EXPLANATORY STATEMENT

Issued by the authority of the Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development

Civil Aviation Act 1988

Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft—Registration and Accreditation) Regulations 2019

The *Civil Aviation Act 1988* (the Act) establishes the regulatory framework for maintaining, enhancing and promoting the safety of civil aviation, with particular emphasis on preventing aviation accidents and incidents.

Subsection 98(1) of the Act provides, in part, that the Governor-General may make regulations, not inconsistent with the Act, prescribing matters required or permitted by the Act to be prescribed, or necessary or convenient to be prescribed for carrying out or giving effect to the Act.

Subsection 9(1) of the Act specifies, in part, that the Civil Aviation Safety Authority (CASA) has the function of conducting the safety regulation of civil air operations in Australian territory by means that include developing and promulgating appropriate, clear and concise aviation safety standards and issuing certificates, licences, registrations and permits.

The *Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft – Registration and Accreditation) Regulations 2019* (the Regulations) amends Part 11, Part 47 and Part 101 of the *Civil Aviation Safety Regulations 1998* (CASR). The Regulations:

- require persons intending to operate any remotely piloted aircraft (RPA) or model aircraft over 250 g, to register the RPA or model aircraft for different types of operations and require persons intending to operate RPA or model aircraft to complete a short online course and pass a corresponding examination to gain accreditation;
- introduce a minimum age of 16 years for a person to be accredited to operate an RPA or model aircraft, and require a remote pilot under the age of 16 years to be supervised by an accredited person 18 years of age or over;
- introduce a provision for a future Part 47 Manual of Standards;
- introduce new definitions into Part 1 of the CASR Dictionary regarding '*registration* holder' and amend existing definitions of '*micro* RPA', '*model* aircraft', 'RPA' and '*very small* RPA'; and
- introduce matters relating to applications for certain authorisations on behalf of an applicant by an agent.

The growing use of RPA in Australia directly correlates with a significant increase in reported RPA safety incidents to the Australian Transport Safety Bureau since 2012. The most concerning occurrences are interference with other persons and loss of (RPA) control, indicating a risk for the safety of conventionally piloted aircraft and for people on the ground.

The Regulations acknowledge that current remote pilot licence holders already have the required knowledge to safely operate an RPA or model aircraft and therefore are not required to meet the new accreditation requirements.

Importantly, the Regulations make provision for different accreditation schemes with varied syllabus requirements for 'excluded RPA' remote pilots (as defined in the Regulations this includes commercial very small RPA use in public, or commercial small/medium RPA use over own land) compared to model aircraft pilots. The accreditation and registration requirements would not apply to model aircraft and model aircraft pilots operating for recreation wholly within a CASA-approved model flying field, indoors, or a model aircraft that is less than 250 g in weight.

Consultation

CASA consulted on the policies that underpin the Regulations by the publication of a *Drone discussion paper - Review of RPAS operations (DP 1708OS)* - in August 2017, and received 910 responses. The outcomes of this consultation were consolidated into a report published by CASA in May 2018 titled '*A Review of aviation safety regulation of* RPA' In the report CASA stated that:

- It supported mandatory RPA registration in Australia for RPAs weighing more than 250 g.
- A simple online course on safe RPA operations should be developed for recreational and excluded category RPA operators, followed by a quiz that has a minimum pass mark.

On 31 July 2018, the Senate Standing Committee on Rural and Regional Affairs and Transport tabled its report - *Current and future regulatory requirements that impact on the safe use of remotely piloted aircraft systems, unmanned aerial systems and associated systems* - after receiving 94 public submissions. The report outlined support for a mandatory RPA registration regime, to which the Government Response tabled on 27 November 2018 agreed.

CASA publicly consulted on the Regulations from 25 January to 22 February 2019, receiving 4,236 responses. In March 2019, the Regulations were reviewed by CASA's Aviation Safety Advisory Panel (ASAP) and its subsidiary Unmanned Aircraft Technical Working Group (TWG) which included representation from two leading RPAS industry bodies. Whilst the TWG was unable to support the Regulations due to the anticipated impacts of future registration costs, the ASAP indicated general support for the Regulations. CASA is now seeking a levy for RPA and model aircraft registration and associated activities such as surveillance and this will be subject to a separate consultation, legislation and Federal Executive Council consideration process.

Regulation Impact Statement

A Regulation Impact Statement (RIS) prepared by CASA was assessed by the Office of Best Practice Regulation as compliant with the Best Practice Regulation requirements with a level of analysis commensurate with the likely impacts (OBPR id:24246).

A copy of the Statement is at Attachment A.

Incorporation by Reference

No documents have been incorporated by reference.

Criminal law issues

The Regulations provide for 20 offences of strict liability, which are outlined in the Statement of Compatibility with Human Rights. Consistent with the principles set out in the Attorney-General's *A Guide to Framing Commonwealth Offices, Infringement Notices and Enforcement Powers (September 2011)* (the AGD Guide) and the Sixth Report of 2002 of the Senate Standing Committee for the Scrutiny of Bills, *Application of Absolute and Strict Liability Offences in Commonwealth Legislation (26 June 2002)*, the strict liability offences are considered reasonable, necessary and proportionate to the objective of ensuring aviation safety. In this regard, the offences are regulatory in nature, in other words their aim is to insist on reasonable compliance with regulated safety standards by those conducting activities which are otherwise intrinsically or potentially unsafe unless such high standards of compliance are met. Not having to prove fault in the relevant circumstances aims to provide a strong deterrent. To this extent, and in this context, they are consistent with other safety-focussed regulatory regimes and do not unreasonably or impermissibly limit the presumption of innocence. The offences are designed to achieve the legitimate objective of ensuring the integrity of the overall aviation safety regulatory scheme by promoting compliance and deterring non-compliance.

The rationale is that owners and operators of RPA and model aircraft have general and particular aviation safety obligations and should be expected to be aware of those obligations. Since registration of relevant RPA and model aircraft, and remote pilot accreditation, contribute to the overall safety of the airspace, these are important obligations. In the context of the general operating rules for remote pilots and operators, a defendant to a prosecution can reasonably be expected to know what the requirements of the law are in this regard, and the mental, or fault, element can justifiably be excluded.

For strict liability offences in the Regulations, the prosecution will have to prove only the conduct of the accused. However, where the accused produces evidence of an honest and reasonable, but mistaken, belief in the existence of certain facts which, if true, would have made that conduct innocent, it will be incumbent on the prosecution to establish, beyond reasonable doubt, that there was not an honest and reasonable mistake of fact.

The Regulations also contain three provisions that reverse the evidential burden of proof in relation to prescribed defences to strict liability offences ("offence-specific defences"). Consistent with section 4.3.1 of the AGD Guide, the provisions have been included in the Regulations because they relate to matters that are peculiarly within the knowledge of a defendant and/or would be significantly more difficult and more costly for the prosecution to disprove than for the defendant to establish the matter.

Details and justification of the offence-specific defences are provided in the Statement of Compatibility with Human Rights.

In practice, any enforcement action contemplated by CASA is subject to the provisions of CASA's "just culture" policy as set out in CASA's Regulatory Philosophy.

Statement of Compatibility with Human Rights

A Statement of Compatibility with Human Rights is at Attachment B.

Commencement and making

The Regulations are a legislative instrument for the purposes of the Legislation Act 2003.

Details of the Regulations are set out at Attachment C.

The Act specifies no conditions that need to be satisfied before the power to make the Regulations may be exercised.

Sections 1 to 4 of the Regulations would commence on the day after registration, with Schedules 1 and 2 commencing the later of 4 November 2019, or a day determined by the Minister up to 4 May 2020.

Transitional provisions would provide incentive for early registration of RPA or model aircraft.

Authority: Subsection 98(1) of the

Civil Aviation Act 1988

ATTACHMENT A

REGULATION IMPACT STATEMENT: PART 101 – *Civil Aviation Safety Regulations 1998*

ATTACHMENT B

STATEMENT OF COMPATIBILITY WITH HUMAN RIGHTS

ATTACHMENT C

Details of the *Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft – Registration and Accreditation) Regulations 2019*

Section 1 - Name of Regulation

Section 1 provides that the title of the Amendment Regulation is the *Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft – Registration and Accreditation) Regulations 2019.*

Section 2 - Commencement

Section 2 provides for sections 1 to 4 of the *Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft—Registration and Accreditation) Regulations 2019* to commence on the day after registration, with Schedules 1 and 2 commencing the later of 4 November 2019, or a day determined by the Minister up to 4 May 2020.

Section 3 - Authority

Section 3 provides that the *Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft - Registration and Accreditation) Regulations 2019* is made under the *Civil Aviation Act 1988.*

Section 4 - Schedules

Section 4 provides that each instrument that is specified in a Schedule to this instrument is amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to this instrument has effect according to its terms.

ATTACHMENT A

Regulation Impact Statement

Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft – Registration and Accreditation) Regulations 2019

Executive Summary

The operation of Remotely Piloted Aircraft (RPA), also commonly known as drones, is a relatively new aviation sector that is experiencing rapid growth. Under current legislation in Australia, RPA, including model aircraft, are considered aircraft and are subject to certain operating limitations in the interests of safety. The number of RPA being operated in Australia is unknown as no registration scheme exists, there are no point of sale obligations on retailers or RPA manufacturers to report sales, and no data is readily discernible from overseas importation records. Some estimates suggest that over one million RPA are operating in Australia.

While legislation exists for the operation of RPA in Australia, the increase in reported sightings of RPA being operated near manned aircraft in flight, and the increasing volume of enforcement action presently undertaken by the Civil Aviation Safety Authority (CASA) against unlawful RPA operations, indicates a trend that some RPA operators are either unaware of legislation about the use of RPA, or are unwilling to operate lawfully. RPA operated without regard to safety and within existing legislation presents an unmitigated risk to aviation safety, including the risk of a catastrophic collision with a passenger aircraft. In addition to the number of RPA, these risks also increase with the rapid development of RPA technology that enables RPA to operate faster, higher and for longer periods before needing to recharge.

While ambiguity exists on the actual number of RPA in Australia, the analysis in this document is based on a figure of 150,000 RPA and model aircraft that weigh more than 250 g and are operated recreationally; a figure derived from informal advice provided by RPA manufacturers.

The analysis is focused on the impact of the proposals upon individuals. Any upward adjustment to the number of RPA in Australia figure would increase the total community cost proportionately, particularly for the recreational sector, up to the speculated figure of over one million mentioned above. Similarly, the risks considered in this document increase as the numbers of RPA increases.

While there have been no deaths or significant injuries attributed to the use of RPA, CASA has taken enforcement action against individuals who have injured people through the unlawful and unsafe use of RPA near people.

With the growing use of RPA, the number of reported safety incidents has increased within Australia since 2012. In particular, there has been a notable increase in the reporting of incidents involving RPA being sighted by pilots in close proximity to their passenger aircraft.

Passive RPA surveillance technology is presently in use by several Australian Government agencies, including CASA. The technology provides the means to electronically identify an airborne RPA's serial number, its location, and the location of the RPA operator on the

ground. While the technology is currently in use, without a means of linking an RPA serial number to a registered operator, identifying the RPA operator remains challenging.

The incident at Gatwick Airport in December 2018, where an RPA was reported operating near the runway environment, resulted in major disruptions over several days, with the airport being closed multiple times to manage the safety risk of RPA collision with passenger aircraft. Reports estimate around 1,000 flights were diverted or cancelled, affecting over 140,000 passengers during the busy Christmas period, and significant losses of revenue to airline and airport operators. In Australia, unlawful RPA use has caused the suspension of aerial firefighting by manned aircraft, placing people and property in the path of the fire at undue risk. Unlawful RPA use is also considered a concern from a national security perspective by the Australian Government, including for surveillance, transport of contraband, and domestic terrorism.

CASA's current research on RPA operators indicates many recreational RPA operators have a poor understanding of the legislation, safety risks and dangers associated with RPA operations. Baseline training to educate RPA operators through an online accreditation scheme, particularly recreational RPA operators, improves the understanding of RPA rules that are designed to protect the safety of other airspace users including passenger aircraft, as well as people and property on the ground. Awareness campaigns alone without a legislative requirement to complete a simple online course has not proved effective to mitigate against the growing risks posed by unsafe and unlawful RPA operation in Australia.

Despite the growth of RPA in Australia, one option is to continue only education campaigns and not to require mandatory training for recreational and simple commercial operators or RPA registration requirements. Simple commercial RPA operations may be conducted without the need to obtain an RPA Operator's Certificate and Remote Pilot Licence, and is known as *Excluded RPA* under subregulation 101.237 of the *Civil Aviation Safety Regulations 1998*, however the rules for these operations, known as *standard operating conditions* restricts the sorts of RPA operations allowed and requires a notification to be made to CASA. Currently, no training requirements are required for *excluded RPA* operations.

Due to the recent, and continuing, rapid increase in the number of RPA in operation, and the capability of RPA to operate increasingly faster, higher and longer, the status quo option is not considered a reasonable or appropriate regulatory response to the growing safety risks, particularly risks to passenger aircraft operating to and from aerodromes.

Another option would be to expand the application of existing regulations for Remote Pilot Licensing and aircraft registration, which currently apply to larger RPA over 150 kg, to smaller RPA. However, this would require significant investment in time and resources by RPA operators, particularly recreational RPA operators and model aircraft operators, and is considered too onerous.

A preferred and reasonable regulatory response is to implement a registration and operator accreditation scheme (Option 2). This option would introduce proportionate requirements for operators to acquire knowledge to operate safely and lawfully and introduce a registration requirement that imposes a relatively low cost on operators but that provides the Government with an effective means of linking operators to RPA and model aircraft that are operated unsafely or unlawfully. Such measures substantially mitigate risks to other airspace users and people and property on the ground.

A requirement to re-accredit RPA and model aircraft operators every 3 years, unless they hold a Remote Pilot Licence, takes into account the rapidly evolving RPA and model aircraft technology and regulatory changes that CASA will likely be required to make on a regular basis. Re-accreditation every 3 years will ensure RPA and model aircraft operators have contemporary knowledge of the rules, and serves as a method for recurrent training that is an internationally recognised foundation to continued aviation safety.

This option also provides for CASA and law enforcement agencies to more easily identify RPA and model aircraft operators, and take appropriate actions where unlawful RPA model aircraft operations are detected, which in turn, reduces potential harm to the public.

While the responses to CASA's consultation for a registration and accreditation scheme indicated concerns around costs of registration, such views are not surprising given that the majority of respondents were existing operators not currently required to undertake any training or pay for registration. CASA subsequently amended parts of the scheme requirements based on the consultation feedback, including allowing exclusions to the requirements to register and complete accreditation for members of a model aircraft club operating at a CASA-approved model aircraft field, recognising that club requirements are considered adequate to mitigate relevant risks.

The final cost for registration is yet to be resolved by CASA, and will be subject to further public consultation in conjunction with a Cost Recovery Implementation Statement.

