



# REMOTE AVIATION A U S T R A L I A

## **Changes to CASA's RPAS advisory circulars – July 2018**

### **Introduction**

In July 2018, CASA updated the advisory circulars that provide advice about the commercial operation of RPA (affecting both certified and Excluded RPA operators). In particular, AC 101-01 (RPAS – licensing and operations) and AC 101-10 (Excluded RPA) have been updated. This article will discuss the changes and highlight areas that may affect your operations. Please note, this article should be read in conjunction with CASA's advisory circulars and the current aviation legislation. We will discuss the major changes only, and not the advisory circular as a whole. This article should be read in conjunction with the advisory circulars and CASR 101 to gain a full understanding of Australia's unmanned aircraft legislation.

### **What are advisory circulars?**

CASA has developed advisory circulars (ACs) to provide advice and expanded guidance to explain the regulatory requirements of the Civil Aviation Safety Regulations (CASRs). As per their name, ACs are advisory only, and illustrate CASA's interpretation on how to comply with the regulations. As CASA explains, "advisory circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the regulations, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material. Alternative procedures demonstrating an equivalent or greater level of safety may be acceptable on a case-by-case basis".

### **Operations near controlled aerodromes**

The largest change in the updated advisory circulars relates to operations near aerodromes. The civil aviation legislation (in particular CASR 101.075) requires unmanned aircraft to avoid the approach and departure paths around aerodromes and helicopter landing sites but provides no actual vertical or horizontal dimensions about these flight paths. The advisory circulars have been written to provide advice about how to comply with this regulation.

Before we discuss the latest change, it is important to explain that a "controlled" aerodrome is an airport at which the control tower is operating. While most capital city airports, such as Sydney and Brisbane, are controlled 24 hours a day, some other larger airports, including Gold Coast, Rockhampton and Coffs Harbour, become non-controlled at certain hours. Outside tower hours, controlled aerodromes are treated as non-controlled aerodromes. The ERSA should be consulted for more information about an aerodrome's tower hours and procedures.

In previous versions of the ACs, there was no guidance about avoiding approach and departure paths around controlled aerodromes. The only requirement was you cannot fly within 3nm of the movement area of a controlled aerodrome unless certified (and approved to do so) or if flying a micro RPA. However, a new diagram has been added to the ACs and explains approach and departure paths may extend beyond 3nm from the controlled aerodrome.

The following diagram has been provided by CASA:



However, this removal of the diagrams does not now suddenly allow you unrestricted flight near aerodromes. CASR 101.075 still requires you to avoid approach and departure paths, the problem is now CASA no longer provides you with any guidance. Discussions with CASA have confirmed you now are required to determine these airspace dimensions yourself and appropriately risk manage the operation. If you'd like to apply a conservative approach to your flying, you could use the approach and departure path dimensions provided for "controlled" aerodromes (discussed in the previous section). However, this is a suggestion only – you may have a more appropriate means of defining an approach and departure path depending on your location, and the density and type of traffic using the aerodrome or helicopter landing site.

In addition, there have been no further rules changes for the general operation of RPA near aerodromes. Recreational and Excluded RPA operators are still required to land their RPA (if heavier than a "micro") as soon as possible if operating within 3nm of an aerodrome/landing site and they become aware of an aircraft operating there. Certified operators are required to adhere to any requirements listed in their operations manual and company procedures.

In summary, even if the diagrams for approach/departure paths for non-controlled aerodromes have been removed, the legislation still requires you to avoid these areas. Consider using the dimensions provided for "controlled" aerodromes or apply other risk management techniques.

### **Operations near certain helicopter landing sites**

In the previous ACs, a number of helicopter landing sites (HLS), such as Mossman, Tully and Westmead hospital, were listed as having a blanket 3nm no-fly area around them (no matter the height of the RPA). These were high traffic landing sites around hospitals that also had an "instrument approach" procedure that allowed the helicopter pilots to approach and land in bad.

In the July 2018 update to the ACs, the requirement to remain 3nm from these HLS has been removed. As there is no longer any guidance about determining approach and departure paths around helicopter landing sites, you will need to determine yourself how to remain clear of these areas.

