

## 5.14 Night EVLOS operations

For an approval of an EVLOS operation to be conducted at night, the certified RPA operator must:

- (a) be approved for night RPA operations under instrument CASA 01/17, or any replacement instrument in force from time to time unless the replacement instrument expressly applies otherwise; and
- (b) satisfy CASA that they can and will comply with the conditions of the instrument.

*Note* Chapter 6 of this MOS is reserved for more general requirements relating to night operations.

## 5.15 If manned aircraft are active in the airspace

- (1) If, during an EVLOS operation, a manned aircraft is:

- (a) flying in the relevant airspace of the operation (the *relevant airspace*); or
- (b) likely to be flying in the relevant airspace;

then, the remote pilot for the EVLOS operation must ensure that the operation does not become a hazard to the manned aircraft, by using, or, subject to subsection (1A), by directing a certified and appropriately trained visual observer to use, the relevant aeronautical VHF channel for:

- (c) regular broadcasts; or
- (d) direct radiocommunication with the pilot of the manned aircraft.

- (1A) Despite a direction given under subsection (1), the remote pilot for the EVLOS operation is at all times responsible for ensuring that the operation of the RPA complies with regulation 101.055 — Hazardous operation prohibited.

- (2) Without affecting subsection (1), a person who is a remote pilot for the EVLOS operation must take reasonable steps to make and keep in direct radiocommunication with the pilot of a manned aircraft while the RPA and the manned aircraft are in relevant airspace.

- (3) In this section:

*relevant airspace* means any point of non-controlled airspace into which the manned aircraft is flying at a particular time that is both less than 3 NM in distance and less than 1 500 ft in height from any point of the airspace in which the RPA is flying at the same time.

## 5.16 Procedures for loss of control of an RPA in an EVLOS operation

- (1) For an RPA in an EVLOS operation, the certified RPA operator's documented practices and procedures must have procedures for the remote pilot to resolve a loss of control over the RPA.
- (2) For subsection (1), the procedures must be such as to ensure that the remote pilot can:
  - (a) re-establish control over the RPA; or
  - (b) end the flight without creating an unreasonable hazard to another aircraft, or to people or property.

*Note* A flight may be ended by means of controlled flight into terrain, if this is possible without creating a hazard to other aircraft, people or property, and all other options for the continuation of safe, observed, flight are exhausted.

### **5.17 Procedures for loss of communications in an EVLOS operation class 2**

- (1) For an RPA in an EVLOS operation class 2, the certified RPA operator's documented practices and procedures must have procedures for the remote pilot to resolve:
  - (a) any communication system failure relating to the observation of the RPA; or
  - (b) any breakdown in communication procedures relating to the observation of the RPA; or
  - (c) any loss of situational awareness by the relevant observer of the RPA for any reason.
- (2) For subsection (1), the procedures must be such as to ensure that the remote pilot must:
  - (a) for a loss of communications with an observer — immediately use the secondary communication system; or
  - (b) for a loss of situational awareness by the relevant observer — immediately implement the certified RPA operator's procedures for loss of situational awareness by an observer to return the RPA to VLOS or EVLOS; or
  - (c) end the flight without creating an unreasonable hazard to another aircraft, or to people or property.

*Note* A flight may be ended by means of controlled flight into terrain, if this is possible without creating a hazard to other aircraft, people or property, and all other options for the continuation of safe flight are exhausted.

### **5.18 Conflict between the requirements of this Chapter and the documented practices and procedures**

- (1) A certified RPA operator must ensure that there is no conflict or inconsistency between the requirements of this Chapter and the documented practices and procedures.
- (2) If there is any conflict or inconsistency:
  - (a) the requirements of this Chapter must prevail; and
  - (b) the documented practices and procedures must be immediately revised and corrected.

*Note* See also the definition of *documented practices and procedures* in subsection 1.04 (2) of this MOS which requires documented practices and procedures to be approved by CASA.

**CHAPTER 6    RESERVED**

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**CHAPTER 7    RESERVED**

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**CHAPTER 8    RESERVED**

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## CHAPTER 9 OPERATIONS OF RPA IN PRESCRIBED AREAS

### Division 9.1 RPAS operations at or near non-controlled aerodromes

#### 9.01 Prescribed areas

- (1) For subregulation 101.066 of CASR, this Division prescribes the requirements relating to the operation of an RPA in a prescribed area.
- (2) For subsection (1), the no-fly zone of a non-controlled aerodrome is a prescribed area for this Division.

#### 9.02 Definitions

In this Division:

***area that is shaded black*** has the same meaning as in section 9.06.

***area that is shaded grey*** has the same meaning as in section 9.06.

***defined unmanned aircraft*** means any of the following:

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

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

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

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

- (a) within 3 NM, in any direction, from the measurement point of any runway of the non-controlled aerodrome; or
- (b) within the approach and departure paths referred to in section 9.06, whether or not they extend beyond 3 NM, in any direction, from the measurement point of any runway of the non-controlled aerodrome.

*Note* If the runway is a grass landing strip, the threshold centrepoint of the runway is the point on the threshold of the runway at which the notional centreline of the runway would intersect the threshold.

***relevant airspace*** means each of the following:

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

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

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

#### 9.02A Meaning of to become aware

In sections 9.03 and 9.04, to become aware that a relevant event is occurring, or is about to occur, is taken to mean the state of awareness that a reasonable person

would have, in all the circumstances, that the relevant event was occurring, or was about to occur.