Background

Within Australia, CASA has the function of conducting the safety regulation of civil air operations which includes Remotely Piloted Aircraft (RPA) and model aircraft. The RPA is one part of the Remotely Piloted Aircraft System (RPAS). The *Civil Aviation Safety Regulations 1998* (CASR) currently defines RPAS as a set of configurable elements consisting of a remotely piloted aircraft, its associated remote pilot station (or stations), the required command and control links and any other system elements as may be required at any point during the operation of the aircraft. Many interchangeable terms are used to also describe RPA, including drone, unmanned aerial vehicle (UAV), and unmanned aircraft system (UAS). They range in size from miniaturised platforms no bigger than a match box, to complex, very high-altitude platforms that remain airborne for multiple days and cover vast distances. RPA platforms include aeroplanes, sailplanes, helicopters and multi-rotors including those used for racing and first-person-view (FPV) racing.

The RPAS industry is a relatively new aviation sector that is experiencing rapid growth. There is uncertainty over the numbers of RPA and model aircraft being operated in Australia, with some estimates, derived through basic internet surveys, indicating over one million RPA and model aircraft. Presently, there is no data from overseas imports, as RPA and model aircraft are not always separately classified in data. The analysis in this document is based on a figure of 150,000 RPA and model aircraft that weigh more than 250 g and are operated recreationally, which figure has been derived from informal advice provided by RPA and model aircraft manufacturers. CASA's best estimate is that the number of RPA and model aircraft is growing at approximately 15,000 annually.

Current regulations

The current regulations governing the use of RPA in Australia are contained in Part 101 of the *Civil Aviation Safety Regulations 1998*. The Part 101 regulations differentiate

requirements on whether the RPA is operated commercially or recreationally and the weight of the RPA, with the following weight categorisation (Table 1).

Table 1: Categorising RPA by size and weight

- *micro RPA*—an RPA with a gross weight of *100 g or less*
- *very small RPA*—an RPA with a gross weight *of more than 100 g but less than 2 kg*
- *small RPA*—an RPA with a gross weight of *at least 2 kg but less than 25 kg*
- *medium RPA*—an RPA with a gross weight of *at least 25 kg, but not more than 150 kg*
- *large RPA*—an RPA with a gross weight of *more than 150 kg*

The primary regulatory requirements are based around operator (pilot) training and organisational approval of the operator, with this approval based on the documented procedures of the operator to ensure the safe operation of the RPA. With certain exceptions all commercial RPA operators and private operators of medium and large RPA (above 25 kg) and certain small RPA must hold a Remote Pilot Licence (RePL) and an RPA Operator's Certificate (ReOC). In addition, RPA weighing more than 150 kg must be registered.

For small, very small and micro RPA these aircraft may be operated in simple commercial operations as e*xcluded RPA* under division 101.5.F of CASR, and do not require a RePL or ReOC. However, the excluded RPA operations are restricted and must be conducted in accordance with the *standard operating conditions (Table 2).*

There is no requirement for an RPA weighing 150 kg or less, operated either commercially or recreationally, to be registered.

Table 2: S*tandard operating conditions* for RPA

The standard operating conditions require that:

- the RPA is operated within the *visual line of sight* of the person operating it; and
- the RPA is operated at or below *400 feet above ground* level (AGL) by day; and
- the RPA is not operated:
  - *within 30 metres of a person* who is not directly associated with its operation;
  - in a *prohibited area* or in *specified restricted areas*;
  - over a *populous area*;
  - within *3 nautical miles of the movement area of a controlled aerodrome*;
  - over an area where a *fire, police or other public safety or emergency operation* is being conducted, without the approval of the person in charge of the operation;
- the person operating the RPA is *only operating that RPA*.

The remainder of this Regulation Impact Statement is structured as follows:

- a statement of the problem
- a statement of the objectives
- a statement of three options, including the status quo
- a statement of the cost and other regulatory impacts of the two options that deviate from the present regulatory response to the problem, including how the options pursue the stated objectives
- a statement of the outcome of consultation processes undertaken in relation to addressing the problem

- a statement of implementation and transition issues in relation to the preferred option
- a conclusion.

Problem

The primary problem is there is an increasing risk posed by the unlawful and unsafe operations of RPA and model aircraft to other airspace users, including passenger carrying aircraft, and people and property on the ground. The risk principally stems from certain RPA and model aircraft operators not knowing, or having insufficient knowledge of, safety regulations when operating RPA and model aircraft.

While CASA has extensive safety education and awareness campaigns, a free to download and use mobile application 'Can I Fly There?' that helps RPA and model aircraft operators know the rules and where they may operate lawfully, and plain language print and online material, it is not sufficiently effective to ensure that all RPA and model aircraft operators, particularly recreational RPA and model aircraft operators, understand the safety risks and rules for safe operation. Despite CASA's best efforts, these measures are no longer considered an appropriate response to the increasing risk.

In addition, a small number of RPA and model aircraft operators appear willing to deliberately contravene legal requirements for the operation of RPA and model aircraft, with some confidence that such operation cannot be attributed to them. Accordingly, a second but related problem is that, without registration of RPA or model aircraft, including a basic identification check and the provision of the RPA or model aircraft serial number, CASA and police agencies are unable to clearly and cost effectively identify the responsible operator. This is particularly concerning when the RPA or model aircraft is being operated unlawfully, or is involved in an accident, serious incident or offence.

As demonstrated through the incident at Gatwick Airport over several days in December 2018, unlawful use not only poses a safety risk, but can severely interrupt operations at a major airport, resulting in knock-on effects for aircraft diversions, cancellations, and disruption to industries that rely on air transport, including postal services. Apart from passenger disruptions, the unlawful use of an RPA as demonstrated at Gatwick results in significant financial impacts to the airline and airport operators, and ancillary suppliers.

Safety

Along with the many benefits the increasing use of RPA and model aircraft can bring, there are safety risks with the potential for RPA and model aircraft to:

- cause serious injury to people on the ground
- cause damage to property on the ground and/or to national infrastructure
- interfere with the safe and lawful operation of manned aircraft, such as at an airport
- compromise the safety of passengers and crew on aircraft through impact with a manned aircraft, resulting in catastrophic engine damage, penetration of the windscreen, penetration of wing and/or fuel tanks, and damage that disables aircraft control systems.

Collision between an RPA and manned aircraft has occurred overseas. In September 2017, an RPA collided with a Black Hawk military helicopter in the United States of America. The accident report found the RPA operator at fault. In Canada in October 2017, an RPA collided with the wing of a Beech King Air passenger aircraft on approach to the airport.

Limited data exists on likely damage to manned aircraft. Research by the University of Daytona Research Institute in 2018 showed that an RPA weighing less than 1 kg simulating an impact with the wing of a 4-seat light aircraft at 206.8 knots resulted in the RPA penetrating the leading edge of the wing (Image 1).

Image 1. Damage to the leading edge of a Mooney aircraft by a simulated 1 kg RPA impact. Source: University of Daytona Research Institute

The safety risk to persons on the ground is related to the size of the RPA or model aircraft. An RPA and model aircraft weighing less than 2 kg is unlikely to cause serious injury or death by directly contacting a person on the ground. However, this is not to say that the risk of injury or death is zero and it is possible to devise scenarios in which injury or death could result from the operation of these small RPA and model aircraft. For example, an RPA or model aircraft could seriously damage a person's eyesight.

The consequences of an RPA colliding with a person on the ground are highlighted by the ATSB, with one reported collision in 2014 (https://www.atsb.gov.au/publications/2017/ar-2017-016/):

> *a race participant received minor injuries while competing in a triathlon in Geraldton, WA, from collision with an RPAS that was filming the race. The collision occurred after the remote pilot lost control of the aircraft.*

In the range of 2 kg to 25 kg the risk of injury increases with the weight of the aircraft and these RPA and model aircraft have proportionately increasing risks of causing death or serious injury to persons on the ground. Increasingly large RPA also creates increasing potential to damage manned aircraft in a way that may compromise safety, particularly at certain altitudes

(https://www.easa.europa.eu/sites/default/files/dfu/TF%20Drone%20Collision_Report%20for%20Publication%20(005).pdf).

The potential risk of RPA and model aircraft to manned aircraft is highlighted by manned aircraft accident and incident data reported by the ATSB (https://www.atsb.gov.au/publications/2017/ar-2017-016/). Whilst CASA could not break down the occurrence data by size of RPA, the data does indicate that there is a risk to manned aircraft, as well as to unrelated people on the ground.

The number of RPA related occurrences reported to ATSB has increased considerably since 2012 (p.8 https://www.atsb.gov.au/publications/2017/ar-2017-016/). There were 632 occurrences reported to ATSB for the period 2012-2018. The occurrences were comprised of 140 accidents, 27 serious incidents (occurrences that whilst not accidents had a high probability of being an accident) and 465 incidents (occurrences which resulted in an unsafe operation with potential to result in an accident). 56 percent of the occurrences were classified as near encounter with RPAs and reported by manned aircraft operations.

Terrain collisions, aircraft control issues and technical failures (systems and powerplant/engine issues) were the other major categories contributing to 38 percent of the reported events. Figure 1 on the following page shows the distribution of the primary events by occurrence type.

The ATSB analysed the reasons for the RPA related occurrences and found that the major proportion were *individual action* findings (occurrences caused by an individual RPA operator) related to *aircraft operation action* (operation of the RPA), particularly in relation to inadequate monitoring and checking, aircraft (RPA) handling and pre-flight preparation (Figure 2 on the following page). Other factors included wind gusts and the lack of appropriate knowledge/skills to conduct the tasks.

Privacy and Security

Beyond the risks that irresponsible use of RPA and model aircraft can pose to the safety of other aircraft and to people and property on the ground—RPA and model aircraft can be used in ways that interfere with other people's legitimate interests and expectations.

Figure 1. RPA related occurrence by type (2012-2018) Source: ATSB

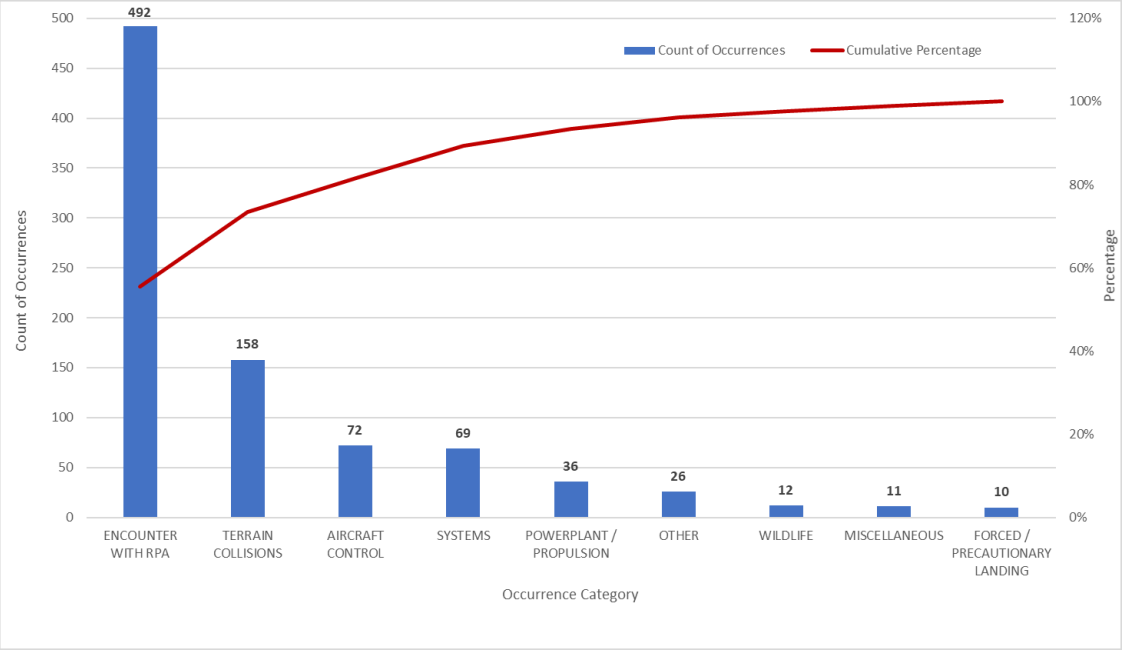
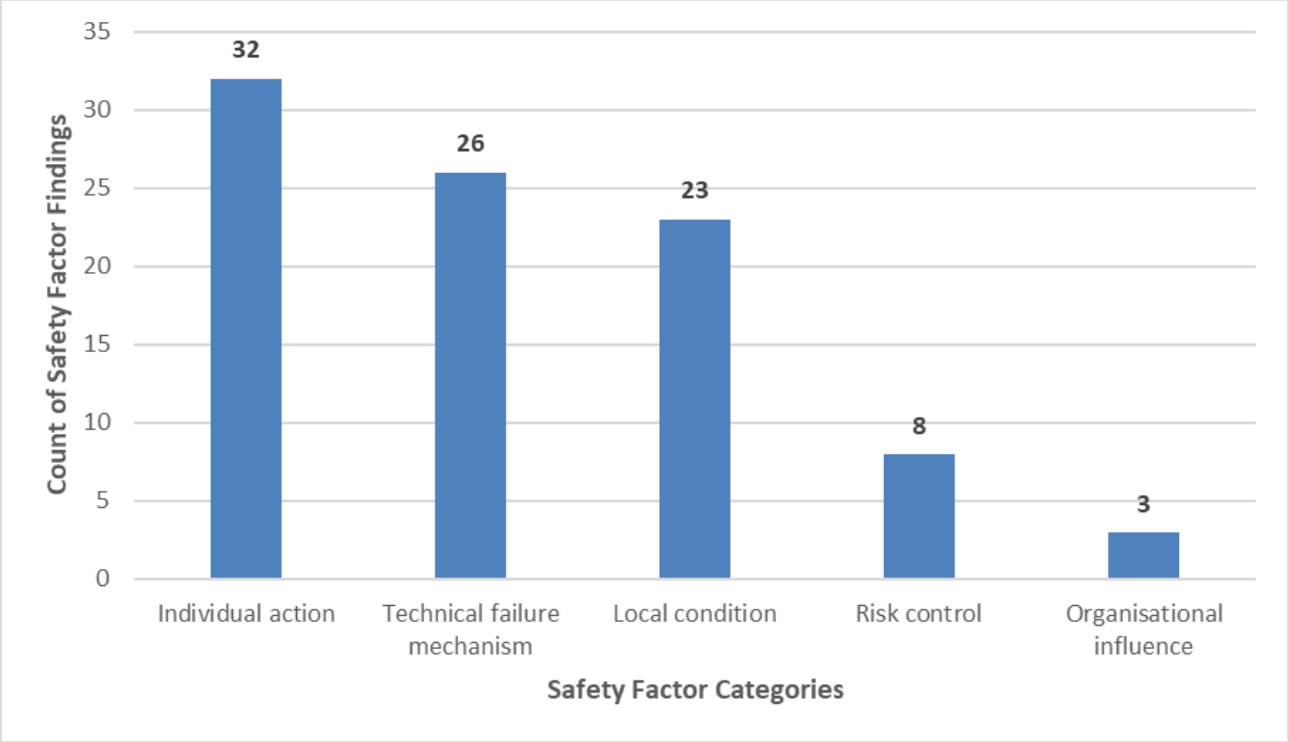


Figure 2: Safety Factor Findings



RPA have been linked to:

- the delivery of contraband to prisons and other controlled premises
- serious criminal activities
- interfering with fire-fighting operations
- encroaching unsafely (and unlawfully) on aerodrome take-off and departure paths and into controlled airspace.

