

## Explanatory Statement

### Civil Aviation Safety Regulations 1998

#### Direction — operation of certain unmanned aircraft

##### Purpose

This legislative instrument gives directions to regulate the operation of certain unmanned aircraft in the interests of safety, particularly in relation to the operation of unmanned aircraft in the area of emergency operations, near aerodromes, and near people not associated with the operation of the aircraft.

##### Legislation

Section 98 of the *Civil Aviation Act 1988* (the *Act*) empowers the Governor-General to make regulations for the Act and in the interests of the safety of air navigation. Relevantly, the Governor-General has made the *Civil Aviation Safety Regulations 1998* (*CASR*).

Subsection 98 (5D) of the Act provides that a legislative instrument made under the Act or the regulations may apply, adopt or incorporate any matter contained in any instrument or other writing as in force or existing from time to time, even if the other instrument or writing does not yet exist when the legislative instrument is made.

Part 101 of CASR deals with the safety regulation of unmanned aircraft and rockets.

Relevantly for present purposes, Part 101 includes the following Subparts:

- Subpart 101.B that imposes a general prohibition on the hazardous operation of unmanned aircraft
- Subpart 101.C that imposes a range of obligations in relation to the operation of unmanned aircraft generally
- Subpart 101.D that comprises specific provisions for the regulation of tethered balloons and kites
- Subpart 101.E that comprises specific provisions for the regulation of unmanned free balloons
- Subpart 101.F that comprises specific provisions for the regulation of remotely piloted aircraft (*RPA*)
- Subpart 101.G that comprises specific provisions for the regulation of model aircraft
- Subpart 101.H that comprises specific provisions for the regulation of rockets
- Subpart 101.I that comprises specific provisions for the regulation of fireworks displays.

The CASR Dictionary defines a number of terms used in Part 101. Most relevantly, these include:

- **micro RPA**: defined as an RPA with a gross weight of 100 g or less
- **model aircraft**: defined as an aircraft that is used for sport or recreation, and cannot carry a person
- **RPA**: defined as a remotely piloted aircraft, other than a balloon or a kite.

Regulation 101.005 prescribes certain applicability of Part 101. Subregulation (3) prescribes certain operation of unmanned aircraft to which Subparts 101.C to 101.I do not apply.

Regulation 101.029 makes provision for CASA to grant approvals in respect of provisions that refer to a person holding an approval under regulation 101.029.

Regulation 101.030 makes provision for CASA to approve areas (*approved areas*) in which unmanned aircraft or rockets may be operated. Regulation 101.030 does not refer to regulation 101.029.

In Subpart 101.B, regulation 101.055 creates offence provisions for the hazardous operation of unmanned aircraft in specified circumstances. It applies to all unmanned aircraft and rockets that are not aircraft.

In Subpart 101.C:

- regulation 101.070 prohibits a person to operate an unmanned aircraft above 400 feet (*ft*) above ground level (*AGL*) in controlled airspace except in an approved area for the aircraft and in accordance with air traffic control clearance
- regulation 101.075 prohibits a person to operate an unmanned aircraft above 400 ft AGL within 3 nautical miles (*NM*) of an aerodrome, or over an area that is the movement area or runway of an aerodrome or over an area that is the approach or departure path of an aerodrome, unless permitted under Part 101 or by a permission under regulation 101.080
- regulation 101.085 prohibits a person to operate an unmanned aircraft above 400 ft AGL except in an approved area or as otherwise permitted under Part 101.

In Subpart 101.F:

- regulation 101.235 relevantly provides that the Subpart does not apply to the operation of very small RPA, small RPA or medium RPA if they are operated for the purpose of sport and recreation
- regulation 101.237 defines “excluded RPA” by reference to a range of operations for RPA: generally the larger the RPA the more restricted the range of operations in which the RPA will be an excluded RPA
- regulation 101.238 prescribes “standard RPA operating conditions”, compliance with which renders an RPA an “excluded RPA” in circumstances prescribed in regulation 101.237
- regulation 101.245 prohibits the operation of RPA within 30 metres of a person who is not directly associated with the operation of the RPA: the prohibition does not apply to certain RPA airships, or if the person is standing behind the RPA while it is taking off, or in relation to the operation of certain RPA to within 15 metres of the person with the person’s consent
- regulation 101.250 prohibits the operation of a very small, small or medium RPA outside an approved area if the RPA stays clear of populous areas and, if the RPA is operated above 400 ft AGL, with CASA’s approval
- regulation 101.252 and Division 101.F.3 create a scheme for persons to operate RPA that are not excluded RPA when they hold a remote pilot licence: the scheme imposes competency requirements and conditions on the exercise of the privileges of the licence
- regulation 101.270 and Division 101.F.4 create a scheme for persons to operate RPA that are not excluded RPA when they are certified as an RPA operator: the scheme regulates a range of commercial operations and operation of larger RPA and imposes competency requirements and conditions on the exercise of the privileges of the certification.

