the person being trained.

3.11.8 Simplify student ratio during actual operation of the RPA under instruction

Reference(s)

- Part 101 MOS Section 2.27

Background / Issue

The current ratio rules provide for 5 students to 1 instructor for all non-flying practical training (instruction in the practical competencies). Practical training with flying involved cannot have more than 3 students operating an RPA while 2 students act as observers per instructor. This ratio limits the number of student observers.

These ratio rules also effect student instructor ratios across each component of the course which can be burdensome to training organisations to fulfil.

Subparagraph 2.27 (1) (b) (i) of the MOS specifies a non-complex RPA, which means all practical training (including non-flying) for a RePL for a complex RPA can only be conducted with 2 students to 1 instructor ratio.

Conflicting ratios exist between some courses that require 2 students to 1 instructor ratio or 5 students to 1 instructor ratio for the delivery of the same training between the two courses (initial medium type RePL and non-complex course).

Key objectives

CASA is proposing to simplify this requirement and only control the ratio during actual operation of the RPA and only for the students under instruction. Any number up to the normal practical training ratio of students should be able to observe, listen to instructor feedback, and be involved in other aspects of the training so long as only 3 students are flying under instruction.

The requirement should also consider that people/students can fly under the excluded category SOC rules without an instructor for the purpose of gaining experience to obtain a RePL (regulation 101.237 of CASR).

Amend paragraph 2.27 (1) (b) of the MOS:

- (b) for the practical component (practical competencies component):
- (i) subject to subparagraph (ii), 5 students to 1 instructor — for a RePL for an RPA that the RPA training organisation specifies in its documented practices and procedures, with the written agreement of CASA, is not complex (a *non-complex RPA*); and
 - (ii) 3 students each actually flying a non-complex RPA to 1 instructor provided that not more than 2 other students are observing; and
 - (iii) 2 students to 1 instructor — for a RePL for an RPA that the RPA training organisation specifies in its documented practices and procedures is complex.

to:

- (b) for the practical component (practical competencies component) – subject to subparagraph (c), 10 students to 1 instructor; and
- (c) 3 students each flying an RPA to 1 instructor.

3.11.9 Nominated remote pilots to perform EVLOS proficiency checks

Reference(s)

- Part 101 MOS Section 5.06

Background / Issue

A person certified to conduct a RePL training course which includes an EVLOS proficiency check can conduct EVLOS proficiency checks for Remote Pilots of a ReOC holder. It has been identified to be problematic as a RePL training organisation may not have the skills and knowledge required for EVLOS operations.

EVLOS procedures are unique to the organisation performing the operation; a certified operator will create and submit a set of procedures for their intended EVLOS operations and most of the time, these procedures will be relevant to the type of RPA being used. It may not be reasonable to expect an RePL training organisation separate from the operator to perform proficiency checks where they do not fully understand the type of operations the student intends to perform and the unique procedures that would apply.

It may be more appropriate for CASA to accept nominated remote pilots within the organisation to perform these types of proficiency checks, as well as the Chief Remote Pilot. This mirrors arrangements in the helicopter industry where training and checking of some specialised operations is the domain of the operator who is expert in the skill, rather than a flying school.

Key objectives

CASA **proposes** to substitute subparagraph 5.06 (c) (i) (B) of the MOS:

- (B) a person certified to conduct an RPL training course which includes a proficiency check for the purpose of this section; or

with words to the effect of:

a remote pilot authorised to operate under the authority of the ReOC and has been approved by the chief remote pilot for the purpose of this section.

3.11.10 Remove requirement for 80-question minimum requirement

Reference(s)

- Part 101 MOS Section 2.10

Background / Issue

CASA **proposes** to remove the prescription of course question numbers in section 2.10 as criteria specified in subsection 2.10 (2) of the MOS already defines minimum question numbers.

Subsection 2.10 (3) of the MOS and the associate note are also proposed to be removed as these are redundant.

Key objectives

CASA **proposes** to repeal subsection 2.10 (3) of the MOS and the associated note.

- (3) The number of examination questions must be such as to ensure that the requirements of subsections (1) and (2) are met.

Note Depending on the relevant RePL sought, more than 80 questions may have to be formulated to ensure that the requirements of subsections (1) and (2) are met.

CASA **proposes** to replace subsection 2.10 (1) of the MOS:

2.10 Examination questions

- (1) The examination must be a set of at least 80 multiple-choice questions covering all of the aeronautical knowledge units in Schedule 4 that are for the relevant category of RPA, including for automated flight management systems and liquid-fuel systems if required (the *relevant units*), for which the applicant is applying for a RePL (the *relevant RePL*).

with:

The examination must be a set of multiple-choice questions covering all the aeronautical knowledge units in Schedule 4 that are for the relevant category of RPA, including for automated flight management systems and liquid-fuel systems if required (the relevant units), for which the applicant is applying for a RePL (the relevant RePL).