Objective

In considering options to address the rapid uptake of RPAs and model aircraft, and the associated problems, CASA's objective is to implement an effective aviation safety regulatory framework to enable the safe and efficient integration of RPA and model aircraft into the Australian aviation system, and by cooperating with relevant police forces to minimise privacy and security issues. CASA's objectives sit within broader Australian Government policy objectives, including national security issues.

Options

Option 1: status quo

Option 1 would maintain the existing regulations that would impose no regulatory requirements for operator training in the excluded RPA category or for recreational operators. The safe operation of RPA within this excluded category would continue to depend on the operators of these aircraft choosing to inform themselves of the safe operation requirements for RPA and operate within the standard operating conditions. This would be assisted by CASA publishing relevant safety information on the CASA website, including an instructional video and supplying a one-page flyer within the box of RPAs sold within Australia. CASA would also undertake surveillance activity to enforce to the current requirements, including the standard operating conditions set out in Table 2.

The status quo would impose no training or knowledge testing for excluded RPA operators or for recreational operators, nor would it require RPA weighing less than 150 kg to be registered.

Option 2: Accreditation and Registration

Under Option 2 operators of RPAs and some model aircraft who are not already Remote Pilot Licence (RePL) holders (with some exceptions) would need to be accredited by CASA which would require them to:

- verify their identity;
- undertake mandatory online education;
- successfully complete a safety quiz; and
- be issued with and continue to hold an accreditation.

There would be separate accreditations for recreational model aircraft operators and excluded RPA (simple) commercial operators. CASA already issues the RePL professional licence, however, the term 'accreditation' has been chosen for this different form of authorisation to differentiate between the privileges of an accreditation and licence.

Accreditation and 3 yearly re-accreditation

A significant reason for requiring re-accreditation is that the RPA and model aircraft sector is an area experiencing rapid technological change requiring periodic regulation changes, which CASA has estimated occurs at least once every 3 years. Re-accreditation every 3 years would enable operators to be informed of the updated regulatory requirements and any changes to the operating environment.

Re-accreditation is also based on the assumption that knowledge of safety requirements for individuals will decline after initial accreditation. Whilst RPA and model aircraft safety requirements could be compared to a drivers licence scheme that does not require reaccreditation, there is in general higher exposure of safety regulations to drivers that do not exist for RPA and model aircraft, such as speed limit signs, ongoing police monitoring, other safety signs, comprehensive government information campaigns including television and print commercials which all reinforce and remind drivers of relevant safety regulations.

RPA registration

Option 2 would also require the mandatory registration of all RPAs and model aircraft weighing more than 250 g through a unique RPA registration scheme administered by CASA, in one of two categories:

- Commercial operation of RPA as excluded RPA or under an RPA Operator's Certificate; or
- Recreational operation of a model aircraft.

Registration by reference to an RPA or model aircraft's manufacturer serial number enables CASA and law enforcement agencies to trace RPA and model aircraft to owners. The serial number is able to be interrogated electronically from the ground so that, for example, the suspicious operation of an unregistered RPA or model aircraft near a security facility could be immediately identified for response. The benefits of registration substantially redefine the ability of CASA and law enforcement agencies to monitor unsafe and unlawful RPA and model aircraft operations.

In summary, the registration and accreditation requirements apply (with certain exceptions) to the following RPA and model aircraft:

- RPA and model aircraft weighing more than 250 g that are operated recreationally; and
- all RPA operated commercially, including excluded RPA operations, regardless of weight.

The scheme contains certain exclusions and does not apply to every RPA or model aircraft or every operator. Commensurate with the risk profile, and recognising that model aircraft associations already have in place procedures for safe operation, the scheme does not apply to:

- RPA and model aircraft that weigh 250 g or less operated recreationally;
- model aircraft operated at a CASA-approved model aircraft field;
- RPA and model aircraft operated recreationally indoors.

A person must be 16 or over to register an RPA or model aircraft, and to complete accreditation. People under 16 must have a person 16 or over register the RPA or model aircraft and supervise its operation. The person supervising must hold an accreditation or RePL.

Option 3: Licensing for small RPA

Under Option 3 operators of RPAs and some model aircraft who are not already licence holders would need to obtain a Remote Pilot Licence (RePL) which would require them to:

- undertake a course of study (typically 5 days in duration);
- demonstrate a sufficient understanding of the safety regulations;

- demonstrate aircraft operational proficiency; and
- be issued with a Remote Pilot Licence by CASA.

Currently Remotely Piloted Aircraft weighing 150 kg or more are required to be registered on the Civil Aviation Registry. Under Option 3 the weight limit for RPA would be lowered requiring all RPA weighing more than 250 g to be registered on the Civil Aircraft Registry and be issued with a VH registration mark that must be attached to the aircraft.

Impact

Option 2: Accreditation and Registration

Option 2 would require a recreational or excluded RPA commercial user to be accredited by CASA. The option would also require the user to be reaccredited every three years.

This option would require a recreational or commercial RPA user who seeks to operate the RPA or model aircraft to register it with CASA annually, which would impact on the following types of operators:

- Recreational;
- Excluded RPA Commercial; and
- Commercial.

Initially the operator would need to provide information about the RPA or model aircraft, including the manufacturer, model and serial number in order to have it registered. The serial number would then be recognised as the registration number. Where a serial number is not provided, for example, a home built model aircraft, CASA will supply a serial number that is to be written indelibly onto the RPA or model aircraft.

In total the requirement for accreditation and registration would take the typical recreational user approximately 23 minutes (Table B1) to complete and require the payment of a $20 or less (subject to public consultation) levy for an annual registration. The recreational registration levy is proposed to apply only to the operator once per year, irrespective of the number of aircraft registered in that year (taken from the date of the first registration). Re-registration every year will take approximately 3 minutes.

For commercial operators the initial time commitment is likely to be 56 minutes (Table B2), with re-registration taking approximately 5 minutes every year.

Whilst the primary impacts are time and financial related, these are low relative to the time that the typical RPA user would be operating their RPA annually and the purchase cost of the RPA. An RPA purchase cost is typically in the range of $100 to $2,200 for recreational RPA, and commercial RPA typically $4,500 and above (Source: Review of consumer / recreational RPA and professional RPA available for purchase on the internet). Given the low relative time and cost commitment it would be unlikely for the accreditation to be a deterrent for potential recreational users and would not impact on the number of RPA users.

Total costs for Option 2

The total cost over 10 years for Option 2 is estimated at $12.63m that consists of an estimated cost of $5.95m for recreational operators and $6.68m for commercial operators. This results in a 10-year annualised cost of $1.26m (Appendix B).

Safety Benefit

The primary safety benefit of the accreditation scheme is the increased probability of the RPA and model aircraft operator having a greater understanding of how to operate the RPA or model aircraft safely through education and thereby reducing likelihood of an incident or accident. With information provided in the safety video, it is likely that operators will more likely avoid operating near manned aircraft, including controlled aerodromes, and will operate a safe distance from people. This behavioural response is more likely when the operators are informed of potential infringement notices for such actions that are typically $1,050 per offence.

The primary safety benefit of requiring RPA and model aircraft (with certain exceptions) to be registered is that registration and marking would serve as a deterrent to those who might otherwise operate their RPA or model aircraft unsafely and unlawfully, and as an effective means by which to identify offenders.

Traceability of the operator through registration will increase the likelihood that it is operated safely and within the regulations, particularly to avoid infringement notices $1,050, or higher if a court imposes a higher penalty amount following a prosecution.

CASA could also use these contact details as a means by which to convey important and useful safety information and advisory material directly to individual owners and operators. The contact details available through the registration scheme would also enable CASA to undertake information campaigns to address specific safety risks.

The significance of the safety benefit

The potential safety benefits are significant and in CASA's view justify the cost of the accreditation and registration scheme, on the basis that the scheme results in safer operation of RPA and model aircraft and reduced risk of collisions with people on the ground or manned aircraft.

Whilst there have been no reported collisions in Australia between an RPA and a manned aircraft resulting in fatalities, in Germany in 1997 an RPA collided with a motor glider breaking a wing of the glider and resulting in fatal injury to the two people on board (p.3, https://www.atsb.gov.au/publications/2017/ar-2017-016/).

In addition, the ATSB reports that an RPA striking a manned aircraft could cause loss of control due to damaged flight surfaces of the manned aircraft, such as the wings or tailplane, in a similar way to a bird strike. The ATSB reports on a US accident to highlight the possible outcome:

> *In 2008, a Cessna Citation collided with terrain in the United States following a birdstrike. The subsequent investigation found the accident was due to damage to the wing structure caused by one or more of the birds. The strike altered the aerofoil's aerodynamic profile enough to cause a loss of control, even though no penetration of the airframe was observed. This is one such example of a catastrophic outcome from a strike on the airframe without penetration. An RPAS collision is more likely to damage flight surfaces due to the higher potential mass and comparatively rigid components (p.36, https://www.atsb.gov.au/publications/2017/ar-2017-016/)*

The evidence of the German glider collision resulting in 2 fatalities and the US Cessna Citation bird-strike accident that resulted in 5 fatalities show the possible safety consequences of collisions between RPA and manned aircraft. Excluding the value of the aircraft and focusing on the loss of human life, if Option 2 was to reduce the risk of a collision between RPA and manned aircraft to the extent that it avoided accidents resulting in 3 fatalities over a 10 year period this safety benefit would be valued at $13.5m using a value of statistical life of $4.5m (Based on the 2014 VSL published by OBPR and indexed by CPI) and would outweigh the costs of Option 2.

Evidence from other schemes

Whilst there is no specific evidence on the extent to which accreditation would reduce the likelihood of an accident, it is noted that educating individuals of the relevant safety regulations and requiring the individual to demonstrate an understanding of the safety regulations are employed in other regulatory areas to generate compliant responses. Some examples in all Australian jurisdictions for transport include: (p. 9 https://consultation.casa.gov.au/regulatory-program/pp1816us/supporting_documents/Policy%20Proposal%20%20PP%201816US.PDF)

- Obtaining a driver's licence requires successfully passing an exam on road rules
- Obtaining a boat licence requires successfully passing an exam on safety rules
- Obtaining a motorcycle licence includes a requirement to pass an exam on safety rules

However, it is difficult to determine the effectiveness of these programs because they are universally implemented, which does not permit the examination of safety outcomes for a subset of participants who do not go through the program. Internationally there is some survey evidence that providing education about safety regulations and the consequences of failing to comply with safety regulations can improve safety outcomes for young drivers (Paz-Cruz A, and Copeland D., 2014, https://www.nevadadot.com/home/showdocument?id=9089).

Option 3: Licensing and VH registration

Option 3 would require recreational and excluded commercial operators to obtain a Remote Pilot Licence. This requires undertaking a course of study with an approved training provider, with a typical course duration of five days and a cost of approximately $3,000.

The commitment of time would also require a minimum face to face period of two days, which will require additional travel time for applicants.

Total costs for Option 3

The total cost over 10 years for Option 3 is estimated at $1,167m that consists of an estimated cost of $895m for recreational users and $272m for excluded commercial operators. This results in a 10-year annualised cost of $116.7m (Appendix B).

Given the relative high cost of obtaining a licence and the time commitment of five days, this is likely to deter a number of potential RPA users.

Safety Benefit

Similar to Option 2, by providing operators with the information about the regulatory requirements applying to RPA use and the potential penalties for non-compliance it is likely that the behavioural response will be improved compliance with safety requirements and a lower likelihood of an accident.

The licence option by requiring a course duration that is approximately five days is more likely to lead to greater compliance with safety requirements. The licence option would provide a safety benefit with more proficient RPA users as the course will be able to teach and test for operator proficiency.

It is likely that Option 3 would provide the same safety benefit as the registration scheme in Option 2, that is the registration and marking would serve as a deterrent to those who might otherwise operate their RPA unsafely and unlawfully, and as an effective means by which to identify and apprehend offenders.

Additional analysis of the preferred Option

The estimated cost of moving to Option 2 relative to Option 1 is likely to be conservative because CASA has chosen conservative assumptions to estimate the cost of implementing Option 2. The impact of Option 1 has assumed (in the absence of data) that individuals seeking to operate an RPA or model aircraft currently invest zero time in informing themselves of the safety regulations and how to operate safely. It is likely that a number of individuals would spend at least some time informing themselves of the safety regulations and operational safety issues and therefore compliance with all the mandatory requirements of Option 2 would not represent additional time devoted to acquiring safety information.

In addition, the assumption that all excluded operators under Option 2 would become accredited is a conservative assumption. Informal feedback to CASA is that a proportion of excluded RPA operators are not operating their business and 'hold' the notification as an option value. When faced with the annual levy of $100 for accreditation and registration under Option 2 a proportion of the non-active operators may not register as they are not operating, which would reduce the estimated cost of Option 2 relative to Option 1.

Relevant to the decision on whether to implement Option 2 as opposed to maintaining Option 1 is the consideration of the cost of Option 2 on individuals, rather than just considering the aggregate cost. Whilst the aggregate cost of Option 2 is $12.63m (consistent with the Best Practice Regulation requirement this excludes the registration and accreditation levy) over 10 years, this primarily consists of a cost to individual users that is relatively low, for example the initial time commitment is less than 30 minutes for recreational users and less than 60 minutes for commercial operators.

The overall the cost of Option 2 relative to Option 1 is therefore estimated conservatively and, in addition, some of the benefits in relation to enforcement have been withheld as it may reduce their effectiveness. Despite these constraints, the case for option 2 relative to option 1 is strong for these reasons:

- Internationally, comparable countries are moving to a form of mandatory registration and accreditation. In general, this movement is in response to the rapidly growing number of RPAs and the potential safety and security issues.
- There are significant efficiency benefits in the enforcement of RPA and model aircraft regulations, for example, security agencies being able to identify registered operators. In conjunction with electronic surveillance it will enable security agencies to make assessments more quickly as to whether an RPA or model aircraft is a security threat by analysing whether it is registered and who it is registered to.

- The consequences of the safety risks associated with unlawful and unsafe RPA and model aircraft operation are potentially catastrophic, with an attendant cost to society.
- Despite the potential benefits of Option 2 CASA does not want to overstate the significance of benefits, given the irregular and uncertain nature of the accidents that are likely to occur in Australia, which in part will depend on other regulatory responses taken by CASA and law enforcement agencies. Whilst the accreditation and registration scheme of Option 2 in isolation will not address all safety and security issues with the operation of RPA and model aircraft, they are considered the reasonable and appropriate next step to address those safety and security issues.
- CASA considers that Option 2 will achieve the objectives, while only imposing a relatively low cost on RPA operators. Whilst Option 3 would achieve the safety and security objectives the cost is significantly higher and is likely to deter RPA operators.

Consultation

The options considered in this RIS were developed following a number of public and industry consultations. In August 2017 CASA published a discussion paper *Review of RPAS operations,* among other questions, the discussion paper invited comment on the following:

- Should all RPA be registered?
- Should all RPA users be required to meet specified training, experience, knowledge and/or assessment requirements?

The responses to the discussion paper supported mandatory registration and training and demonstrated proficiency.

Some form of registration is supported, with greater support by non-users

Proportionally more non-users advocated mandatory registration of all RPA, with 36% recommending registration of all RPA operators. By contrast, recreational and commercial users showed a clear preference for a more targeted approach to registration, with weight of the RPA the most popular method of determining whether registration is required.