In Subpart 101.G:

- regulation 101.395 relevantly prohibits the operation of model aircraft within 30 metres of a person who is not directly associated with the operation of the aircraft: the prohibition does not apply if the person is standing behind the aircraft while it is taking off, or in relation to a person who is judging the aircraft as part of a model aircraft flying competition
- regulation 101.400 prohibits the operation of a model aircraft outside an approved area above 400 ft AGL unless the aircraft is kept in sight and is kept clear of populous areas.

In Subpart 101.H:

- regulation 101.440 prohibits the launch of prescribed rockets above 400 ft AGL within 3 NM of an aerodrome, or over an area that is the movement area or runway of an aerodrome or over an area that is the approach or departure path of an aerodrome, unless permitted under Part 101 or by a permission under regulation 101.445
- regulation 101.455 prohibits the launch of a rocket that is not a model rocket to higher than 400 ft AGL only in an approved area or as permitted under Part 101.

Subpart 101.I prohibits the use of firework projectiles above 400 ft AGL only with CASA approval.

Relevantly for the present instrument, Part 101 does not regulate:

- the operation of unmanned aircraft operated for recreation or sport purposes in an area under the control of an emergency authority, for example a bushfire zone
- how many excluded RPA or model aircraft a person may operate at a single time.

Subpart 11.G of CASR provides for CASA to issue directions in relation to matters affecting the safety of air navigation. Under paragraph 11.245 (1) (a) of CASR, CASA may, by instrument, issue a direction about any matter affecting the safe navigation and operation of aircraft. Subregulation 11.245 (2) of CASR provides that CASA may issue such a direction if CASA is satisfied that it is necessary to do so in the interests of the safety of air navigation, if the direction is not inconsistent with the Act, and for the purposes of CASA's functions.

Under paragraph 11.250 (a) of CASR, a direction under regulation 11.245 ceases to be in force on the day specified in the direction.

Under regulation 11.255, it is an offence of strict liability to contravene a direction under regulation 11.245.

## **Background**

Australia is experiencing exponential growth in the number of RPA, commonly known as "drones", being operated both recreationally and commercially. Whilst CASR are a mature set of regulations pertaining to RPA operations, the scheme has not proved sufficiently agile to respond to the rapid adoption of innovative RPA technologies and novel uses of RPA that were not contemplated when Part 101 was made. Similarly, the exponential growth of RPA operations introduces new potential aviation safety risks that CASA keeps under constant review. These circumstances have resulted in the expression of community concerns about risks to the safety of manned aircraft caused by the operation of unmanned aircraft, as well as reports of circumstances in which unmanned aircraft could reasonably be assessed as creating a risk to manned aircraft.

Consistent with CASA's regulatory philosophy, and where deemed necessary, CASA will take appropriate regulatory measures to mitigate such risks.

In particular, CASA has identified that Part 101 is presently not sufficiently prescriptive or clear in relation to some other types of unmanned aircraft operations. CASA has identified that the requirement to not operate an RPA over an area where a fire, police or other public safety or emergency operation is being conducted without the approval of a person in charge of the operation is found only within the "standard RPA operating conditions". These conditions do not apply in a range of circumstances, including the operation of unmanned aircraft generally for recreational or sport purposes. CASA has previously received reports of emergency operations involving manned aircraft being interrupted due to an unauthorised RPA operating in the emergency area.

With the commencement of the 2017/18 bushfire season, CASA considers it paramount to prohibit operation of unmanned aircraft near such emergency or public safety operations unless approved by the person in charge of the operation. This is necessary given that such operations often involve rescue and/or firefighting aircraft operating at low level and in reduced visibility such that obstruction or impact by them with an unmanned aircraft would be a significant risk to aviation safety. Similarly, many emergency service organisations deploy their own unmanned aircraft under the authorisations held by each organisation.

At the same time, CASA has sought to clarify and simplify the requirements for operation of unmanned aircraft, particularly those applicable to recreational and sport use, particularly near aerodromes, near other people, and above 400 ft AGL.

The directions in the instrument are an interim, precautionary measure, and will be revisited in light of the outcomes of a fuller review of the legislation currently in train.