CASA **proposes** to replace the first part of subsection 2.10 (2) of the MOS:

- (2) The examination questions must be compiled as follows, based on the items in the relevant units for the relevant RePL:

with:

The number and the composition of questions in the examination must be as follows, based on the items in the relevant units for the relevant RePL:

CASA **proposes** to replace paragraph 2.12 (2) (a) of the MOS:

- (a) be comprised of at least 80 multiple-choice questions; and

with:

be comprised of at least, a number of questions as is required under subsection 2.10 (2) of the MOS; and

3.11.11 Include aeronautical knowledge requirement for RPA registration

Reference(s)

- Part 101 MOS
- Schedule 4, Appendix 1, Unit 7 (RORA - Operational rules and air law for RPAS)

Background / Issue

The provisions in Unit 7 of the MOS were developed before RPA registration came into force. As such, there are no items of aeronautical knowledge covering the registration requirement for operating RPA for commercial purposes.

Schedule 4 Aeronautical knowledge units

Appendix 1 Any RPA — Common units (contd.)

Unit 7 RORA — Operational rules and air law for RPAS

Item	Aeronautical knowledge topics	Priority
1	<p><i>Aviation legislation and information</i></p> <p>(a) documents that contain aviation legislation, aeronautical information and general operating rules that apply to the operation of RPA;</p> <p>(b) obtaining the documents and ensuring that the information is up to date;</p> <p>(c) guidance materials and information sources relating to RPAS operations.</p>	A
2	<p><i>Remote pilot licence</i></p> <p>(a) conditions that apply to a remote pilot licence under Part 101 of CASR;</p> <p>(b) conditions that may apply to a remote pilot licence under other legislation;</p> <p>(c) conditions that apply to a certified RPA operator under Part 101 of CASR.</p>	B

Key objectives

CASA **proposes** to amend the aeronautical knowledge components above, to include registration knowledge requirements at item 3 or a similar mechanism at Item 1 (d) in the table.

(d) *Registration requirements for RPA.*

3.11.12 Approved examinations and Instrument CASA EX46/21

Reference(s)

- CASA EX46/21
- Part 101 MOS Chapter 5

Background / Issue

Regulation 101.300 of CASR prescribes conditions on a RePL which restrict the remote pilot operating an RPA BVLOS; however, regulation 101.073 of CASR already identifies restrictions on unmanned aircraft generally and this applies to the organisation and the remote pilot.

For an operator to be issued a BVLOS approval under the authority of a ReOC, CASA requires the ReOC to list all names of the pilots who are going to operate under that approval and issue another approval for the purposes of paragraph 101.300 (4) (b) of CASR. CASA would prefer to ensure the approval issued under paragraph 101.029 (2) (b) of CASR and is only required for the certified operator and not the individual pilots (refer to 5.01 (3) of the MOS).

CASA EX46/21 — *Remotely Piloted Aircraft Operations Beyond Visual Line of Sight Instrument 2021* came into effect on 28 April 2021, expiring 30 April 2023. Additional changes may be required to the MOS to align with amendment made to Part 101 of CASR.

Key objectives

CASA **proposes** to move the provisions of subregulation 101.300 (4) of CASR into section 5.01 of the MOS.

- (4) It is a condition of a remote pilot licence that an RPA must be operated within the visual line of sight of the licence holder unless he or she:
- (a) has passed:
 - (i) an aeronautical knowledge examination (within the meaning of Part 61) for the grant of an instrument rating under Part 61; or
 - (ii) an aviation licence theory examination before 1 September 2014 that is taken to be an equivalent requirement for the grant of an instrument rating under regulation 202.274; or
 - (iii) an approved examination; and
 - (b) either:
 - (i) holds both a certificate as an RPA operator under Division 101.F.4 and an approval under regulation 101.029 to operate the RPA beyond the person's visual line of sight; or
 - (ii) is a member of an RPA operator's personnel and the RPA operator holds both a certificate as an RPA operator under Division 101.F.4 and an approval under regulation 101.029 for the operator's personnel to operate RPA beyond their visual line of sight.

EVLOS 1 will not require the remote pilot to hold any pass in an instrument rating examination or approved examination.

CASA **proposes** to impose the following requirements on remote pilots when operating EVLOS class 2 and BVLOS:

- (a) has satisfied one of the following:
- (i) a pass in an aeronautical knowledge examination (within the meaning of Part 61) for the grant of an instrument rating under Part 61; or
 - (ii) a pass in an aviation licence theory examination before 1 September 2014 that is taken to be an equivalent requirement for the grant of an instrument rating under regulation 202.274; or
 - (iii) an approved examination; and

CASA may include a note to better define what may constitute an approved examination.