Training and demonstrated proficiency are broadly supported, particularly for users of large RPA

Recreational users, commercial users and non-users all indicated a preference for both mandatory training and demonstrated proficiency requirements to be determined by the weight of the RPA. Notably, there was some divergence in views, with recreational users more likely to advocate no mandatory training or proficiency requirements than commercial and non-users.

Respondents indicated support for free or inexpensive online training to be made available and the need for development of an awareness campaign to help new users learn about the safe and responsible use of RPA. Whilst there is broad support for large and small RPA to be treated differently (for registration, training and demonstrated proficiency) there were divergent views on defining a "small" RPA.

Senate Inquiry

On 31 July 2018, the report of the Senate Standing Committee on Regional and Rural Affairs and Transport inquiry, *Regulatory requirements that impact on the safe use of Remotely*

Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems was tabled in Parliament. Recommendation 2 states:

> *The committee recommends that the Australian Government introduce a mandatory registration regime for all remotely piloted aircraft systems (RPAS) weighing more than 250 grams. As part of registration requirements, RPAS operators should be required to successfully complete a basic competence test regarding the safe use of RPAS, and demonstrate an understanding of the penalties for non-compliance with the rules.*

Aviation Safety Advisory Panel – Technical Working Group

A meeting of a Technical Working Group (TWG) established by the Aviation Safety Advisory Panel consisting of CASA and industry representatives was held in November 2018 to consider the policy proposals. The TWG meeting recommended that CASA proceed with public consultation on a new RPA registration scheme as well as an RPA operator education and accreditation scheme.

Policy Proposal

In January 2019 CASA published a proposal for the Accreditation and Registration scheme options that are outlined in this RIS for public consultation (https://consultation.casa.gov.au/regulatory-program/pp1816us/supporting_documents/Policy%20Proposal%20%20PP%201816US.PDF) . In contrast to previous consultations the majority of respondents (in the range of 80%) did not support the proposed Accreditation and Registration scheme options. There were also strong objections to the proposed fees for registration, including the $20 levy for recreational RPA.

In response to the negative feedback CASA will consider an appropriate fee levy structure before finalising the scheme requirements.

Implementation and transition

CASA is working towards a regulation make date of 25 July 2019 with a graduated commencement. To minimise risks associated with the supporting information technology systems, a staged implementation is planned, whereby registration and accreditation are progressively introduced:

- November 2019 – RPA Operator's Certificate (ReOC) holders (registration only)
- November 2019 – Excluded RPA operators (accreditation and registration)
- March 2020 – Recreational model aircraft operators (accreditation and registration)

CASA has existing RPA operator educational material including a quiz on its *www.dronefyer.gov.au* website. CASA is developing an expanded question set that will enable a randomised exam that covers the syllabus to be provided.

Enforcing compliance with the accreditation and registration scheme

Incentives, positive and/or negative, imposed by CASA to 'drive' the desired RPA and model aircraft operator behaviour must be sufficient to produce the desired compliance outcome.

CASA would, in relevant publications, emphasise the positive attributes of the accreditation-registration policy such as: airspace access, legitimacy of operation and wider social benefits.

A penalty would be introduced to provide a disincentive to those who illegally operate a non-registered RPA or model aircraft, or to operate without accreditation. The level of CASA enforcement action will depend not only on its own resourcing, but also on its continuing efforts to streamline existing frameworks with support from various Federal, State and Territory law enforcement agencies.

CASA, and other law enforcement agencies, will have an improved capability to enforce the registration requirements through electronic surveillance equipment. The equipment can identify RPA and model aircraft operating in a geographical area, as well as the electronic serial numbers of the RPA or model aircraft where present. The serial numbers may be cross-referenced against the CASA registration database and will identify whether the RPA or model aircraft is registered or not. As the equipment also pin-points the location of the airborne RPA or model aircraft and the location of the operator, CASA and/or law enforcement officers are enabled to take appropriate action against the operator where unlawful operation is detected.

Review

CASA will monitor and review the new regulations on an ongoing basis during the transition phase, with careful consideration given to the feedback from the regulated individuals and organisations and CASA will make any necessary changes to internal processes or the regulatory requirements.

The key information that CASA will be collecting during the transition is ease at which individuals and organisations can access the online systems and feedback on the content of the safety video and associated quiz.

The regulatory changes may be subject to a post-implementation review to assess the level of compliance with the accreditation and registration scheme and whether the safety objectives are being achieved.

Conclusion

CASA considers that Option 2 will achieve the desired safety and other regulatory objectives, while imposing only a low cost on individual RPA and model aircraft operators. Whilst Option 3 would also achieve those objectives, the cost is significantly higher and is likely to deter participation in RPA and model aircraft activities.

The Senate Standing Committee on Rural and Regional Affairs and Transport inquiry report: *Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems* recommended an accreditation and registration system for RPA in Australia. This is consistent with regulatory approaches either in place or planned in countries including the USA, UK, Canada and member states of the European Union (https://www.easa.europa.eu/easa-and-you/civil-drones-rpas).

Accreditation will encourage better educated RPA operators to constructively participate in the aviation-safety system and be better equipped to operate responsibly and competently. An interactive short online course that imparts the required knowledge, followed by an

accreditation scheme indicating the attained proficiency is achievable and its implementation would have a safety benefit.

While CASA's most important consideration is safety, and having regard to the Australian Government's decision for CASA to implement a national registration scheme, the scheme is also expected to be of benefit for government agencies responsible for privacy, noise, security and undesirable social behaviour concerns associated with RPA and model aircraft operations. A registration system will also provide the foundational elements of a future RPA traffic management system that will ultimately further improve safety performance.

Subject to appropriate protocols and handling of personal information, data associated with the registration system will additionally provide a valuable data resource for CASA and, where appropriate and permitted by law, for other government agencies.

A challenge of the national accreditation and registration system will be to promote compliance by recreational operators, many of whom have no aviation background or previous engagement with CASA. It will also be a challenge to encourage commercial RPA operators' continual involvement with the safety regulatory system.

CASA therefore proposes to undertake a comprehensive national education campaign, and to ensure that the online accreditation and registration system is simple and easy to use without compromising integrity of the information received. CASA has already commissioned work into behavioural economics, user acceptance testing and market testing to ensure its desired implementation strategies are as effective as possible to attain high levels of compliance. Further, CASA has commenced discussions with manufacturers and retailers to best understand how to provide information to new RPA and model aircraft users at time of purchase.

CASA is committed to the successful implementation of a registration and accreditation scheme to pursue the objectives stated earlier in this statement, while reasonably minimising the costs to the community of the scheme.

Appendix A: Number of Remotely Piloted Aircraft and Model Aircraft

There is uncertainty over the numbers of RPA and model aircraft being operated in Australia. Basic internet surveys accessed by CASA indicate over one million RPA and model aircraft currently being operated in Australia. As importation data does not separately list RPA and model aircraft, import data is unable to be used to determine numbers. As sales data is confidential to manufacturers, only informal advice has been provided by the main manufacturers.

For the purposes of this analysis, CASA has used the estimate of 150,000 RPA and model aircraft currently operating in Australia and increasing at approximately 15,000 per year. The options under consideration impact on the following types of operators:

- Recreational;
- Excluded Commercial; and
- Commercial.

CASA estimates that there are approximately 108,000 recreational users, increasing at approximately 10,800 annually.

CASA has received 15,000 notifications for commercial operators in the excluded RPA category and based on this information CASA has assumed that in the first year there will be 15,000 initial excluded commercial accreditations. Based on the growth in the commercial operators over the last two years CASA has estimated that the number of commercial accreditations will be 4,000 per year after the initial year (Table A1).

For commercial operations CASA has issued 1,300 Remote Operating Certificates. Based on this information CASA has assumed that in the first year there will be 1,300 initial commercial registrations. Based on the growth in the commercial operators over the last two years CASA has estimated that the number of commercial registrations will be 100 per year after the initial year (Table A1). It is also assumed that 100% of the RPA will be registered each year.

Table A1: Number of RPA and model aircraft users

	Initial	Annual Growth Rate
Recreational	108,000	10,800
Excluded Commercial	15,000	4,000
Commercial	1,300	100

Appendix B: compliance costs

Option 2: Accreditation and RPA Registration

Option 2 would require a recreational or excluded commercial RPA user to be accredited by CASA and to register their RPA. The requirement for accreditation would not impact on Commercial RPA users who are currently required to hold a licence.

The starting point for accreditation is to create an account with CASA, which takes approximately 3 minutes. The individual will need to obtain an Aviation Reference Number (ARN), which is essentially a method for CASA to verify the identity of the individual using the Attorney General's online document verification services. This step takes individuals approximately 3 minutes to complete online.

After acquiring an ARN the potential user must then watch an online instructional video that provides information on how to safely operate a RPA and provide information on the regulatory requirements that apply to the use of RPA. It will include information for parents who are completing the RPA registration with the intention of children operating the RPA. Whilst the

final content of the safety video is to be resolved it is expected to be approximately 3 minutes in length. This content is seen by CASA as a minimum level of safety information that would be needed by potential users in order to operate within the regulatory requirements. The potential user is then required to complete an online quiz with approximately 15 questions based on information provided in the video. This would take approximately 8 minutes to complete. After successfully completing the quiz the user would be required to enter details for each RPA and assuming one RPA per individual this will take approximately 4 minutes and the final step of making the payment will take 2 minutes. In total the requirement for accreditation and registration would take the typical recreational user approximately 23 minutes (Table B1).

Table B1: Time to comply with accreditation (Recreational)

Activity	**Time in Minutes**
Account Creation	3
ARN	3
Video	3
Quiz	8
RPA Details	4
Payment	2
Total	23

Excluded Commercial category

The excluded commercial operator will be required to watch a more extensive instructional video approximately 12 minutes in length that contains both safety and operational limitations content; and undertake a longer questionnaire of approximately 24 minutes in length, and assuming they register 3 RPA would lead to an overall compliance time of approximately 56 minutes (Table B2).

Table B2: Time to comply with accreditation (Excluded Commercial)

Activity	**Time in Minutes**
Account Creation	3
ARN	3
Video	12
Quiz	24
RPA Details	12
Payment	2
Total	56

Re-accreditation

Every third year the Recreational and Excluded Commercial user would be required to be reaccredited which involves watching the instructional video and undertaking the quiz.

Costs for recreational accreditation and registration

Based on the initial recreational accreditation and registration requiring 23 minutes of an individual's time this would be valued at $11.88 using a wage rate of $31 per hour. Reaccreditation every 3 years requiring 11 minutes of time would be valued at $5.68 per individual every 3 years or $1.89 when annualised. Re-registration will take approximately 3 minutes every year to renew the registration of their RPA. When valued at $31 per hour the re-registration is valued at $1.55. Based on the number of annual re-registrations from Table A1 this will result in a total cost of over ten years of $2.11m (Table B3). Based on the number of accreditations and reaccreditations per year from Table A1 this will result in a total cost over 10 years of $5.95m (Table B3).

Table B3: Costs for recreational accreditation

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000	$m
Initial	1,283	128	128	128	128	128	128	128	128	128	2.44
Re-accreditation	0	112	123	134	145	156	167	179	190	201	1.41
Reregistration	0	167	184	201	218	234	251	268	285	301	2.11
Total											5.95

Costs for Excluded Commercial accreditation

Based on the initial accreditation and registration requiring 56 minutes of an operator's time this would be valued at $63.47 using a wage rate of $68 per hour. Reaccreditation every 3 years requiring 36 minutes of time would be valued at $40.80 per operator every 3 years or $13.60 when annualised. Based on the number of accreditations and reaccreditations per year from Table A1 this will result in a total cost over 10 years of $6.68m (Table B4).

Table B4: Costs for excluded commercial accreditation

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000	$m
Initial	571	254	254	254	254	254	254	254	254	254	2.86
reaccreditation	0	122	177	231	286	340	394	449	503	558	3.06
reregistration	0	31	44	58	71	85	99	112	126	139	0.77
											6.68

Total costs for Option 2

The total cost over 10 years for Option 2 is estimated at $12.63m that consists of an estimated cost of $5.95m for recreational users and $6.68m for excluded commercial operators. This results in a 10-year annualised cost of $1.26m.

Option 3: Licensing and VH Registration

Costs for recreational Remote Pilot Licensing

The Remote Pilot Licence (RePL) requires the applicant to complete an approved study course of approximately 40 hours of study time and is usually completed over five days and costs in the range of $3000. CASA estimates that an individual's time over the 40 hours would be valued at

$1240 when using a wage rate of $31 per hour. The total cost is therefore estimated at $4240 when the value of time and course fees are considered. Based on 108 000 recreational pilots requiring a licence initially and 10 800 annually (Table A1) this will result in a total cost of $870m over 10 years (Table B5).

Costs for Recreational VH Registration

In order to register an RPA on the current Civil Aviation Registry the operator would need to complete an eleven-page paper-based form, which takes approximately 1 hour and return this form to CASA including the payment of a $130 one off fee. The operator would be required to wait approximately one week for the registration to be processed and be issued with a VH registration mark that must be attached to the aircraft.

The value of the one-week delay in obtaining the registration is estimated based on the average user operating the RPA for 4 hours per week. When the 4 hours is valued at $31 per hour this results in an estimated delay cost of $124. The total cost per registration is estimated $155 when the delay cost and time to complete the form is considered. The total cost over 10 years would be $25.44m based on the number of initial registrations from Table A1 (Table B5).

Table B5: Costs for recreational licensing

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Initial Remote Pilot licence	$458	$46	$46	$46	$46	$46	$46	$46	$46	$46	$870m
VH Registration	13.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	$25.4m
											$895m

Costs for Excluded Commercial Remote Pilot Licensing

The cost for excluded commercial operators to obtain a Remote Pilot Licence is based on using a wage rate of $68 per hour. CASA estimates that an individual's time over the 40 hours would be valued at $2720 when using a wage rate of $68 per hour. The total cost is therefore estimated at $5720 when the value of time and course fees are considered. Based on 9000 excluded commercial pilots requiring a licence initially and 4000 annually (Table A1) this will result in a total cost of $257m over 10 years (Table B6).

Costs for Excluded Commercial VH Registration

For Excluded Commercial operators the value of the one-week delay in obtaining the registration is estimated based on the average user operating the RPA for 4 hours per week. When the 4 hours is valued at $68 per hour this results in an estimated delay cost of $272 per operator. The total cost per registration for an operator is estimated at $340 when the delay cost and time to complete the form is considered. The total cost over 10 years would be $14.47m based on the number of initial registrations for Excluded Commercial operators from Table A1 (Table B6).

Table B6: Costs for excluded commercial licensing

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Initial Remote Pilot Licence	$51	$23	$23	$23	$23	$23	$23	$23	$23	$23	$257m
VH Registration	4.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	$14.5m
											$272m

Total costs for Option 3

The total cost over 10 years for Option 3 is estimated at $1167m that consists of an estimated cost of $895m for recreational users and $272m for excluded commercial operators. This results in a 10-year annualised cost of $116.7m.

ATTACHMENT B

STATEMENT OF COMPATIBILITY WITH HUMAN RIGHTS

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011

Civil Aviation Safety Legislation Amendment (Remotely Piloted Aircraft and Model Aircraft — Registration and Accreditation) Regulations 2019

This legislative instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Disallowable Legislative Instrument

Part 47 of the *Civil Aviation Safety Regulations 1998* (CASR) regulates the registration of conventionally piloted aircraft on the Australian Civil Aircraft Register (ACAR). Part 101 of CASR regulates aspects of the pilot and flight safety requirements for operating remotely piloted aircraft (RPA) and model aircraft.