As discussed above in the non-towered aerodromes explanation, recreational and Excluded RPA operators are still required to land their RPA (if heavier than a "micro") as soon as possible if operating within 3nm of a helicopter landing site and they become aware of an aircraft operating there. Certified operators are required to adhere to any requirements listed in their operations manual and company procedures.

### **Determining maximum flying height**

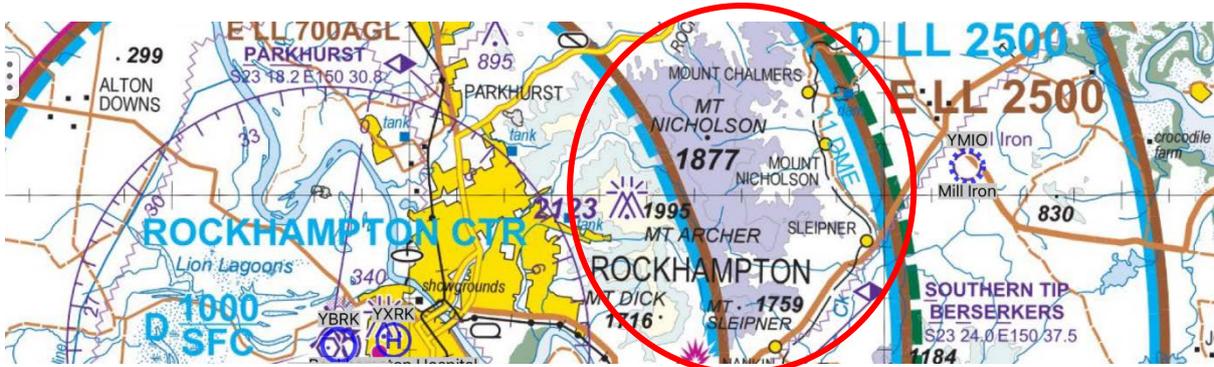
CASA have now provided extra guidance when considering maximum operating heights near aerodromes. If operating near aerodromes, you should consider the elevation of the aerodrome, and not just the RPA's height above ground level. The AC explains:

*"The datum for operations in the vicinity of aerodromes should be the aerodrome elevation. Aerodrome elevations are included in ERSA and available from aerodrome operators."*

In addition, guidance has been given for operations near controlled airspace. The AC explains:

*"In some places, controlled airspace overlies non-controlled airspace with less than 500 ft between the ground and the control area. These areas are tinted purple on visual terminal charts (VTCs). In these places, RPA should not be flown higher than 100 ft below the overlying control area. This entails flying at a height lower than the general 400 ft limit, depending on the location."*

The following extract from the Rockhampton visual terminal chart is an example of the purple shading CASA are discussing:



Why the height restriction? If an air traffic controller has not granted a manned aircraft pilot permission to enter controlled airspace, the pilot must remain clear and may attempt to fly at an altitude below the controlled airspace lower limit (i.e. fly beneath the controlled airspace steps). This allows the pilot to navigate around the controlled airport and remain in non-controlled airspace. However, it is not a typical occurrence that a pilot will fly in the “purple shaded” areas depicted on an aeronautical chart, as the pilot will have less than 500 feet between terrain and the controlled airspace step above them. Having less than 500 feet separation from the ground goes against manned aviation legislation requirements (in most circumstances, manned aircraft are required to remain a minimum 500 feet above ground level).

Let’s consider an example where you wish to fly near the Mt Nicholson area, east of Rockhampton. If you review the below image, it illustrates the lower limited of controlled airspace in this area is 1000 feet above seal level (D LL 1000). Based on CASA’s advice, the highest you could fly an RPA in this area is 900 feet above mean sea level (AMSL), no matter the elevation of the terrain underneath the RPA. Therefore, if you were flying from a location in the Mt Nicholson area that was (for example) 700 feet AMSL, you could only fly 200 feet above ground level to not exceed the 900 feet AMSL limit CASA recommend in this area.



Remember, the legislation still allows flight in controlled airspace not above 400 feet (as long as you avoid approach and departure paths and remain 3nm from the movement area). The advisory circular is advice only and the avoidance of “purple shaded areas” isn’t actually reflected in the aviation legislation. However, it is guidance to avoid “creating a hazard to aircraft”, which is a requirement of the legislation.