Repeal subsection 5.01 (3) of the MOS:

- (3) Only a RePL holder:
- (a) who is a certified RPA operator holding an approval for paragraph (2) (a); or
 - (b) who is a member of the personnel of a certified RPA operator holding an approval for paragraph (2) (b);
- may be granted an approval under paragraph 101.029 (2) (b) of CASR for subregulation 101.073 (2) to operate an unmanned aircraft beyond the RePL holder's visual line of sight.
- Note* An approval for a RePL holder would only be granted in association with the grant of a relevant approval for a certified RPA operator.

CASA will review CASA EX46/21 and make appropriate amendments to the MOS to incorporate the intent of the exemption.

3.11.13 Certification of RePL training course completion

Reference(s)

- Part 101 MOS Section 2.29

Background / Issue

Issue 1

Some information relevant to the type of RePL training conducted, cannot be placed on a RePL (such as liquid-fuel endorsements/ auto only). CASA **proposes** that this information is added to the certificate of course completion to allow RePL training providers, remote pilot students and ReOCs to hold a record of the exact training a remote pilot completed as part of a RePL training course. This is standard practice for Registered Training Organisations.

Issue 2

The Chief RePL Instructor should be authorised to sign off on the certification of RePL training course completion.

Key objectives

CASA **proposes** to amend 2.29 (1) of the MOS:

2.29 Certification of RePL training course completion

- (1) An RPA training organisation must give each student who successfully completes a RePL training course a certificate of course completion which:
 - (a) identifies the RPA training organisation and the student; and
 - (b) identifies the RePL training course, and when it was completed by the student;
and
 - (c) is signed and dated by the chief remote pilot of the organisation.

to:

An RPA training organisation must give each student who successfully completes a RePL training course a certificate of course completion which:

- identifies the RPA training organisation and the student;
- identifies the RePL training course completed, and the RePL training units included in the course;
- identifies the mode of operation used for the practical competency component of the RePL training course, being either:
 - automated operation mode only — for a course which does not include training in the manual operation of an RPA; or
 - both the automated operation mode and the manual mode — for a course which includes training in both the manual operation and automated operation of an RPA.
- identifies the date on which the RePL training course was completed by the student; and
- is signed and dated by the CRI or CRP of the organisation.

3.11.14 Amend title and clarify references

Reference(s)

- Part 101 MOS
- Schedule 4, Appendix 1, Unit 2

Background / Issue

The referencing numbers in Schedule 4 of the MOS is not consistent for items 3 and 4 which makes it difficult for CASA to assess, and for training organisations to reference material in their syllabus. These items are proposed to be amended so they are more easily referenced.

For example, in relation to Item 4 of Schedule 4 of the MOS, this section of training should highlight the differences and considerations for using electronic flight bags and CASA-verified drone safety apps for flight planning. Most operators use these tools and remote pilots should know the risks and limitations.

To assist, CASA **proposes** to include item number 5 next to '*Form of the earth, aeronautical charts and maps 2*', and rename it 'Electronic flight bag'. The reference to 'CASA's RPA/Drone app' will be amended to 'CASA-verified drone safety app'.

Key objectives

Schedule 4, Appendix 1 Unit 2 – RACP – Airspace, charts and aeronautical publications for RPAS:

Item 3 - NOTAMs 1

3	<i>NOTAMs 1</i> (a) obtaining NOTAMs for operational areas; (b) decoding NOTAMs.	A
	<i>NOTAMs 2</i> Submitting a NOTAM for publication.	C

CASA **proposes** to amend the title *NOTAMs 2* to '*NOTAM publication*' and add '(c)' before the words '*Submitting a NOTAM for publication*' so it can be more easily referenced.

Item 4 - Form of the earth, aeronautical charts, and maps

4	<i>Form of the earth, aeronautical charts and maps</i> (a) features on an aeronautical chart (other than airspace); (b) cardinal and ordinal points of the compass; (c) latitude and longitude; (d) depiction of height and elevation on charts; (e) distance on the earth and in charts; (f) magnetic variation; (g) relationship between magnetic heading and magnetic bearing.	A
	<i>Form of the earth, aeronautical charts and maps 2</i> (a) electronic maps and charts; (b) CASA's RPA/Drone app.	C

Create a new Item number 5 (as Item 4 has two sections). Item 5 will appear next to '*Form of the earth, aeronautical charts and maps 2*'. CASA **proposes** to change the Aeronautical knowledge topic heading to '*electronic flight bag*'.

Continue the reference letters continuing from Item 4 to:

(h) electronic maps and charts (i) CASAs RPA/ Drone App (amend this to read 'CASA verified drone safety app').