The *Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft — Registration and Accreditation) Regulations 2019* (the Amendments) amend Parts 11, 47 and 101 of CASR to provide for registration for certain remotely piloted aircraft and model aircraft, and accreditation of certain persons operating these aircraft. The Amendments:

- except for large RPA which are already subject to aircraft registration, require persons intending to operate any remotely piloted aircraft (RPA), or model aircraft *over 250 g,* to register the RPA or model aircraft for different types of operations;
- require persons intending to operate any RPA, or a model aircraft over 250 g, to complete a short online course and pass a corresponding examination to gain accreditation – unless the person is already the holder of a remote pilot licence;
- introduce a minimum age of 16 years for a person to hold an accreditation to operate an RPA or model aircraft and the corresponding registration, and require a remote pilot under the age of 16 to be supervised by an accredited person 18 years of age or over when operating the RPA or model aircraft;
- introduce a provision for a future Part 47 Manual of Standards;
- introduce new definitions into Part 1 of the CASR Dictionary regarding *registration holder* and *responsible person* and amend existing definitions of *model aircraft* and some RPA (for example, the definitions marginally adjust some of the RPA weight limits in the interests of clarity and consistency); and
- introduce matters relating to applications for an authorisation on behalf of an applicant by an agent.

Model aircraft *other than* those excepted, namely gliders, those used in particular areas and those, weighing no more than 250 g, must be registered in a CASA register. All RPA whose gross weight classes them as micro, very small, small, or medium must similarly be registered. Legislative instruments may exclude certain classes of aircraft from registration.

Persons operating RPA or non-excepted model aircraft over 250 g, must be accredited by successfully completing an online competency course and examination unless the person already holds a remote pilot licence, or the person is under the age of 16 and is supervised by an accredited person over the age of 18. The online course is tailored for the size of the aircraft and the nature of the operation.

A person commits a strict liability offence if the person operates an RPA, or a non-excepted model aircraft over 250 g, and the person is not accredited, or the aircraft is not registered.

The fundamental rational for the Amendments is to ensure, protect and enhance aviation safety for conventionally piloted aircraft insofar as such aircraft are increasingly exposed to the risks associated with exponentially increasing numbers of RPA in particular, in potentially conflicting airspace. In addition, with increasing numbers of users, these aircraft represent an increasing risk to persons and property on the ground.

Registration requirements to assist in the identification of aircraft, and to impose accreditation requirements, promote greater aviation knowledge and skills among pilots, and are initiatives taken in the interests of general aviation safety. The new requirements are regulatory administrative requirements. They are designed to promote aviation safety and avoid relevant accidents, thereby promoting the right to life through freedom from serious aviation accidents.

Human rights implications

The Regulations engage the following human rights:

A. the right to a fair trial and fair hearing under Article 14 of the International Covenant on Civil and Political Rights (ICCPR);
B. the right to protection against arbitrary and unlawful interference with privacy under Article 17 of the ICCPR;
C. the right to work and rights at work under Article 6 of the International Covenant on Economic, Social and Cultural Rights (ICESCR);
D. the rights of children under the Convention on the Rights of the Child; and
E. the right to life under Article 6 the ICCPR.

A The right to a fair trial and fair hearing: the presumption of innocence

Article 14 of the ICCPR provides that in the determination of a criminal charge, everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law. Further, in criminal proceedings, people are entitled to a range of protections including minimum guarantees as set out in Article 14(3) and following of the ICCPR.

The presumption of innocence in Article 14(2) imposes on the prosecution the burden of proving the charge and guarantees that no guilt can be presumed until the charge has been proven beyond reasonable doubt. For the charge to be proven beyond reasonable doubt, the legal and evidential burden is on the prosecution.

Strict liability offence provisions

There are 20 offences of strict liability prescribed in the Amendments. Strict liability offences engage the presumption of innocence through the imposition of liability without the need to prove

intentional fault beyond reasonable doubt. However, a strict liability offence will not impermissibly limit the right to the presumption of innocence if the offence pursues a legitimate aim and is reasonable, necessary and proportionate to that aim.

Nature of strict liability provisions

The following is a list of the 20 strict liability offences in the Amendments, with a comment and an indication of the penalty.

- Under subregulation 11.033 (4), a person (the agent) commits an offence of strict liability if the person acts as another person's agent in submitting an application for a remote pilot licence or a relevant authorisation, and the agent has not included a declaration that the agent has received the applicant's declaration authorising the agency, and has prepared the application in accordance with the applicant's information — 30 penalty points.

- Under subregulation 11.034 (2), a person (the applicant) commits an offence of strict liability if the person authorises an agent to make a relevant application on the applicant's behalf and fails to give the agent a signed declaration stating that the agent is authorised and that the information provided to the agent is true and correct — 30 penalty units.

- Under subregulation 11.034 (5), a person (other than CASA) who makes or receives a declaration under regulation 11.033 or 11.034 and fails to keep it (or a copy) for the prescribed retention period commits an offence of strict liability — 30 penalty units (the prescribed retention period is 5 years or a CASA-determined period of not more than 5 years).

- Under subregulation 11.034 (8), an agent or an applicant who, within the prescribed retention period, fails to produce a relevant declaration (or copy) for inspection by a police officer or an authorised person commits an offence of strict liability — 5 penalty units.

- Under subregulation 47.096A (1), a person commits an offence of strict liability if the person operates, or conducts an operation using, an unregistered aircraft that is required to be registered — 50 penalty units.

- Under subregulation 47.096A (2), a person commits an offence of strict liability if the person supervises the operation, by a person under 16, of an unregistered aircraft that is required to be registered — 50 penalty units.

- Under subregulation 47.096A (3), a person commits an offence of strict liability if the person operates, or conducts an operation using, an aircraft, registered as a model aircraft but that is not a model aircraft — 50 penalty units.

- Under subregulation 47.096A (4), a person commits an offence of strict liability if the person supervises the operation, by a person under 16, of an aircraft, registered as a model aircraft but that is not a model aircraft — 50 penalty units.

- Under subregulation 47.099B (3), a person commits an offence of strict liability if the person operates, or conducts an operation of, an RPA or a model aircraft that is required to be registered and fails to comply with a demand from a police officer or an authorised person to produce a certificate of registration (or copy) for the aircraft — 5 penalty units.

- Under subregulation 47.099B (4), a person commits an offence of strict liability if the person supervises the operation by a person under 16 of an RPA or model aircraft that is required to be registered and the supervisor fails to comply with a demand from a police officer or an authorised person to produce a certificate of registration (or copy) for the aircraft — 5 penalty units.

- Under subregulation 101.066 (2), a person commits an offence of strict liability if the person operates an unmanned aircraft in a prescribed area without complying with the requirements for operations in the prescribed area — 50 penalty units.

- Under subregulation 101.098 (2), a person commits an offence of strict liability if the person operates, or conducts an operation using, an RPA, or a model aircraft, that is required to be registered and to meet identification requirements prescribed in a Manual of Standards (a MOS) and the person does not comply with the requirements — 50 penalty units.

- Under subregulation 101.099 (2), a person commits an offence of strict liability if the person operates, or conducts an operation within Australian territory using an RPA or a model aircraft that is registered under the law of a foreign country and that is required to meet prescribed requirements under the MOS and the person does not comply with the requirements — 50 penalty units.

- Under subregulation 101.099A (2), a person commits an offence of strict liability if the person operates an RPA or model aircraft that is required to be registered and the aircraft has later been modified beyond the extent to which such an aircraft may, in accordance with the MOS, acceptably be modified without the need to be re-registered as a different aircraft because of the modifications — 50 penalty units.

- Under subregulation 101.372 (2), a person commits an offence of strict liability if the person operates an excluded very small RPA, a small or medium RPA in certain conditions or circumstances, without the first operation of the RPA being the subject of a written notification to CASA — 50 penalty units.

- Under subregulation 101.252 (3), a person commits an offence of strict liability if the person operates an RPA for which a remote pilot licence is required and fails to comply with a demand from a police officer or an authorised person to produce the licence — 5 penalty units.

- Under subregulation 101.374B (1), a person commits an offence of strict liability if the person operates an excluded RPA (a very small, small or medium RPA operated in defined circumstances) or a micro RPA (not more than 250 g gross weight) without either excluded RPA accreditation or a remote pilot licence — 50 penalty units.

- Under subregulation 101.374B (2), a person commits an offence of strict liability if the person operates a model aircraft with a gross weight of more than 250 g and the person is neither accredited for the model aircraft, nor accredited for an excluded RPA or micro RPA, nor holds a remote pilot licence — 50 penalty units.

- Under subregulation 101.374C (4), a person commits an offence of strict liability if the person operates an excluded RPA, a micro RPA or a model aircraft, the operation of which requires authorisation in the form of either accreditation or the holding of a remote

pilot licence and fails to comply with a demand from a police officer or an authorised person to produce either form of authorisation — 5 penalty units.

- Under subregulation 101.374C (7), a person supervising someone under the age of 16 in the operation of an excluded RPA, a micro RPA or a model aircraft, commits an offence of strict liability if the person fails to comply with a demand from a police officer or an authorised person to produce the person's accreditation or remote pilot licence — 5 penalty units.

Reasonableness, necessity and proportionality

The strict liability offences in the Amendments are all either directly or indirectly safety-related regulatory administrative offences, that is, they are offences that may be committed by a person failing to comply with the requirements of the Australian government's registration and accreditation scheme for the operation of RPA and model aircraft, a scheme which exists for the express purpose of promoting and enhancing aviation safety.

The numbers of RPA and model aircraft in the airspace has proliferated geometrically over the past few years, and their sophistication and capabilities have also increased markedly, without these rapid developments being matched by appropriate regulatory controls. There is no certainty around the total number of RPA and model aircraft in Australia. However, some high-end estimates place the figure between 400,000 and 1 million. The absence of an appropriate registration scheme means that it is difficult for CASA as the aviation safety regulator to determine with complete accuracy how many such aircraft are using the airspace.

The growing use of RPA in Australia directly correlates with a significant increase in reports to the Australian Transport Safety Bureau (***ATSB***) of RPA safety incidents.

During the period 2012-2018, 632 incident occurrences were reported to ATSB, made up of: 140 accidents, 27 serious incidents and 465 less incidents. Some 56% of reported incidents concerned near-misses with RPA as reported by conventionally piloted aircraft operators.

The most common occurrences are, therefore, interference with other conventionally piloted aircraft and loss of RPA command and control. Such incidents clearly indicate a rising risk to the safety of conventionally piloted aircraft and people on the ground.

The ATSB has analysed the safety factors associated with RPA-related occurrences and found that the major proportion arose from RPA operation factors attributed to a lack of appropriate knowledge and skills to safely conduct the tasks.

While various aviation safety rules apply to the actual operation of RPA and model aircraft, the absence of training for the majority of RPA and model aircraft operators has increased the risks to aviation safety which these aircraft pose to other aircraft in the air and to people on the ground. The absence of any means of identifying who the operator of an infringing RPA or model aircraft is, greatly diminishes CASA ability to enforce the existing operational safety rules.

Because of the increasing numbers of aircraft involved, and the large numbers of potential infringements that could arise under the operational safety rules in the absence of effective deterrence, a requirement to prove in every individual case a specific intent to breach a registration or accreditation requirement is considered inimical to achieving a high level of

compliance with the registration and accreditation requirements, and hence a commensurate high level of operational safety.

Although their basis and rationale lies in a quest to enhance aviation safety, the offences themselves are essentially administrative in nature and relate to failures to register RPA and model aircraft that are subject to compulsory registration, and failures to successfully train for, and achieve a degree of, competence in the safe operation of the aircraft.

It is important to note that, because of their different nature, intentionality and likely infrequency, offences protecting the integrity of the online training course and examination from cheating are not strict liability offences and the usual standard and onus of proof applies in these cases (subregulation 101.374F (2) and (3)).

Registration and accreditation as such may be obtained through convenient and easy-to-use online processes. A requirement to prove criminal intent to establish a failure to become accredited or registered in accordance with the regulations would have a damaging effect on the extent of both normative compliance and deliberate infringements.

A further consideration is that the defence of honest and reasonable mistake, as set out in section 9.2 of the *Criminal Code Act 1995*, is available to any defendant with respect to any of the strict liability offences. If relied upon, this defence involves an evidential burden on the defendant to prove, but only on the balance of probabilities, that he or she had an honest and reasonable but mistaken belief in facts which, if those facts had existed, would not have constituted the offence.

The strict liability offences in the Amendments are considered reasonable, necessary and proportionate to the objective of ensuring aviation safety. The offences are regulatory in nature, in other words their aim is to insist on reasonable compliance with regulated safety standards by those conducting activities which are otherwise intrinsically or potentially unsafe unless high standards of compliance are met.

Not having to prove deliberate fault in the relevant circumstances aims to provide a strong deterrent. To this extent, and in this context, the offences are consistent with other safety-focussed regulatory regimes and do not unreasonably or impermissibly limit the presumption of innocence. The offences are designed to achieve the legitimate objective of ensuring the safety and integrity of the aviation system for the benefit of the aviation industry and the public.

In addition, the offences are also proportionate in that the penalties they attract fall at the lower end of the penalty scale, some as low as 5, and none exceeding 50, penalty units. The framing of the offences is consistent with the guidance set out in *A Guide to Framing Commonwealth Offences, Infringement Notices and Enforcement Powers*, September 2011 (The Guide).

Reversal of burden of proof provisions

The Guide states that provisions imposing a reversal of the evidential burden of proof are permissible for either or both of the following justifications:

- the relevant information or evidence to be established is peculiarly within the knowledge of the defendant;

- it is significantly more difficult and costly for the prosecution to disprove the matter than for the defendant to establish the matter.

Three offence provisions impose a reversed evidential burden of proof on the accused in relation to a defence, as follows.

Under subregulation 101.372 (2), a person commits an offence of strict liability if the person operates an excluded very small RPA, small or medium RPA in certain conditions or circumstances without the registration holder's first operation of the RPA being the subject of a written notification to CASA — 50 penalty units. However, under subregulation 101.372 (3), subregulation 101.372 (2) does not apply if the aircraft registration holder or another person is already a CASA-certified operator. Such a status may reasonably be considered to be peculiarly within the knowledge of the defendant.

Under subregulation 101.374B (2), a person commits an offence of strict liability if the person operates a model aircraft with a gross weight of more than 250 g and the person is neither accredited for the model aircraft, nor accredited for an excluded RPA or micro RPA, nor holds a remote pilot licence. However, under subregulation 101.374B (3), subregulation 101.374B (2) does not apply to a person operating a model aircraft if the model aircraft is being operated in a CASA-approved area and in accordance with the conditions in the approval. Such a fact may reasonably be considered to be peculiarly within the knowledge of the defendant.