### **9.03 RPA flight in the no-fly zone of a non-controlled aerodrome**

- (1) A person may fly an RPA, or conduct RPA operations, in relevant airspace provided that:
  - (a) the flight or operation does not occur during a relevant event; and
  - (b) if, during the flight or operation, the person becomes aware that a relevant event is occurring, or is about to occur — the person complies with section 9.04.

*Note* A remote pilot with a relevant radio qualification should monitor the aerodrome radio frequency and communicate with manned aircraft using the aerodrome frequency.

- (2) Despite subsection (1), a certified RPA operator may conduct RPA operations in relevant airspace during a relevant event, but only if the RPA operation is exclusively:
  - (a) an indoors operation; or
  - (b) a tethered operation in accordance with section 9.05; or
  - (c) an operation using a defined unmanned aircraft.
- (3) Despite subsection (1), a person who is not a certified RPA operator may fly an RPA in relevant airspace during a relevant event but only if the flight is exclusively an indoors flight.

*Note 1* Thus, a person who is not a certified RPA operator may fly an RPA, *including a micro RPA*, in relevant airspace, only if the flight is exclusively an indoors flight, or if the flight is not occurring during a relevant event, provided that if the person becomes aware that a relevant event is occurring, or is about to occur, the person complies with the requirements of section 9.04.

*Note 2* By virtue of subregulation 101.075 (4) of CASR, a person must not fly a model aircraft in the no-fly zone of relevant airspace during a relevant event at a non-controlled aerodrome. On becoming aware that a relevant event is occurring, or is about to occur, a person flying a model aircraft must take immediate action to safely manoeuvre away from the path of the piloted aircraft and land as soon as safely possible.

### **9.04 Action on becoming aware of a relevant event**

If the person who is flying an RPA within relevant airspace becomes aware that a relevant event is occurring, or is about to occur, the person must:

- (a) if the RPA is airborne:
  - (i) act immediately to ensure that the RPA is safely manoeuvred away from the path of the manned aircraft; and
  - (ii) land the RPA as soon as safely possible; or
- (b) if the RPA is on the ground, on water, or on any object or structure on the ground or water — not launch the unmanned aircraft.

### **9.05 Approval to operate an RPA in a no-fly zone of a non-controlled aerodrome — tethered and indoors operations**

- (1) A certified RPA operator is approved to conduct RPA operations in relevant airspace, during a relevant event, subject to the certified RPA operator ensuring that the requirements mentioned in subsection (2) are complied with.

*Note* A **certified RPA operator** means a person who is certified as a certified RPA operator in accordance with regulation 101.335 of CASR. See the definitions in subsection 1.04 (2) of this MOS.

- (2) For subsection (1), the requirements are that the RPA operation is exclusively 1 of the following:
  - (a) an indoors operation; or

- (b) a tethered operation, provided the conditions in subsection (3) are complied with.
- (3) For a tethered operation in the no-fly zone of a non-controlled aerodrome, the certified RPA operator must:
  - (a) use a tether that is no longer than 150 ft; and
  - (b) ensure that the RPA is not operated higher than 150 ft above the aerodrome elevation; and
 

*Note* The aerodrome elevation can be determined from the aerodrome obstacle limitation data (OLS data).
  - (c) conduct the tethered operation in accordance with the operator's documented practices and procedures for operations under this Division; and
  - (d) ensure that:
    - (i) the RPA is flown within the area that is shaded grey for the non-controlled aerodrome; or
    - (ii) if the RPA is flown within the area that is shaded black for the non-controlled aerodrome, the RPA is not flown within 3NM from the measurement point of any runway of the non-controlled aerodrome.
- (4) For paragraph (2) (b), the requirements for the no-fly zone of an HLS are as follows:
  - (a) the tether must be no longer than 150 ft;
  - (b) the RPA must always be at least 465 m from the central axis of the no-fly zone of the HLS;
  - (c) the RPA flight must be conducted within VLOS;
  - (d) the RPA flight must be conducted in accordance with the certified RPA operator's documented practices and procedures for operations under this Division.

## 9.06 Approach and departure paths — non-controlled aerodromes

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

*Note* Figure 9.06 (1)-2 illustrates a cross-runways scenario to which the requirements in this Division apply in the same way as for a single runway. Application of the requirements does not affect the black-shaded areas but produces overlapping grey-shaded areas, and what would otherwise be a grey-shaded area becomes a black-shaded area because of the intersection of the runways.
- (2) As shown in Figure 9.06 (1)-1, the approach and departure path is up to 400 ft, as follows:
  - (a) anywhere on or from the ground upwards in the area that is the runway or the runway strip;
  - (b) anywhere in the following areas which are the approach and departure paths for the non-controlled aerodrome:
    - (i) on or from the ground upwards in the area that is shaded black to a distance of 7 km from the end of the runway strip;
    - (ii) anywhere from 150 ft (45 m) above the ground (referenced to the aerodrome elevation) in the area that is shaded grey.
- (3) The area that is shaded black, which shows the approach and departure paths and the ground below them, is described as comprising the following:
  - (a) a symmetrical trapezoids with the shorter side coincident with the ends of a nominal 100 m wide runway strip and extending out at an angle of 15 degrees on either side to a distance of 7 km;