3.11.15 Remove certain variables - dark conditions or within urban, suburban, and populated areas

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 1, Unit 19

Background / Issue

Most training organisations conduct flight training on open flat land such as an oval. Legally, the training organisation cannot conduct training or test applicants in dark conditions (at night) or within urban, suburban, and populated areas.

The training organisations should discuss/teach the risks and mitigation strategies when operating in these conditions but cannot legally test applicants. CASA **proposes** removing or amending these variables from the schedule.

Key objectives

Item 3 - Emergency Procedures / Range of variables - Unit 3 of the MOS

CASA **proposes** to remove Unit 3 variable (a):

- (a) operations in both dark conditions and under artificial illumination;

CASA **proposes** to either amend Unit 3 variable (c):

- (c) urban, suburban and unpopulated areas;

to include '*simulate*' i.e., *to simulate in urban, suburban and unpopulated areas*, (or simply repeal (c)).

3.11.16 Remove certain variables - physical location of training organisations and not testing applicants at night

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 2, Unit 21
- Schedule 5, Appendix 5, Unit 35
- Schedule 5, Appendix 5, Unit 36

Background / Issue

Items within Schedule 5, Appendix 2, Unit 21 of the MOS, require students to be tested in variables:

- undulating terrain
- near aerodromes and away from aerodromes
- daytime and night

Due to the physical location of training organisations and testing areas (normally an empty oval or open space), testing students near aerodromes is sometimes not possible due to location. It is difficult to test over undulating terrain as most tests are conducted on football fields. Similarly, students cannot be tested to fly at night as this is in direct breach of the regulations.

Schedule 5, Appendix 5, Unit 36 Item 1, includes the variable 'undulating terrain'.

Key objectives

CASA **proposes** the following:

Schedule 5, Appendix 2, Unit 21, Item 1 remove variables – (b), (c) and (d):

- (b) undulating terrain;
- (c) near aerodromes and
away from
aerodromes;
- (d) daytime and night.

Schedule 5, Appendix 2, Unit 21, Items 2-5 remove variable (b):

- (b) daytime and night.

Schedule 5, Appendix 5, Unit 35 Item 1, remove variable (b) and (c):

- (b) undulating terrain;
- (c) daytime and at night.

Schedule 5, Appendix 5, Unit 35, Item 2 remove variable (b), Item 3 remove variable (b):

- (b) daytime and at night.

Schedule 5, Appendix 5, Unit 36 Item 1, remove variable (b).

- (b) undulating terrain;

3.11.17 Remove variable 'daytime and night'

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 3, Unit 25
- Schedule 5, Appendix 4, Unit 30
- Schedule 5, Appendix 5, Unit 34
- Schedule 5, Appendix 5, Unit 38
- Schedule 5, Appendix 5, Unit 36

Background / Issue

Night-time operations are not permitted without an authorisation.

Subsection 2.06 (7) of the MOS states:

- (7) For an item mentioned in a Table of an Appendix of Schedule 5 (the *practical competency units*), the training and assessment of the subject matter mentioned in column 2 of the item must be within the tolerances mentioned in column 3 of the item, and across the range of variables mentioned in column 4 of the item.

Subsection 2.18 (3) of the MOS states:

- (3) To be assessed as competent, the applicant must:
- (a) demonstrate to a RePL training instructor all of the behaviours mentioned in each item of the relevant practical competency unit; and
 - (b) satisfy the RePL training instructor that each of the behaviours referred to in paragraph (a) has been demonstrated within the relevant tolerances, and across the range of variables, (if any), mentioned for the item; and
 - (c) having satisfied the requirements of paragraphs (a) and (b), pass a RePL training course flight test in the relevant RPA, conducted in accordance with the RePL training organisation's documented practices and procedures by an examiner.

Some of the variables listed in these and other units are not achievable and should be removed. As an example, night-time flying is not permitted for someone who doesn't hold an RePL.

Key objectives

CASA **proposes** the following amendments:

Schedule 5, Appendix 3, Unit 25 - in Item 2 Launch and hover, - remove variable (b):

- (b) daytime and night;

Schedule 5, Appendix 4, Unit 30 - Item 1: remove variables (b) and (c):

- (b) daytime and night;
- (c) daytime and night
for landing
manoeuvres.

Schedule 5, Appendix 5, Unit 34 - Item 2, remove variable (b):

- (b) daytime and night;

Schedule 5, Appendix 5, Unit 38 - Item 4 Other abnormal situations - remove variable (b).

- (b) by day and night;

Schedule 5, Appendix 5, Unit 36 - Item 1 remove variable (d):

- (d) daytime and night.

Schedule 5, Appendix 5, Unit 36, Items 2-5 remove variable (b) in each.

(b) daytime and night.