Under subregulation 101.374B (1), a person commits an offence of strict liability if the person operates an excluded RPA (a very small, small or medium RPA operated in defined circumstances) or a micro RPA (not more than 250 g gross weight) without either accreditation or a remote pilot licence. Also, under subregulation 101.374B (2), a person commits an offence of strict liability if the person operates a model aircraft with a gross weight of more than 250 g and the person is neither accredited for the model aircraft, nor accredited for an excluded RPA or a micro RPA, nor holds a remote pilot licence. However, under subregulation 101.374B (4), these provisions do not apply to a person under 16 years of age who is being supervised by an accredited or licensed person over 18 years of age.

In each of these cases, the burden of proof has been reversed to establish a defence to an offence provision, once prosecution discharges the legal and evidential burden of proof in establishing the offence. The burden of adducing or pointing to evidence must only suggest a reasonable possibility that the matter exists or does not exist. This is in accordance with subsection 13(3)(6) of the Criminal Code. It is a relatively easy matter for the defendant to adduce or point to evidence suggesting a reasonable possibility that there was prior certification or a CASA-approved area, or that the respective ages of the child and the supervisor were under 16 years and over 18 years respectively.

To be acceptable, the reversed burden must pursue a legitimate aim and be reasonable, necessary and proportionate to that aim.

Aim

The aim of CASA and its regulatory framework for RPA and model aircraft operations is to uphold aviation safety by prescribing the conduct of individuals involved in civil aviation operations. The provisions reversing the burden of proof pursue this aim as they attached to a

defence to a strict liability offence in circumstances where the defence relates to a safe aviation practice.

Reasonableness, necessity and proportionality

The provision imposing a reversed burden of proof is reasonable as it provides the defendant with the opportunity to adduce evidence of specific aviation practices, of a kind contemplated by the offence provisions, that are safe despite contravening the offence provision.

The provision imposing a reversal of the evidential burden of proof is proportionate because it is more practicable for defendants to prove that they satisfy the requirements of the defence given that it is significantly more difficult and costly for the prosecution to prove the negative, that is, the absence of the exculpating circumstances.

Implication on right to presumption of innocence

The provisions reversing the evidential burden of proof are consistent with the presumption of innocence, as they are within reasonable limits which take into account the importance of the objective being sought while maintaining the defendant's right to a defence. In particular, the burden is reversed only where the matter to be established is peculiarly within the knowledge of the defendant in particular circumstances. For such circumstance it is significantly more costly for the prosecution to disprove and relatively easy for the defendant to prove. At that point, it would then be for the prosecution to prove, beyond reasonable doubt, that the defence was not available as a matter of fact.

B Right to protection against arbitrary and unlawful interference with privacy

Article 17 of the ICCPR provides that no one shall be subjected to arbitrary or unlawful interference with their privacy, family, home or correspondence, or to unlawful attacks on honour and reputation. It further provides that everyone has the right to the protection of the law against such interference or attacks.

Under regulation 47.098, registration of an RPA or a model aircraft may only be obtained after a person submits to CASA an application with details of the person's name and address and information about the aircraft to be registered. The collection of this limited application information is reasonable, necessary and proportionate in order the provide a basis for the aircraft registration scheme. Without it, registration of RPA and model aircraft would be without substance or meaning.

Subregulation 201.016 (1), applies to *conventionally piloted aircraft generally*, and authorises CASA to disclose certain personal information to a person providing an air traffic service or carrying out a search and rescue operation in Australian territory, if the disclosure is necessary for the safety of air navigation. The information (under existing subregulation 201.016 (2)) is limited to name, address, telephone number, aviation reference number (ARN) and details of CASA civil aviation authorisations and CASA medical certificates held.

The disclosure of name, address, telephone number, ARN and details of CASA civil aviation authorisations and CASA medical certificates held is also reasonable, necessary and proportionate when it is for the purpose of air traffic control or search and rescue operations in relation to conventionally piloted aircraft operations. The disclosure of details of CASA medical certificates held is no less reasonable, necessary and proportionate in circumstances in which a

conventionally piloted aircraft's access to certain classes of airspace may be dependent of the level of pilot licence held, itself affected by the nature of the medical certificate held. Disclosure of such details may also be necessary to ensure the successful completion of a search and rescue mission for a missing aircraft and pilot.

Subregulation 201.016 (3) applies only to registered RPA and model aircraft. It authorises CASA to disclose registration information to a person who provides an air traffic service in Australian territory, or to an enforcement body (within the meaning of the *Privacy Act 1988*) for the purposes of the body's enforcement related activities.

An enforcement body is defined in the *Privacy Act 1988* to include a range of Australian law enforcement authorities, from police forces and Directors of Public Prosecutions, to crime and corruption investigation bodies and the Immigration Department. An enforcement related activity is also defined in that Act to include criminal investigation, surveillance and prosecution activities.

The requirements in this subregulation engage Article 17 but the requirements are reasonable, necessary and proportionate to achieve both CASA's aviation safety enforcement goals and broader law enforcement outcomes. CASA has to rely to a large extent on relevant police forces and the Director of Public Prosecutions to assist it in investigating and prosecuting infringements of aviation safety laws, including the laws in relation to the safe operation of registered RPA and model aircraft by accredited remote pilots. In addition, RPA are, and will likely increasingly be, used for unlawful purposes, including carriage of contraband, drugs and firearms, and spying on and unlawful surveillance of government and law enforcement activities.

Unless registration information can be shared with the government law enforcement agencies mentioned above, it will be exceptionally difficult both to deter and to investigate aviation safety offences and other offences involving RPA and model aircraft.

The protections afforded by the *Privacy Act 1988* continue to apply to any disclosures made by CASA.

To the extent that the subregulations limit the privacy-related rights in Article 17 of the ICCPR, those limitations are reasonable, necessary and proportionate for aviation safety purposes, consistent with the objects of the Civil Aviation Act and the peace, order and good government that arises from effective general law enforcement.

C Right to work and rights at work

The Amendments may engage the right to work that is protected under Article 6 (1) of International Covenant on Economic, Social and Cultural Rights (ICESCR). This right includes the right of everyone to the opportunity to gain their living by work which they freely choose or accept.

Regulations in force prior to the Amendments, regulate use of RPA of less than 2 kg for commercial purposes in simple lower-risk activities. They required only that the participant must *notify* CASA of their presence in the industry and acknowledged that they would adhere to a regulated list of standard operating conditions.

Under the Amendments, however, the details of all relevant RPA must be registered in the operator's name. Nevertheless, with the facilitation of online processing, the imposition of this registration requirement on people who use RPA in their work is not unduly burdensome and is not expected that operators would cease commercial activities because of it.

Before the Amendments were made, for operators other than the less than 2 kg for commercial purposes class, it was already the case that to use an RPA for commercial purposes required the person who supplied the RPA to be a certificated RPA operator and mandated that the remote pilot who flew the RPA must hold a remote pilot licence.

It is not necessary for such a licence holder to be accredited under the Amendments since the process of gaining the licence requires more sophisticated sets of learning and competencies than is involved in the new accreditation scheme. However, for the reasons described above, it is now necessary that all relevant RPA and model aircraft, including those used for commercial purposes, be registered. The right to work may be engaged by this requirement insofar as it imposes a registration obligation for the lawful conduct of relevant flights.

However, as described above, it is the interests of aviation safety that now require the registration of all RPA, including those used for commercial purposes. This is, in the circumstances, a reasonable, necessary and proportionate requirement under aviation safety law. It will ensure the integrity of the aviation safety system in so far as it may be affected by relevant RPA and model aircraft.

The right of relevant persons to the opportunity to gain their living by work using RPA for commercial purposes is recognised. However, the lawful exercise of that right requires the person to carry out their RPA registration responsibilities in the safety-critical aviation industry. Accordingly, any potential limitation on the right to work is necessary, reasonable and proportionate in achieving the aim of protecting and improving aviation safety.

D The rights of children under the Convention on the Rights of the Child

Under the Convention on the Rights of the Child, States are required in their laws and practices to give special protection to children under the age of 18 years, so that in all actions concerning children the best interests of the child must be the primary consideration.

Also, Article 26 of the ICCPR prohibits discrimination on various grounds one of which, "other status", may be taken to include age. However, differential treatment based on prohibited grounds like age will not constitute discrimination where it is aimed at achieving a legitimate purpose, the criteria for differentiation are reasonable and objective, and the measure is proportionate to achieving the legitimate aim.

Under subregulation 47.097 (2), an individual may apply to register an aircraft as an RPA or a registrable model aircraft but only if the individual is at least 16 years old.

Under subregulation 101.374E (2), an applicant is eligible for an accreditation of an excluded RPA, a micro RPA, or a model aircraft over 250 g only if the applicant is, among other things, at least 16 years old.

However, the effect of subregulation 101.374B (4) is that a person under 16 years old (the ***child***) may operate an excluded RPA, a micro RPA or a model aircraft if the child is being supervised by another person (the ***supervisor***) who is at least 18 years old and that supervisor is lawfully authorised to operate the RPA or model aircraft (through accreditation or the holding of a remote pilot licence).

These requirements, if observed, do not prevent a child from using, becoming familiar with and training on, a relevant RPA or model aircraft.

It is considered, therefore, that these requirements are necessary, reasonable and proportionate in achieving the intended legitimate purpose of primarily protecting children from risk of self-injury, and of also promoting and improving aviation safety.

The purpose of the Amendments is to require relevant RPA and model aircraft registration, and to enhance relevant flying skills. It is considered that it would be irresponsible and inappropriate to permit children under the age of 18 to register relevant RPA and model aircraft without the knowledge and supervision of a responsible adult. Similarly, it would be irresponsible and inappropriate to permit children under the age of 18 to operate relevant RPA or model aircraft which if flown without skill, care and responsibility would give rise to aviation risks, as well as risks of injury to other persons or even the child.

E The right to life under the ICCPR

Insofar as the Amendments are crafted and intended as far as possible to promote and enhance aviation safety in the responsible use of relevant RPA and model aircraft which in some circumstances may have lethal potential, they promote the right to life under Article 6 of the ICCPR by legislating for safer conditions in both general and commercial operations.

Conclusion

The amendment instrument is compatible with human rights and, to the extent that it may limit human rights, those limitations are reasonable, necessary and proportionate to ensure the safety of aviation operations and to promote the integrity of the aviation safety system.

Schedule 1 – Amendments relating to registration

Civil Aviation Safety Regulations 1998

Item 1 - Regulation 45.005

This item amends regulation 45.005 and provides that aircraft that are not Remotely Piloted Aircraft or Model Aircraft—are subject to Part 45.

Item 2 - After regulation 47.010

Regulation 47.012 titled 'Issue of Manual of Standards for Part 47', is inserted after regulation 47.010.

Regulation 47.012 provides a head of power for the issue of a Part 47 Manual of Standards prescribing matters required or permitted by these Regulations to be prescribed by the Part 47 Manual of Standards, or necessary or convenient to be prescribed for carrying out or giving effect to Part 47 of CASR.

Item 3 – Paragraph 47.015(1)(f)

Paragraph 47.015(1)(f) provides that model aircraft prescribed in an instrument are not required to be registered.

Item 4 – Paragraph 47.015(1)(i)

This item repeals paragraph 47.015(1)(i) and a new regulation inserted provides detail on which RPAs need be registered.

Item 5 – At the end of subregulation 47.015(1)

A new note is inserted at the end of subregulation 47.015(1) explains the registration requirements for aircraft for which a special flight permit has been issued.

Item 6 – After subregulation 47.015(1)

Subregulation 47.015(1A) provides for the types of model aircraft required to be registered.

Subregulation 47.015(1B) provides that CASA may issue an instrument prescribing classes of RPA or model aircraft required to be registered.

Item 7 – Regulation 47.020

Regulation 47.020 provides to allow that only an aircraft that is not an RPA or model aircraft may have a person appointed to act on behalf of more than one owner of the aircraft. An RPA or model aircraft that is owned by two people, is only be able to be registered to one person.

Item 8 – Regulation 47.030

Regulation 47.030 provides to only require CASA to make the aircraft register public for an aircraft that is not an RPA or model aircraft.

Item 9 – Subregulation 47.050(1)

Subregulation 47.050(1) provides that for an aircraft that is not an RPA or model aircraft, CASA is required to provide a copy of aircraft registration information to the aircraft registration holder. RPA or model aircraft registration information is held on an online portal accessible only by the registration holder of the RPA or model aircraft.

Item 10 – Before regulation 47.060

Division 47.C.1 – Registration of aircraft other than certain RPA and model aircraft was inserted.

Regulation 47.058 provides that existing Subpart 47.C is renamed **"**Division 47.C.1" and its applicability excludes RPAs and model aircraft.

Item 11 – At the end of Subpart 47.C

The following regulations were inserted under new heading "Division 47.C.2—Registration of medium RPA, small RPA, very small RPA, micro RPA and model aircraft".

Regulation 47.096 - Application of Division 47.C.2

Subregulation 47.096(1) provides that Division 47.C.2 applies to model aircraft and specified types of RPA.

Subregulation 47.096(2) provides for the issue of a legislative instrument, listing kinds of aircraft excluded from the requirement for registration.

Subregulation 47.096(3) provides that CASA can issue an instrument prescribing classes of aircraft or particular aircraft to which registration applies.

Regulation 47.096A – Certain RPAs and model aircraft-registration requirements

Subregulation 47.096A(1) provides that a person commits a strict liability offence if the person operates, or conducts an operation using, an aircraft that is required to be registered under this Division and the aircraft is not registered.

Subregulation 47.096A(2) provides that a person commits a strict liability offence if the person supervises a person who operates an aircraft that is required to be registered under this Division that is not registered.

Subregulation 47.096A(3) provides for a strict liability offence for a person to operate an aircraft registered as a model aircraft but it is not a model aircraft.

Subregulation 47.096A(4) provides for a strict liability offence if the person supervises the operation by another person of an aircraft that is registered under this Division as a model aircraft and the other person is under 16 years old and the aircraft is not a model aircraft.

Regulation 47.097 – Application for registration of certain RPA and model aircraft

Subregulation 47.097(1) provides that a person may apply to CASA to register an RPA or model aircraft.

Subregulation 47.097(2) provides that a person under the age of 16 may not register an RPA or model aircraft with CASA.

Subregulation 47.097(3) provides that the application for registration for a model aircraft must include a declaration that the aircraft is to be operated exclusively as a model aircraft.

Regulation 47.098 – Registration of certain RPA and model aircraft

Subregulation 47.098(1) provides that CASA must register an RPA or model aircraft if the application meets all of the requirements.

Subregulation 47.098(2) specifies what information about the aircraft must be entered in the Australian Civil Aircraft Register by CASA after registering an RPA or model aircraft.

Regulation 47.099 – Period of registration for certain RPA and model aircraft.

Subregulation 47.099(1) provides that the registration for RPA ends after 12 months.

Subregulation 47.099(2) provides that initial registration for model aircraft ends after 12 months and re-issued registration ends at the end of the first anniversary day for the certificate that occurs following registration of the model aircraft.

Subregulation 47.099(3) is inserted to define the term *anniversary day*.

Subregulation 47.099(4) provides that if the registration anniversary date is 29 February the anniversary day for the certificate is to be 1 March in a year that is not a leap year.

Regulation 47.099A Certificates of registration for Division 47.C.2

Subregulation 47.099A(1) provides that a registration certificate may be issued for more than one aircraft.

Subregulation 47.099A(2) provides reasons that CASA may reissue a certificate of registration to the registration holder.