## **Details of the instrument**

### Section 1

Section 1 of the instrument provides that the instrument commences on the day after registration on the Federal Register of Legislation and specifies, for paragraph 11.250 (a) of CASR, that it is repealed at the end of 30 September 2020.

### Section 2

Section 2 defines matters for the instrument.

A note refers to terms used in the instrument that are defined in CASR under which the instrument is made.

The definition of *helicopter landing site (HLS)* reflects the definition in international standards.

The term "non-controlled aerodrome" is used in the instrument to differentiate the requirements applicable to controlled aerodromes, and also to capture HLSs that are not located at controlled aerodromes.

Subsection (2) is a deeming provision. It extends the meaning of “aware” in the instrument that is used in the context of a person being aware that a manned aircraft is operating at an aerodrome. Subsection (2) has effect to deem a person to be aware of an aircraft if a reasonable person ought to have been aware of the aircraft.

### Section 3

Section 3 states the application of the instrument. The instrument does not apply to the operation of unmanned aircraft mentioned in subregulation 101.005 (3) of CASR, namely:

- control-line model aircraft
- model aircraft or unmanned airships operated indoors
- small balloons within 100 metres of a structure and not above the top of the structure
- unmanned tethered balloons that remain below 400 ft AGL
- firework rockets not capable of rising more than 400 ft AGL.

### Section 4

Subsection 4 (1) directs a person not to control an unmanned aircraft within 3 NM of the movement area of a controlled aerodrome. The direction intends to capture the area of 3 NM within any part of such a movement area. The direction extends the restriction on operation of unmanned aircraft near aerodromes imposed in regulation 101.075 as the direction operates to limit the operation of such aircraft at any height, not only operations above 400 ft AGL. This is to mitigate risks to unmanned aircraft associated with unmanned aircraft that are not effectively controlled by operators and to provide a simpler rule for the operation of unmanned aircraft near controlled aerodromes. The direction will provide pilots of manned aircraft and air traffic controllers confidence that flights to and from controlled aerodromes will not be impacted by unmanned aircraft operations, and a more easily enforced rule in the event of unauthorised operations.

A note to subsection 4 (1) identifies the *Determination of airspace and controlled aerodromes etc*, as in force from time to time (the **Determination**), as the source of aerodromes that are controlled aerodromes. The Determination is a legislative instrument made under section 5 of the *Airspace Regulations 2007* that prescribes aerodromes that are controlled aerodromes as well as volumes of Australian airspace in which different operational and control arrangements apply, and is available on the Federal Register of Legislation. The Determination may be applied, adopted or incorporated as in force from time to time in accordance with subsection 98 (5D) of the Act.

The direction does not apply in the circumstances mentioned in subsections (2) and (3).

Subsection (2) disapplies the direction in respect of the operation of unmanned aircraft in accordance with an “authorisation” under CASR, within the meaning of the word “authorisation” in regulation 11.015 of CASR, or an exemption under CASR, where the authorisation or exemption permits operation of the unmanned aircraft near the aerodrome at which the operation is being conducted.

The subsection also disapplies the direction to the operation of an unmanned aircraft in an area that is approved under regulation 101.030 of CASR, if the operation is conducted in accordance with the terms of the approval.

The subsection also disapplies the direction to operation of RPA by the holder of a remote pilot licence under the auspices of a certified RPA operator, in accordance with the privileges

and limitations of remote pilot licence and the certification of the RPA operator. The direction still applies to the operation of an RPA by the holder of a remote pilot licence who is controlling the RPA for other purposes, for example sport or recreation.

Subsection (3) disapplies the direction to the operation of other specified kinds of unmanned aircraft.

### Section 5

Section 5 issues directions in respect of the operation of unmanned aircraft near non-controlled aerodromes, as defined in the instrument. The rationale for the directions is the same as stated in relation to the direction in section 4.

Subsection 5 (1) directs a person not to launch an unmanned aircraft within 3 NM of the movement area of a non-controlled aerodrome if the person is aware that a manned aircraft is operating to or from the aerodrome.

Subsection (2) applies if a person is controlling an unmanned aircraft within 3 NM of the movement area of a controlled aerodrome. If the person then becomes aware that an unmanned aircraft is operating to or from the aerodrome, the person is directed to immediately ensure the aircraft is safely manoeuvred away from the path of the manned aircraft and to land the aircraft as soon as safely possible.

This will ensure that persons operating unmanned aircraft are subject to precautionary requirements in circumstances where a manned aircraft is operating close enough to the unmanned aircraft for the person to be aware of it, without imposing requirements to avoid manned aircraft that may be operating near the aerodrome but not near the unmanned aircraft.