3.11.18 Ground operations - only applicable to certain RPA

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 2, Unit 20

Background / Issue

Item 1: Ground operations – taxiing

1	<i>Ground operations taxiing</i> When taxiing on the ground or water:
---	---

This section is only applicable to RPAS that can taxi. It would be appropriate to include '(if applicable)' in the title.

Item 2: Ground operations – hand launch

2	<i>Ground operations — launch</i> For hand launching of the RPA:
---	--

This section is only applicable to RPAS that can be hand launched. It would be appropriate to include '(if applicable)' in the title.

Item 3: Launch actions

3	<i>Launch actions</i> If performing the launch of an RPA:
---	---

Due to the changes CASA **proposes** to make to include 'if applicable' for hand launch in Item 2, this item must be completed (it currently states 'If performing the launch of an RPA...').

Key objectives

CASA proposes to:

- Amend Item 1 title to: 'Ground operations – taxiing (if applicable)'
- Amend Item 2 title to: 'Ground operations – hand launch (if applicable)'
- Amend Item 3 title and first line to: 'Launch actions', '*When* performing the launch of the RPA:'

3.11.19 Amend prescribed distances to 'an appropriate' distance

Reference(s)

- Part 101 MOS Schedule 5 (various)

Background / Issue

Where a distance is prescribed in the schedule items, training with some RPA over these distances is inappropriate.

It is proposed to change the requirements to 'an appropriate' distance or some other mechanism relating to the manoeuvre size for the distance, and to include intent to operate at distance without being specific.

Key objectives

CASA will consider whether the MOS should specify the size of a circuit or distance at which the manoeuvre should be conducted.

Unit 22-RA3 Item 1 (a) of the MOS

Recover RPA

- (a) perform a rectangular circuit, minimum width 100 m, minimum length 200 m, followed by a straight-line approach to a nominated point and landing;

CASA proposes:

perform a rectangular circuit, of an appropriate length and width for the remote pilot to demonstrate positive control at a distance beyond which the orientation can be easily determined with unassisted vision, followed by a straight-line approach to a nominated point and landing

Unit 23-RA4 Item 4 (a) of the MOS

Control at a distance

- (a) demonstrate accurate control and navigation at a distance of at least 200 m;

CASA proposes:

At a distance beyond which the orientation can be easily determined with unassisted vision, demonstrate accurate control and navigation.

Unit 23-RA4 Item 4 (b) of the MOS

- (b) perform a horizontal rectangular pattern at a distance of 200 m;

CASA proposes:

At a distance beyond which the orientation can be easily determined with unassisted vision, perform a horizontal rectangular pattern.

Unit 25-RM1 Item 3 (e) of the MOS

- (e) perform a rectangular circuit, minimum width 100 m, minimum length 200 m, of the RPA;

CASA proposes:

perform a rectangular circuit and landing, of an appropriate length and width for the remote pilot to demonstrate positive control at a distance beyond which the orientation can be easily determined with unassisted vision. The maneuverer must include a 45-degree climb and descent on the take-off and final legs of the circuit.

Unit 30-RH2 Item 1 (g) of the MOS

- (g) perform a rectangular circuit, minimum width 100 m; minimum length 200 m, of the RPA.

CASA proposes:

perform a rectangular circuit and landing, of an appropriate length and width for the remote pilot to demonstrate positive control at a distance beyond which the orientation can be easily determined with unassisted vision. The maneuverer must include a 45-degree climb and descent on the take-off and final legs of the circuit.

Unit 37-RP4 Item 4 (a) of the MOS

Control at a distance

- (a) demonstrate accurate control and navigation at a distance of at least 200 m;

CASA proposes:

From a distance beyond which the orientation can be easily determined with unassisted vision, demonstrate accurate control and navigation.

Unit 37-RP4 Item 4 (b) of the MOS

- (b) perform a horizontal rectangular pattern at a distance of 200 m;

CASA proposes:

At a distance beyond which the orientation can be easily determined with unassisted vision, perform a horizontal rectangular pattern.

Alternative wording that may be included, words to the effect:

the RPA should be flown at a reasonable distance which demonstrates the student can maintain positive control and orientation of the RPA and ensure that the requirements for maintaining the visual line of sight can be met.

3.11.20 A stall may only be applicable to some aircraft

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 2, Unit 23
- Schedule 5, Appendix 5, Unit 37

Background / Issue

For these items of the MOS, a stall may only be applicable to some aircraft as some aeroplanes cannot be forced to stall.

Key objectives

Include '(if applicable/possible)' at the end of the title in the following items:

Schedule 5, Appendix 2, Unit 23: Item 1 - *Enter and recover from stall*

Schedule 5, Appendix 5, Unit 37: Item 1 - *Enter and recover from stall in other than vertical flight*

3.11.21 Powered-lift category; 'if applicable' where required

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 5, Unit 34

Background / Issue

Many powered-lift RPAS are designed to launch in the hover flight mode and transition to an aeroplane flight mode automatically or within a short time to reduce motor overheating or maintain battery capacity. These RPAS will not be able to conduct manoeuvres in the hover flight mode.