Subregulation 47.099A(3) provides that a certificate of registration must state the period of registration of each aircraft covered by the certificate.

Regulation 47.099B Requirement to produce certificate of registration (or copy)

Subregulation 47.099B(1) provides that a person who operates an RPA or model aircraft must, if required, produce a certificate of registration or a copy of the certificate when requested by a person covered by subregulation (2).

Subregulation 47.099B(2) provides, for the purposes of subregulation (1), the category of persons who can demand production of a certificate of registration, being an authorised person or police.

Subregulation 47.099B(3) provides for an offence of strict liability if the person fails to comply with the demand to produce the certificate of registration.

Subregulation 47.099B(4) provides that a person who supervises another person who operates or conducts an operation of an RPA or model aircraft must, if required, produce a certificate of registration.

Subregulation 47.099B(5) provides for an offence of strict liability if the supervising person fails to comply with the demand to produce the certificate of registration.

Item 12 –Regulation 47.100A was inserted before regulation 47.100

Regulation 47.100A provides that Subpart 47.D applies to an aircraft registered under Division 47.C.1.

Item 13 –Before regulation 47.105 Regulation 47.105A

Regulation 47.105A provides that Subpart 47.E applies to an aircraft registered under Division 47.C.1.

Item 14 – Paragraph 47.131(1)(a)

After the word "aircraft", the following is inserted "registered under Division 47.C.1".

Paragraph 47.131(1)(a) is amended to limit the applicability of registration transfer requirements to only aircraft registered under Division 47.C.1.

Item 15 – Regulation 47.131B

After the word "aircraft" (first occurring), the following is inserted "registered under Division 47.C.1".

Regulation 47.131B is inserted to limit the applicability of the provision dealing with cancellation of aircraft registration at the request of the holder for certain purposes to only aircraft registered under Division 47.C.1.

Item 16 –After regulation 47.131B

Regulation 47.131C ***Cancellation of registration – certain RPA and model aircraft*** is inserted to provide when CASA must cancel the registration of certain RPA and model aircraft.

Subregulation 47.131C(1) is inserted to provide that CASA must by written notice cancel an aircraft registration where the aircraft has been modified to such an extent that the aircraft is no longer an aircraft to which the registration applies.

Subregulation 47.131C(2) is inserted to provide that CASA may cancel the registration of an RPA or model aircraft if another certificate of registration for the aircraft is issued to another person.

Item 17 –Regulation 47.139 was inserted before regulation 47.140

Regulation 47.139 is inserted to limit the applicability of Subpart 47.G to only aircraft registered under Division 47.C.1.

Item 18 –Regulation 47.169 was inserted before regulation 47.170

Regulation 47.169 is inserted to limit the applicability of Subpart 47.H to only aircraft registered under Division 47.C.1.

Item 19 – Regulation 101.015

Regulation 101.015 is repealed.

Item 20 – At the end of Subpart 101.C the following is inserted Regulation 101.098

Regulation 101.098 – Identification of certain RPAs and model aircraft- requirements prescribed by the Part 101 Manual of Standards.

Subregulation 101.098(1) provides that the Part 101 Manual of Standards may prescribe requirements relating to the identification of RPA and model aircraft that is required to be registered.

Subregulation 101.098(2) provides an offence of strict liability if a person operated an RPA or model aircraft that is required to be registered and fails to comply with a prescribed identification requirement concerning the aircraft.

Regulation 101.099 – Foreign registered RPAs and model aircraft-requirements prescribed by the Part 101 Manual of Standards.

Subregulation 101.099 (1) provides that the Part 101 Manual of Standards may prescribe requirements to relating to the operation of an RPA and model aircraft that is registered under a law of a foreign country.

Subregulation 101.099(2) provides an offence of strict liability if a person operated an RPA or model aircraft that is registered under a law of a foreign country, but fails to comply with any of the operation requirements in the Part 101 Manual of Standards.

Regulation 101.099A – Modifications of certain RPA and model aircraft-requirements prescribed by the Part 101 Manual of Standards.

Subregulation 101.099A(1) provides that the Part 101 Manual of Standards may prescribe requirements for the modification of an aircraft and the extent to which an RPA or model aircraft could be modified and remain the same aircraft to which the registration applies.

Subregulation 101.099A(2) provides an offence of strict liability if a person operated an RPA or model aircraft in a way that did not comply with any modification requirements in the Part 101 Manual of Standards.

Item 21 – Subregulation 201.004(2) (table item 13, column headed "A decision…")

Subregulation 201.004(2) provides for a decision to cancel the registration of an RPA or model aircraft to be a decision reviewable by the Administrative Appeals Tribunal.

Item 22 – Regulation 201.016 Disclosure etc. of information

The heading to regulation 201.016 is substituted with a new regulation heading with a more descriptive title.

Item 23 Subregulation 201.016(1)

Subregulation 201.016(1) is repealed and substituted with a similar provision authorising CASA to disclose personal information of the type described in subregulation 201.016(2), to a person conducting an air traffic service or carrying out search and rescue operations where the disclosure is necessary for the safety of air navigation.

Item 24 Subregulation 201.016(3)

Subregulation 201.016(3) is repealed and substituted with a provision authorising CASA to disclose information relating to an aircraft registered under Division 47.C.2, to a person providing an air traffic service or an enforcement body for an enforcement related activity.

Item 25 Part 1 of the Dictionary (definition of *certificate of registration*)

The definition of *certificate of registration* is repealed and substituted with a new definition that is inclusive of a certificate issued under regulation 47.090 or in relation to a certificate issued under Division 47.C.2.

Item 26 Part 1 of the Dictionary

A definition of ***Part 47 Manual of Standards*** is inserted into the CASR Dictionary to mean the Manual of Standards issued by CASA under regulation 47.012.

Item 27 Part 1 of the Dictionary (definition of registered)

The existing definition of *registered* is repealed, and substituted with a new definition of *registered* so that an aircraft to which Division 47.C.1 applies is one that has been registered under Division 47.C.1; or in relation to an aircraft to which Division 47.C.2 applies is one that has been registered under Division 47.C.2.

Item 28 Part 1 of the Dictionary (definition of registration holder)

The definition of *registration holder* is amended to mean in the case of an aircraft registered under Division 47.C.1—the aircraft's owner; and in the case of an aircraft that is an RPA or a model aircraft registered under Division 47.C.2—the person who applied for the registration of the aircraft.

Schedule 2 – Accreditation to operate certain RPA and model aircraft

Civil Aviation Safety Regulations 1998

Item 1 – After regulation 101.020

Regulation 101.021 is inserted to describe what an *RPA* is.

Regulation 101.022 is inserted to describe the types of RPA.

Regulation 101.023 is inserted to describe what a *model aircraft* is.

Item 2 – At the end of regulation 101.030

Subregulation 101.030(10) is inserted to provide for subregulations 101.030(7) or (8) to not apply to an area approved for the operation of model aircraft.

Item 3 – Subpart 101.AB (heading)

Subpart 101.AB heading is amended to omit "section 20AB" and substitute "sections 20AA and 20AB".

Item 4 Before regulation 101.047

Regulation 101.046 provides for flight of an RPA (other than a large RPA) without a certificate of airworthiness.

Item 5- Subregulation 101.047(2)

Subregulation 101.047(2) provides for the authorisation of persons to operate model aircraft in certain circumstances without a civil aviation authorisation.

Item 6 Regulation 101.048

Regulation 101.048 provides for the authorisation of persons to operate certain RPA in certain circumstances without a civil aviation authorisation.

Item 7 After regulation 101.065

Regulation 101.066 enables the Part 101 Manual of Standards to prescribe requirements relating to the operation of unmanned aircraft in an area prescribed by the Manual of Standards.

Item 8 Regulation 101.150 (note to definition of *approved area*)

The note to the regulation is amended to correct a reference, so that "101.030(5)" is omitted and substituted with "101.030(7)".

Item 9 Paragraphs 101.235(a), (b) and (c)

Paragraphs 101.235(a), (b) and (c) are amended to omit ", other than for the purpose of sport or recreation".

Item 10 At the end of regulation 101.235

Notes 1 and 2 provide for what the Subpart does not apply to.

Item 11 Subregulation 101.237(1) (note)

Subregulation 101.237(1) (note) is repealed and substituted with "A remote pilot licence is not required to operate an excluded RPA. An accreditation is sufficient—see regulation 101.252 and Subpart 101.FA."

Item 12 Subregulation 101.237(2)

Subregulation 101.237(2) is repealed.

Item 13 Subregulation 101.237(3)

Subregulation 101.237(3) provides for when a very small RPA is an excluded RPA, namely when it is operated in standard RPA operating conditions.

Item 14 Subregulation 101.237(5)

Subregulation 101.237(5) is repealed.

Item 15 Subregulation 101.237(6)

Subregulation 101.237(6) is amended to omit ", or a medium RPA,".

Item 16 Paragraph 101.237(6)(b)

Paragraph 101.237(6)(b) is amended to omit ", including a kind of RPA that is not specified in the holder's remote pilot licence", and substituted with "of a category that is specified in the licence".

Item 17 At the end of paragraph 101.237(6)(b)

A note provides an example of what may be an excluded RPA and what cannot be an excluded RPA for a particular remote pilot licence holder.

Item 18 Regulation 101.238

Regulation 101.238 omits "if, during the operation", and substituted "if, at all times during the operation".

Item 19 Before paragraph 101.238(a)

Before paragraph 101.238(a), '(aa) the RPA is operated in Australian territory; and' is inserted.

Item 20 Regulation 101.247

Regulation 101.247 is repealed.

Item 21 At the end of regulation 101.252

Paragraphs 101.252 (3) and (4) makes it a strict liability offence for a person to fail to produce their remote pilot licence for inspection upon demand by police or an authorised person.

Item 22 subregulation 100.255(1) (note 1)

At subregulation 100.255(1) (note 1) "regulation 101.240", is omitted and substituted with "regulation 101.022".

Item 23 Subregulation 101.280(2) (note 1)

At subregulation 100.280(2) (note 1) "regulation 101.240", is omitted and substituted with "regulation 101.022".

Item 24 Regulation 101.315 (after the heading)

Regulation 101.315 (after the heading) is amended and 'Show cause notice—variation, cancellation or suspension' is inserted.

Item 25 Subregulation 101.315(1)

Subregulation 101.315(1) provides for the variation or suspension of a remote pilot licence in addition to the existing cancellation power. This enables CASA to take different types of enforcement action.

Item 26 Paragraph 101.315(2)(a)

Paragraph 101.315(2)(a) provides for variation or suspension of a remote pilot licence in addition to the existing cancellation power.

Item 27 Paragraph 101.315(2)(b)

Paragraph 101.315(2)(b) inserted the following "varied, suspended or" before "cancelled".

Item 28 Subregulations 101.315(3) and (4)

Subregulations 101.315(3) and (4) provides for immediate suspension of a remote pilot licence in cases of serious risk to the safety of air navigation where a show cause notice has been issued for that reason.

Item 29 Subregulation 101.315(6)

Subregulation 101.315(6) is repealed (except for the note) and replaced with provision of the effect of a remote pilot licence suspension under subregulation 101.315(3).

Item 30 Regulation 101.320 (heading)

Regulation 101.320 (heading) "101.320 variation, suspension or cancellation of remote pilot licence" is inserted.

Item 31 Subregulation 101.320(1)

Subregulation 101.320(1) is amended by inserting the words "vary, suspend or" after "CASA may".

Item 32 Subparagraphs 101.320(1)(c)(ii) and (iii)

Subparagraphs 101.320(1)(c)(ii) and (iii) describes when CASA can seek to vary, suspend or cancel a remote pilot licence.

Item 33 Subregulation 101.320(2)

Subregulation 101.320(2) provides that CASA is required to give notice of a decision if it decides to vary, suspend or cancel a remote pilot licence, or to not do so.

Subregulation 101.320(3) provides the effect of the suspension of remote pilot licence.

Note 1 provides that CASA may also impose a condition on the licence, or vary an existing condition of the licence—see regulation 11.067.

Note 2 provides that regulation 201.004 provides for review of certain decisions by the Administrative Appeals Tribunal.

Item 34 Subparagraph 101.340(1)(c)(i)

In subparagraph 101.340(1)(c)(i) "Advisory Circular 101-05, as", is omitted and substituted with "an advisory circular". Reference to an advisory circular 'as issued by CASA from time to time' will allow for CASA to update the applicable list of functions and duties of a maintenance controller as necessary in the future without the Advisory Circular being limited in its number identification. All Advisory Circulars are published by CASA on its website at https://www.casa.gov.au/rules-and-regulations/standard-page/advisory-circulars and are accessible at no cost.

Item 35 Regulation 101.360 (after the heading)

Regulation 101.360 (after the heading) is amended to insert '*show cause notice – variation, cancellation or suspension'*.

Item 36 Subregulation 101.360(1)

In subregulation 101.360(1) "cancellation of the approval", is omitted and substituted with "variation, suspension or cancellation of the certification".

Item 37 Paragraph 101.360(2)(a)

Paragraph 101.360(2)(a) provides that CASA is required to tell the operator of the facts and circumstances that justifies the variation, suspension or cancellation of the RPA Operator certification under regulation 101.365.

Item 38 Paragraph 101.360(2)(b)

Paragraph 101.360(2)(b) is amended to insert "varied, suspended or" before "cancelled".

Item 39 Subregulations 101.360(3) and (4)

Subregulations 101.360(3) and (4) provides for an immediate suspension power, that can be exercised if CASA reasonably considers there may be a serious risk to the safety of air navigation, and the show cause notice states the RPA operator's certificate is suspended for that reason.

Item 40 Subregulation 101.360(6)

Subregulation 101.360(6) (not including the note) provides that if the certification of a person as an RPA operator is suspended under subregulation (3), what the effects of the suspension are, which include that the operator is taken not to be a certified RPA operator during the period of suspension.

Item 41 Regulation 101.365 (heading)

Regulation 101.365 heading is substituted with "101.365 Variation, suspension or cancellation of RPA operator's certification".

Item 42 Subregulation 101.365(1)

Subregulation 101.365(1) is amended by inserting the words "vary, suspend or" after "CASA may".

Item 43 Subparagraphs 101.365(1)(c)(i), (ii) and (iii)

Subparagraphs 101.365(1)(c)(i), (ii) and (iii) describes the grounds CASA may rely upon to vary, suspend or cancel an RPA operator's certification.

Item 44 Subregulation 101.365(2)

Subregulation 101.365(2) provides that if CASA has given a show cause notice and has decided to vary, suspend or cancel an RPA operator's certificate, or to not do so, it must give a notice of the decision to the operator.

Subregulation 101.365(3) provides that if the certification of an RPA operator is suspended the operator is taken not to be a certified RPA operator and the certification is not in force during the period of suspension.

Note 1 provides that CASA may also impose a condition on the certification, or vary an existing condition of the certification—see regulation 11.067.

Note 2 provides that regulation 201.004 provides for review of certain decisions by the Administrative Appeals Tribunal.

Item 45 Division 101.F.5 (heading)

Division 101.F.5 (heading) is amended to substitute "very small RPA", with "certain RPA".

Item 46 Regulations 101.371 and 101.372

Regulations 101.371 and 101.372 is repealed and substituted with the following.

Regulation 101.371 Application of Division 101.F.5 provides for a requirement to give notice to CASA before the first operation that is conducted by the registered operator of an RPA that is an excluded RPA.