The state of “awareness” in the directions is affected by subsection 2 (2) and ensures that operators of unmanned aircraft cannot avoid the safety requirements as a result of wilful blindness about a nearby manned aircraft.

The directions intend to capture the area of 3 NM within any part of such a movement area.

The directions do not apply in the circumstances mentioned in subsections (3) and (4).

Subsection (3) disapplies the directions in respect of the operation of unmanned aircraft in accordance with an “authorisation” under CASR, within the meaning of the word “authorisation” in regulation 11.015 of CASR, or an exemption under CASR, where the authorisation or exemption permits operation of the unmanned aircraft near the aerodrome at which the operation is being conducted.

The subsection also disapplies the direction to the operation of an unmanned aircraft in an area that is approved under regulation 101.030 of CASR, if the operation is conducted in accordance with the terms of the approval.

The subsection also disapplies the directions to operation of RPA by the holder of a remote pilot licence under the auspices of a certified RPA operator, in accordance with the privileges and limitations of remote pilot licence and the certification of the RPA operator. The direction still applies to the operation of an RPA by the holder of a remote pilot licence who is controlling the RPA for other purposes, for example sport or recreation.

Subsection (4) disapplies the directions to the operation of other specified kinds of unmanned aircraft.

### Section 6

Subsection 6 (1) directs a person not to control an unmanned aircraft higher than 400 ft AGL.

Subsection (2) states circumstances in which the direction does not apply, including the operation of unmanned aircraft in accordance with Subparts 101.D, 101.E and 101.H of CASR.

Subsection (2) also disapplies the direction in respect of the operation of unmanned aircraft in accordance with an “authorisation” under CASR, within the meaning of the word “authorisation” in regulation 11.015 of CASR, or an exemption under CASR, where the authorisation or exemption permits operation of the unmanned aircraft higher than 400 ft AGL.

The subsection also disapplies the direction to the operation of an unmanned aircraft in an area that is approved under regulation 101.030 of CASR, if the operation is conducted in accordance with the terms of the approval.

The subsection also disapplies the directions to operation of RPA by the holder of a remote pilot licence under the auspices of a certified RPA operator, in accordance with the privileges and limitations of remote pilot licence and the certification of the RPA operator. The direction still applies to the operation of an RPA by the holder of a remote pilot licence who is controlling the RPA for other purposes, for example sport or recreation.

Paragraph (f) of subsection (2) also disapplies the directions to operation of a model aircraft in accordance with an approval given by CASA for the purpose of the paragraph. CASA will assess applications for a person to operate model aircraft above 400 ft AGL on a case by case basis by reference to safety considerations.

The direction is not disapplied with respect to micro RPA.

The direction consolidates and simplifies the rules relating to the maximum operating height for unmanned aircraft and extends the rule in regulation 101.400 relating to model aircraft.

### Section 7

Subsection 7 (1) directs that a person must not control an unmanned aircraft over an area where a fire, police or other public safety or emergency operation is being conducted. The direction ensures the appropriate safety regulation of all operation of unmanned aircraft over public safety or emergency operations. The direction is intended to ensure that emergency operations can be conducted efficiently and safely, with particular regard to the discretion of the emergency authorities to control aviation activities in the area as part of the emergency response.

Subsection (2) states that the direction does not apply if the operation of the unmanned aircraft is approved by the person in control of the emergency operation, including in circumstances where the emergency response would not be affected by the operation of unmanned aircraft in the area. This direction otherwise covers all unmanned aircraft to which the instrument applies (see section 3).

### Section 8

Section 8 issues a direction in relation to the operation of RPA near people. It gives a more restrictive but clearer requirement than that presently expressed in Part 101. Notably, it extends the present restrictions in CASR concerning operation of RPA near people by overriding the right in subregulation 101.245 (3) to operate an RPA up to 15 metres of a person in the circumstances prescribed in the subregulation.

Under subsection (1), a person controlling an RPA is directed to ensure that the RPA is not operated within 30 metres of another person unless the other person has duties essential to the control or navigation of the RPA. The formulation of the direction is similar to the definition of *flight crew member* in the CASR Dictionary and is intended to clarify the direct link between a person who is close to the RPA and that person's role in the control of the RPA.

The intention of the direction is to clarify the intention of regulation 101.245 that RPA should not be operated near persons who may be associated with the person controlling an RPA but who are not associated with the control of the RPA, for example a person being photographed or filmed by the RPA.

Subsection (2) explains that the measurement of 30 metres is taken in every direction from the point on the ground directly below the RPA at any given time. This clarifies the existing requirement in Part 101.