Key objectives

CASA **proposes** to add 'if applicable' where required.

Amend Item 2 (Launch and hover), Tolerance (b):

- (b) the RPA must remain
over the selected
take-off position for at
least 10 seconds, with
no drift;

to:

the RPA must remain over the selected take-off position with no drift;

3.11.22 Amend term 'attitude mode' to general term, 'without GPS hold'

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 3, Unit 27

Background / Issue

CASA **proposes** to change the term '*attitude mode*' to a more general term '*without GPS hold*'. This will align this language to that used in Schedule 6 Appendix 2 Flight test Item 7, section 3 of the MOS.

Key objectives

Amend Item 1 (e):

- (e) perform an 8-point pirouette pausing at each point in “attitude mode”;

to read:

perform an 8-point pirouette pausing at each point without GPS hold.

Amend Item 1 (f):

- (f) perform a 360-degree level turn in “attitude mode”.

to read:

perform a 360-degree level turn without GPS hold.

3.11.23 Remove Tethered operation from practical competency units - place in Schedule 4 Unit 6 RKOP – operations and procedures

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 3, Unit 27

Background / Issue

If conducting tethered operations, the training organisation must have a tethered system, not a home-built RPA with a tether attached. The training organisation must also have tethered operations procedures (documented practices and procedures), reviewed and approved by CASA.

A standardised tethering system is not yet developed. Almost every single drone used for RePL training should not be used for tethered operations. Most manufacturer’s instructions explicitly advise **NOT** to attach anything to the RPA.

Theory and concepts in tethering operations are more important than the practical in this instance. CASA is proposing 'Tethered operation' as a theory item in Schedule 4 Unit 6 RKOP - operations and procedures.

Key objectives

CASA **proposes** to remove Item 2 Tethered operation from the practical competency units and place it in a theory item in Schedule 4 Unit 6 RKOP – operations and procedures, i.e., item 10: Priority B.

2	<i>Tethered operation</i> Perform a simulated inspection or photography operation with the RPA tethered to the ground.	[No tolerances]	[Variables at instructor's discretion]
---	--	-----------------	--

Amend: *Tethered Operations (title)*

To:

Operational considerations for when the RPA is tethered to the ground.

3.11.24 Remove requirement for a training organisation to conduct training with various sized RPA

Reference(s)

- Part 101 MOS
- Schedule 5, Appendix 4, Unit 32, Item 1
- Schedule 5, Appendix 5, Unit 37, Item 4

Background / Issue

CASA is satisfied that a training organisation can conduct training with a single sized RPA for their course delivery. The cost impost in requiring various sized RPA may be prohibitive to some organisations.

Key objectives

CASA **proposes** to remove Item 1 variable (b) 'various sizes of the RPA' (from Schedule 5, Appendix 4, Unit 32 of the MOS), and remove Item 4 variable (b) 'various sizes of the RPA' (from Schedule 5, Appendix 5, Unit 37 of the MOS) with any other occurrences of this term.

3.11.25 Clarify referencing

Reference(s)

- Part 101 MOS
- Schedule 6, Appendixes 1-4

Background / Issue

The referencing numbers within the tables of the Schedule 6 Appendix 1 - 4 of the MOS are not consistent.

Some sections in the 'Item/manoeuvre' column do not have a correlating alphabetical reference which makes it difficult for training organisations and CASA to map and review content in submissions.

For example, in Schedule 6, Appendix 1, '3. Practical flight standards', Item 1, in the 'Item/manoeuvre' column, the requirement to complete a JSA should be labelled as (aa). Leaving (a) and (b) for this item will ensure that this amendment does not have any impact on referencing in existing and current operator manuals.

The items within each of the item/manoeuvre columns throughout need to be amended so that each requirement can be easily referenced.

Key objectives

Part 101 MOS

Schedule 6, Appendixes 1 -4

3. Practical flight standards (table)

Item 1 – Item/ manoeuvre column and Accuracy/ tolerance column.

Ensure these columns are all appropriately referenced.

3.12 Machinery amendments

3.12.1 Rectify formatting issue

Reference(s)

- Part 101 MOS
- Schedule 6, Appendixes 1-4

Background / Issue

The table is missing some borders when displayed online.

Key objectives

Add borders.

3.12.2 Amend incorrect reference in subsection 9.01 (1) from r 101.247 (1) to r 101.066

Reference(s)

- Part 101 MOS Subsections
- 9.01 (1)

Background / Issue

Subregulation 101.247 (1) of CASR is incorrectly referenced as regulation 101.247 of CASR has been repealed. The correct reference for the MOS provisions relating to operations in prescribed areas, is regulation 101.066 of CASR.