Subregulation 101.371(2) defines the meaning of *first operation* of an RPA.

Subregulation 101.372(1) provides that before the first operation of an RPA is conducted, the registration holder must notify CASA of the operation, in writing, in a form and manner approved by CASA.

Subregulation 101.372(2) provides for a strict liability offence if a registration holder is found to be conducting operations without having notified CASA.

Subregulation 101.372(3) provides for a defence for an individual who is conducting operations without having notified CASA if they can demonstrate that they were conducting the operations under an RPA Operator's Certificate. A note states the defendant's bears an evidential burden in relation to this matter. A reverse onus of proof is justified on the basis of the ease at which the defendant could prove innocence, and the difficulty in differentiating without examination of evidence who was legitimately, and who was not legitimately conducting a particular operation.

Item 47 After Subpart 101.F

After subpart 101.F the following are inserted.

A heading "Subpart 101.FA—Excluded RPA, micro RPA and model aircraft accreditation".

Division 101.FA.1—General

Regulation 101.374A provides that the Subpart applies to the operation of excluded RPA, micro RPA and model aircraft, other than model aircraft that are gliders.

Division 101.FA.2—Accreditation requirements

Regulation 101.374B Excluded RPA, micro RPA and model aircraft—requirement for accreditation or remote pilot licence

Subregulation 101.374B(1) provides for an offence of strict liability if a person operates an excluded or micro RPA, and the person does not hold either an RPA accreditation or remote pilot licence for operation of the excluded or micro RPA.

Subregulation 101.374B(2) provides for an offence of strict liability if a person operates a model aircraft with a gross weight of more than 250 g, and the person does not hold either an RPA accreditation or remote pilot licence for operation of the model aircraft.

Subregulation 101.374B(3) provides that subregulation (2) does not apply to a person operating a model aircraft if the model aircraft is being operated in an area approved as an area for the operation of model aircraft in accordance with any conditions stated in the approval.

Subregulation 101.374B(4) provides that subregulations (1) and (2) do not apply to a person under 16 years old operating an excluded RPA, a micro RPA or a model aircraft if the person is being supervised by a person who is at least 18 years of age who holds an accreditation or remote pilot licence authorising the operation of the aircraft.

Regulation 101.374C Excluded RPA, micro RPA and model aircraft – requirement to produce accreditation or remote pilot licence provides that a person who operates an excluded or micro RPA or model aircraft commits an offence of strict liability if they fail to produce their accreditation or licence to an authorised person or police.

Division 101.FA.3—Grant of accreditation to operate excluded RPA, micro RPA and model aircraft heading is inserted.

A note to this heading provides that in addition to the provisions of the Division, Part 11 contains provisions relating to an application for accreditation under this Division.

Regulation 101.374D Accreditation – Application provides for an individual to apply for accreditation to operate excluded RPA, micro RPA and model aircraft.

Regulation 101.374E Accreditation – grant

Subregulation 101.374E(1) provides that subject to regulation 11.055, CASA must grant an accreditation to an applicant if the applicant is eligible for that kind of accreditation under this regulation.

Subregulation 101.374E(2) provides that the applicant is eligible for an accreditation if the applicant is at least 16 years old, has completed an online training course provided by CASA and has achieved a standard required by CASA in an examination.

Subregulation 101.374E(3) provides for when an applicant is not eligible for an accreditation, including if an accreditation formerly held by the applicant has been cancelled within the period of 12 months before the date of the application.

Subregulation 101.374E(4) provides that two or more persons cannot jointly hold an accreditation.

Subregulation 101.374E(5) provides that an accreditation authorises the holder to operate excluded RPA, micro RPA and model aircraft; or model aircraft as stated in the accreditation.

Regulation 101.374FAccreditation—conduct of online courses and examinations

Subregulation 101.374F(1) provides that the Part 101 Manual of Standards prescribes requirements relating to the conduct of online courses and examinations, including requirements against cheating, in relation to accreditation.

Subregulation 101.374F(2) makes it a strict liability offence for a person to complete, or attempt to complete, an online training course or examination without meeting a requirement under subregulation (1).

Subregulation 101.374F(3) is inserted to provide for an offence if a person does not comply with the requirements against cheating.

Regulation 101.374G Accreditation—cessation provides for when an accreditation ceases.

Regulation 101.374H Notice to accreditation holder to show cause

Show cause notice—cancellation or suspension

Subregulation 101.374H(1) provides for when CASA may give a person who holds an accreditation a show cause notice where there are reasonable grounds for believing that there are facts or circumstances that would justify the suspension or cancellation of the accreditation.

Subregulation 101.374H(2) provides that the show cause notice must tell the accreditation holder of the facts and circumstances that justifies the suspension or cancellation of the accreditation and invite the accreditation holder to show in writing why the accreditation should not be suspended or cancelled.

Immediate suspension if serious risk to the safety of air navigation

Subregulation 101.374H(3) provides that the accreditation is suspended if CASA reasonably believes there may be a serious risk to safety if the accreditation were not suspended, and the show cause notice states the accreditation is suspended for that reason.

Subregulation 101.374H(4) provides that CASA may revoke the suspension at any time.

Subregulation 101.374H(5) provides that if the accreditation is suspended under subregulation (3) what the effects of the suspension are, including that the holder is taken not to be the holder of an accreditation during the period of suspension.

Regulation 101.374J Suspension or cancellation of accreditation

Subregulation 101.374J(1) outlines the grounds CASA may rely upon to suspend or cancel an accreditation.

Notice of decision

Subregulation 101.374J(2) provides that if CASA has given a show cause notice to an accreditation holder and decided to suspend or cancel the accreditation, or to not do so, it must give a notice of the decision to the holder.

Effect of suspension

Subregulation 101.374J(3) provides that if an accreditation is suspended under this regulation, what the effects of the suspension are, including that the accreditation holder is taken not to be the holder during the period of suspension and the accreditation is not in force during the period of suspension.

Item 48 Regulation 101.375

Regulation 101.375 is amended to omit "100 grams or more", and substitute this with "more than 250 g".

Item 49 Section 101.375 (Note 1)

Regulation 101.375 (Note 1) is amended to omit "the Dictionary", and substitute this with "regulation 101.023".

Item 50 Regulation 101.380 (note to definition of *approved area*)

The note is repealed.

Item 51 Regulation 101.380 (definition of *giant model aircraft*)

Regulation 101.380 (definition of giant model aircraft) is amended to omit ", but not more than 150 kilograms".

Item 52 Regulation 101.380 (note to definition of giant model aircraft)

Regulation 101.380 note is repealed and substituted with a new note.

Item 53 Section 101.425 (note to definition of *approved area*)

Regulation 101.425 (note to definition of *approved area*) is amended to omit "101.030(5)", and substituted with "101.030(7)".

Item 54 Part 1 of the Dictionary

Part 1 of the Dictionary is amended by the insertion of definitions of 'accreditation' and 'accreditation holder'.

Item 55 Part 1 of the Dictionary (definition of large RPA)

Part 1 of the Dictionary (definition of large RPA) is amended to repeal and substitute a definition of "large RPA".

Item 56 Part 1 of the Dictionary (definition of medium RPA)

Part 1 of the Dictionary (definition of medium RPA) is amended to repeal and substitute the definition of "medium RPA".

Item 57 Part 1 of the Dictionary (definition of micro RPA)

Part 1 of the Dictionary (definition of micro RPA) is amended to repeal and substitute the definition of "micro RPA".

Item 58 Part 1 of the Dictionary (definition of model aircraft)

Part 1 of the Dictionary (definition of model aircraft) is amended to repeal and substitute the definition of "model aircraft".

Item 59 Part 1 of the Dictionary (definition of RPA)

Part 1 of the Dictionary (definition of RPA) is amended to repeal and substitute the definition of "RPA".

Item 60 Part 1 of the Dictionary (definition of small RPA)

Part 1 of the Dictionary (definition of small RPA) is amended to repeal and substitute the definition of "small RPA".

Item 61 Part 1 of the Dictionary (definition of very small RPA)

Part 1 of the Dictionary (definition of very small RPA) is amended to repeal and substitute the definition of "very small RPA".

Schedule 3 – Other Amendments

Civil Aviation Safety Regulations 1998

Item 1 After paragraph 11.030(1)(aa)

New paragraph 11.030(1)(ab) provides that if an application for an authorisation is made by an agent on behalf of the applicant it must be accompanied by a declaration by the agent under subregulation 11.033(1).

Item 2 After regulation 11.032 the following are inserted:

Regulation 11.033 Applications by agents

Subregulation 11.033(1) provides that if an agent applies on behalf of an applicant for an authorisation, the application must include a declaration from the applicant that the application has been prepared in accordance with information provided by the applicant.

Subregulation 11.033(2) provides that for the purposes of subregulation (1), remote pilot licences or an authorisation of a kind determined under subregulation (2), are covered by this regulation.

Subregulation 11.033(3) provides that for the purposes of subsection 98(5A) and regulation 11.033(2)(b), CASA may by instrument determine kinds of authorisations, and that such a determination is a legislative instrument.

Subregulation 11.033(4) provides that an agent commits an offence of strict liability if the agent fails to comply with the requirement to include a declaration in an application in accordance with subregulation (1).

Regulation 11.034 Requirements for applications made by agents

Subregulation 11.034(1) provides that if a person authorises another person (the agent) to make an application for an authorisation on their behalf, the applicant must give the agent any information and documents required by the agent for the application, and a declaration stating the applicant has authorised the agent to make the application and the information provided to the agent is true and correct.

Subregulation 11.034(2) provides that the applicant commits an offence of strict liability if the applicant fails to comply with the requirement to give a signed declaration.

Subregulation 11.034(3) and (4) provides requirements for agents and applicants to keep declarations (or a copy of it).

Subregulation 11.034(5) provides that a person commits an offence of strict liability if the person fails to comply with the requirement to keep declarations.

Subregulation 11.034(6) provides that a person who makes or receives a declaration must produce it (or a copy of it) to person described in subregulation (7) who demands it.

Subregulation 11.034(7) provides that the persons who may demand a declaration are authorised persons or police.

Subregulation 11.034(8) provides that an agent or applicant commits an offence of strict liability if the agent or applicant fails to comply with a demand to produce the declaration.

Schedule 4 – Transitional provisions

Civil Aviation Safety Regulations 1998

Item 1 Subpart 202.AD (after the heading)

New heading "Division 202.AD.1 – Transitional provisions relating to the commencement of Part 11" amendments is inserted.

Item 2 After regulation 202.013

New heading "**Division 202.AD.2 – Amendments made by Schedule 3 to the Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft—Registration and Accreditation) Regulations 2019**", is inserted.

Regulation 202.014 Applications by agents for authorisations provides that the amendments made by Schedule 3 apply in relation to an application to CASA for an authorisation covered by subregulation 11.033(2) (as inserted by those amendments) if the application is made on or after the commencement of that Schedule.

Item 3 After Division 202.BF.2

New heading **"Division 202.BF.3—Amendments made by Schedule 1 to the Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft Registration and Accreditation) Regulations 2019",** is inserted.

Regulation 202.229 Definitions for Division 202.BF.3

Subregulation 202.229(1) provides the following definitions: amending Regulations, model aircraft stage 1 application day, model aircraft stage 2 application day, registration requirements provisions and RPA application day.

Subregulation 202.229(2) provides that the Director may, by legislative instrument, determine an alternative day for the purposes of the commencement of the above application days.

Regulation 202.230 Registration of medium RPA, small RPA, very small RPA and micro RPA

Subregulation 202.230(1) provides that CASA must register an aircraft as an RPA under Division 47.C.2 for which an application is made before the RPA application day, if CASA is satisfied that the aircraft is required to be registered as an RPA, or will be required to be registered as an RPA on and after the RPA application day.

Subregulation 202.230(2) provides that on and after the RPA application day, certain provisions, as amended or inserted by Schedule 1 to the amending Regulations, apply in relation to the requirement to register an RPA.

A note provides that for model aircraft, the registration requirements provisions start to apply on or after 2 March 2020 (or a later day determined by the Director)—see subregulation 202.231(3).

Regulation 202.231 Registration of model aircraft

Subregulation 202.231(1) provides that on and after the model aircraft stage 1 application day, Division 47.C.2, as inserted by Schedule 1 to the amending regulations, apply in relation to the registration of an aircraft as a model aircraft, subject to this regulation and regulation 202.232. A note is inserted to state the model aircraft stage 1 application day is 2 March 2020 (or a later day determined by the Director).

Subregulation 202.231(2) provides that subject to regulation 11.055, on an application under regulation 47.097, as inserted by Schedule 1 to the amending regulations, that are made before the stage 2 model aircraft application day, CASA must register an aircraft as a model aircraft if satisfied of certain matters. A note is inserted to state the model aircraft stage 2 application day is 29 May 2020 (or a later day determined by the Director).

Subregulation 202.231(3) state the registration requirement provisions apply in relation to a model aircraft (within the meaning of regulation 101.023 as inserted by Schedule 2) on and after the model aircraft stage 2 application day. A note is inserted to state the registration requirement provisions start to apply on or after 13 December 2019 (or a later day determined by the Director).

Regulation 202.232 Initial periods of registration of aircraft as model aircraft

Subregulation 202.232(1) provides that if an aircraft that begins to be registered as a model aircraft under Division 47.C.2 before 27 April 2020, the registration ends on the date specified in the table in the regulation.

Subregulation 202.232(2) provides that if the Director, determines a day for the purposes of the definition of ***model aircraft stage 1 application*** that is later than 2 March 2020 by a particular number of days (the ***extended number*** of days), a reference in the table in subregulation (1) is taken to be a reference to the day that is the extended number of days later.

Item 4 After Division 202.FA.1

New division heading **Division 202.FA.2—Amendments made by Schedule 2 to the Civil Aviation Safety Amendment (Remotely Piloted Aircraft and Model Aircraft—Registration and Accreditation) Regulations 2019** is inserted.

Regulation 202.463 Definitions for Division 202.FA.2 provides for the following definitions in this Division: amending Regulations, model aircraft stage 1 application day model aircraft stage 2 application day and RPA application day.

Regulation 202.464 Delayed application - show cause notices provides that the amendments of the regulations by Schedule 2 to the amending regulations apply in relation to a show cause notice given by CASA on or after the commencement of that Schedule.

Regulation 202.465 Delayed application - RPA provides that on and after the RPA application day, certain provisions, as inserted by Schedule 2 to the amending Regulations, apply in relation to the operation of an RPA.

Regulation 202.466 Delayed application—model aircraft

New definition of model aircraft

Subregulation 202.466(1) is inserted to provide when the new definition for model aircraft will apply.

Accreditation requirements

Subregulation 202.466(2) is inserted to provide for accreditation requirements and when they will apply.

Rules for operating model aircraft

Subegulation 202.466(3) is inserted to provide that the existing rules for operating model aircraft will continue to apply until immediately before the new definition and application of model aircraft commences.

Approval of areas for the operation of aircraft

Subregulation 202.466(4) is inserted to provide for the approval of areas for the operation of aircraft and when they will apply.

Enforcement of rules relating to model aircraft accreditation

Subregulation 202.466(5) is inserted to provide for the enforcement of rules relating to model aircraft accreditation and when the rules will apply.