The direction does not apply in the circumstances mentioned in subsection (3). The first circumstance mentioned is the operation of an RPA in accordance with an "authorisation" under CASR, within the meaning of the word "authorisation" in regulation 11.015 of CASR, or an exemption under CASR, where the authorisation or exemption permits operation of the unmanned aircraft less than 30 metres of another person. Relevantly, an "authorisation" mentioned in subsection (3) includes an approval under regulation 101.029 of CASR granted for regulation 101.245. This circumstance in which the direction does not apply will permit people who have legitimate reasons to operate under Subpart 101.F near people to seek approval for such operations, subject to an assessment of safety risks.

Subsection (3) also disapplies the direction in the circumstances mentioned in subregulation 101.245 (4) for RPA to which Subpart 101.F applies.

The direction is not disapplied in respect of micro RPA generally.

### Section 9

Section 9 directs that a person piloting an RPA or model aircraft may only pilot 1 aircraft at a time. The direction reflects the limitation on the holders of remote pilot licences in subregulation 101.300 (5) that is appropriate to apply to other operators of RPA and model aircraft. The direction applies to micro RPA.

The direction does not apply in relation to the operation of an RPA in accordance with an "authorisation" under CASR, within the meaning of the word "authorisation" in regulation 11.015 of CASR, or an exemption under CASR, where the authorisation or exemption permits a person to control multiple RPA or model aircraft.

### **Legislation Act 2003 (the LA)**

Paragraph 98 (5A) (a) of the Act provides that CASA may issue instruments in relation to matters affecting the safe navigation and operation or the maintenance of aircraft.



Additionally, paragraph 98 (5AA) (a) of the Act provides that an instrument issued under paragraph 98 (5A) (a) is a legislative instrument if the instrument is expressed to apply in relation to a class of persons, and paragraph 98 (5AA) (b) of the Act provides that an instrument issued under paragraph 98 (5A) (a) is a legislative instrument if the instrument is expressed to apply in relation to a class of aircraft.

The instrument directs a class of persons in relation to the operation of a class of aircraft and is, therefore, a legislative instrument subject to tabling and disallowance in the Parliament under sections 38 and 42 of the LA.

### **Consultation**

CASA has consulted directly with the principal unmanned aircraft associations in relation to the instrument, namely Australian Association for Unmanned Systems, Australian Certified UAV Operators Inc., Australian Miniature Aerospports Society Inc. and Model Aeronautical Association of Australia Inc. In addition, CASA consulted with members of the former Unmanned Aircraft Systems Sub Committee that was established under CASA's previous consultation framework as a forum to discuss unmanned aircraft policy issues. While some specific suggestions were made in relation to the instrument that CASA is addressing through other mechanisms, the feedback on the draft instrument was positive.

Further, in light of information CASA has received about unsafe and unauthorised operation of unmanned aircraft, and concerns expressed more generally about the risk of conflict between unmanned and manned aircraft, CASA considers it prudent to issue the directions as soon as possible as an interim precautionary measure to mitigate relevant aviation safety risks, including in relation to the current bushfire season, outcomes of a fuller review of the legislation currently in train.

In these circumstances CASA is satisfied that no further consultation is necessary or appropriate for this instrument for section 17 of the LA.

### **Office of Best Practice Regulation (OBPR)**

A Regulation Impact Statement (*RIS*) is not required in this case, as the instrument is covered by a standing agreement between CASA and OBPR under which a RIS is not required for directions (OBPR id: 14507).

### **Statement of Compatibility with Human Rights**

The Statement of Compatibility with Human Rights at Attachment 1 has been prepared in accordance with Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*. The instrument does not engage any of the applicable rights or freedoms, and is compatible with human rights, as it does not raise any human rights issues.

### **Making and commencement**

The instrument has been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 73 (2) of the Act.

The instrument commences on the day after registration and is repealed at the end of 30 September 2020.

[Instrument number CASA 96/17]

## **Statement of Compatibility with Human Rights**

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

### **Direction — operation of certain unmanned aircraft**

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 legislative instrument**

This legislative instrument gives directions to regulate the operation of certain unmanned aircraft in the interests of safety, particularly in relation to the operation of unmanned aircraft in the area of emergency operations, near aerodromes, and near people not associated with the operation of the aircraft.

#### **Human rights implications**

This legislative instrument does not engage any of the applicable rights or freedoms.

#### **Conclusion**

This legislative instrument is compatible with human rights as it does not raise any human rights issues.

**Civil Aviation Safety Authority**