Key objectives

CASA **proposes** to amend subsection 9.01 (1) of the MOS by replacing the reference to subregulation 101.247 (1) of CASR to reflect the correct regulation 101.066 of CASR.

9.01 Prescribed areas

- (1) Without affecting Division 9.2, for subregulation 101.247 (1) of CASR, this Division prescribes the requirements relating to the operation of an RPA in a prescribed area.

3.12.3 Remove redundant, and incorrect, words relating to micro RPA in regulation 101.020

Reference(s)

- Regulation 101.020 CASR

Background / Issue

The wording of this regulation implies that Part 101 of CASR does not apply to micro RPA, but it does.

101.020 Exemption from certain provisions of CAR

Parts 4, 4A, 4B, 4C, 5, 7, 9, 10, 11, 12, 13 and 14 of CAR do not apply to an aircraft to which this Part applies, nor to a micro RPA.

Key objectives

CASA **proposes** to remove the words '*nor to a micro RPA*'.

3.12.4 Amend note in regulation 101.280 of CASR to reference new regulations

Reference(s)

- Regulation 101.280 of CASR

Background / Issue

Note 1 in subregulation 101.280 (2) of CASR, was incorrectly amended by *Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft—Registration and Accreditation) Regulations 2019*.

Note 1: For *populous area*, see regulation 101.025. For *RPA*, see regulation 101.022.

The Note 1 should reference regulation 101.021, not regulation 101.022 of CASR.

Key objectives

Replace the reference to regulation 101.022 with regulation 101.021 of CASR.

3.12.5 Replace 'Division' with 'Chapter' and amend incorrect reference in section 4.02 of the MOS

Reference(s)

- Part 101 MOS Sections
 - 4.01
 - 4.02

Background / Issue

Chapter 4 of the MOS does not contain any Division titles but references '*this Division*' in section 4.01 of the MOS. This can be misleading to the reader.

4.01 Purpose

For subsection 101.072 (1) of CASR, this Division prescribes the requirements relating to the operation in controlled airspace, below 400 ft, of an unmanned aircraft.

The first three Definitions in section 4.02 of the MOS reference section 4.06 which does not exist.

4.02 Definitions

In this Division:

area that is crosshatched has the same meaning as in section 4.06.

area that is shaded black has the same meaning as in section 4.06.

area that is shaded grey has the same meaning as in section 4.06.

These definitions should refer to section 4.05 of the MOS.

Key objectives

CASA **proposes** to replace the word '*Division*' in section 4.01 of the MOS with '*Chapter*'.

Amend the initial three definitions in section 4.02 Definitions by replacing '*section 4.06*' with '*section 4.05*'.

3.13 Rockets/ Balloons/ Fireworks / Tethered operations

3.13.1 Remove visual line of sight requirement for unmanned free balloons (will remove need for exemption)

Reference(s)

- Paragraph 101.073 (1) (a) of CASR

Background / Issue

Paragraph 101.073 (1) (a) of CASR was inserted in 2016, requiring CASA to issue exemptions to enable unmanned free balloon releases. CASA **proposes** to amend the regulation to exclude an unmanned free balloon operator from the requirement for VLOS operations. This change would reduce compliance costs to industry and remove the requirement for CASA to issue an exemption that provides no additional safety benefit. Previously CASA managed this via legislative instrument (CASA EX85/20, now expired), and currently includes this exemption within area approval instruments.

Key objectives

CASA **proposes** to amend paragraph 101.073 (1) (a) of CASR:

- (a) the person operates an unmanned aircraft; and

to:

After “unmanned aircraft”, insert “(other than an unmanned free balloon)”.

3.13.2 Increase notice period for launch approval of unmanned balloons to provide CASA with enough review time

Reference(s)

- Subregulation 101.160 (1) of CASR
- Subregulation 101.165 (1) of CASR

Background / Issue

For applications for unmanned free balloons to operate outside approved areas, the notice period is currently one day (for light balloons) and two days (for medium and heavy balloons). Due to these regulatory notification timeframes, CASA does not have sufficient time to conduct an adequate risk assessment. One or two working days is insufficient for CASA to carry out its approval function with an appropriate level of scrutiny and causes difficulties when appropriately qualified staff are unavailable, particularly during holiday periods.

CASA **proposes** to increase the notice period for the release of light balloons from 1 day to 5 days, and for release of medium and heavy balloons from 2 days to 10 days, to provide CASA sufficient time to review and assess applications.

Key objectives

CASA **proposes** the following amendments:

Subregulation 101.160 (1) of CASR:

- (1) A person may release a light balloon outside an approved area only if the person gives to CASA the information required by table 101.160 at least 1 working day before the proposed release.

Substitute “1 working day”, with “5 working days”.

Subregulation 101.165 (1) of CASR:

- (1) Subject to subregulation (3), a person may release a medium or heavy balloon outside an approved area only if the person gives to CASA the information required by table 101.165 at least 2 working days before the proposed release.

Substitute “2 working days”, with “10 working days”.

3.13.3 Increase notice period for launch approval rockets

Reference(s)

Subregulation 101.450 (2) of CASR

Background / Issue

For high-powered rockets, one working days’ notice is required for approvals, which is insufficient to appropriately assess all third-party risks and for an appropriate risk assessment to be completed. A NOTAM is also often required, and the short notification period does not allow enough time for the issue and distribution of a NOTAM prior to launch.

CASA **proposes** to increase the notice period for the launch approval of high-power rockets to provide CASA with enough review time of applications.

Key objectives

CASA **proposes** to amend subregulation 101.450 (2) of CASR:

- (2) A person may launch a rocket that is not a model rocket, or permit such a rocket to be launched, only if the person gives the details listed in the table following subregulation 101.445(2) to CASA at least 1 working day before the intended time of the launch.

by substituting “1 working day”, with “10 working days”.

3.13.4 Amend notification timeframes for fireworks displays and tethered operations

Reference(s)

- Paragraph 101.110 (1) (c) of CASR
- Subregulation 101.500 (1) of CASR

Background / Issue

CASA **proposes** to increase the notice period for fireworks operations from 2 days to 10 days to provide CASA sufficient time to review and assess applications. For firework displays, each application can take five hours to process. CASA and/or Airservices Australia may need to impose conditions on the operation of a fireworks display. If a proposed fireworks operation has

not gone through an appropriate assessment due to the short, regulated timeframes, this poses a risk to aviation safety. Given that most public fireworks displays are planned well in advance and state and territory government bodies require at least 2 weeks' notice (and in some cases 6 weeks notification of a display), extending the CASA notification requirement to ten days would impose negligible additional burdens on operators.

Similarly, CASA is proposing for the notice period for proposed operation of tethered balloons to be changed from '1 working day' to '10 working days'.

Key objectives

CASA **proposes** to amend subregulation 101.500 (1) of CASR:

- (1) A person may operate a firework display at a place within 3 nautical miles of an aerodrome only if the person has given at least 2 working days' notice to CASA.

By substituting '2 working days', with '10 working days'.

CASA **proposes** to amend paragraph 101.110 (1) (c) of CASR:

- (c) the person gives to CASA the information required by table 101.110 about the proposed operation at least 1 working day before it is due to start.

by substituting '1 working day', with '10 working days'.

4 Policy assessment

4.1 Impacts on industry

Overall, the proposed amendment package seeks to facilitate better efficiency for CASA and industry, effect better processes, reduce costs, clarify requirements, and provide a more consistent and flexible framework for the regulation and operation of aircraft and rockets under Part 101 of CASR and the MOS.

Feedback from industry has been considered as a part of the PIR development process. Feedback has included a requirement for consistent, timely and efficient approval processes, less restriction for the operation of micro RPA and enclosed operations, and to clarify definitions and conflicting provisions between the CASR and the MOS.

Changes to certain processes and clarification of legislative requirements are anticipated to be positively received. The PIR will also incorporate various CASA exemptions and instruments into the regulations, providing a more efficient and streamlined regulatory suite.

While the automated airspace authorisation trial at three controlled aerodromes is an example of how CASA is using technology to alleviate burden on industry, CASA is cognisant that more must be done both in the digital enablement and legislation design spaces.

4.2 Implementation and transition

Some amendments may need to be operational soon after making to ensure continuity, and the implementation of other provisions may be delayed. This will depend on consultation feedback, and the impost or lead time required to implement the change.

Other changes may be subject to a commencement and implementation process over a period of approximately 12-18 months where necessary or desirable, and where it is reasonable to provide a transition period.

Suitable transition provisions will be considered and discussed with OPC once an advanced draft of the amendments is available. For example, some savings provisions may be needed for changes to remote pilot licence eligibility options to ensure current holders are not affected.

CASA will also amend internal practices and procedures, guidance material (Advisory Circulars) and public information products to align with the proposed changes to legislation. CASA will use guidance and information in preference to creating regulations and standards that are too complex or prescriptive.

CASA may also need to update specialist guidance, such as the sample operations manual and associated inspector and administration process documents. It is also important that the new rules are suitably informed by other areas of CASA and, in some cases, coordinated with Airservices Australia.

5 Closing date for comment

CASA will consider all comments received as part of this consultation process and will incorporate changes to the regulation as appropriate. Comments on the draft new policy should be submitted through the online response form by close of business 7 February 2022.