(5) A person must not fly a model aircraft that has a gross weight of more than 250 g in the no-fly zone of a controlled aerodrome.

(6) A person may fly a model aircraft that has a gross weight of no more than 250 g in the no-fly zone of a controlled aerodrome if the aircraft does not enter an approach and departure path described in paragraph (b) of the definition of ***no-fly zone of a controlled aerodrome***.

(7) A person may fly a defined unmanned aircraft in the no-fly zone of a controlled aerodrome.

4.04 Approval to operate an RPA in a no-fly zone of a controlled aerodrome — tethered and indoors operations

(1) A certified RPA operator is approved to conduct an RPA operation in the no-fly zone of a controlled aerodrome if the requirements of this section 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) The requirements are that the RPA may only be operated in:

(a) an indoors operation; or

(b) a tethered operation in accordance with subsection (3).

(3) For a tethered operation in the no-fly zone of a 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 Chapter; and

(d) notify ATC before the RPA takes off; and

(e) ensure that the RPA is flown in accordance with any instructions issued by ATC; and

(f) ensure that:

(i) the RPA is flown within the area that is shaded grey for the controlled aerodrome; or

(ii) if the RPA is flown within the area that is shaded black for the controlled aerodrome, the RPA is not flown within 3 NM from the measurement point of any runway of the controlled aerodrome.

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

4.05 Approach and departure paths — controlled aerodromes

(1) Figure 4.05 (1)-1 shows the approach and departure paths of a controlled aerodrome.

Note Figure 4.05 (1)-2 illustrates 1 example of a multi-runway scenario to which the requirements in this Chapter 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 4.05 (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 controlled aerodrome:

(i) subject to subparagraph (ii) — 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 300 ft (90 m) above the ground (referenced to the aerodrome elevation) in the area that is between 7 km and 8.5 km from the end of the runway strip (the ***area that is crosshatched***);

(c) 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 8.5 km;

(b) a rectangle extending 500 m on either side of the runway centreline and overlying the runway strip until it intersects the trapezoids of the approach and departure paths.

(4) The area that is shaded grey is an area that extends 3 NM in all directions from the measurement point.

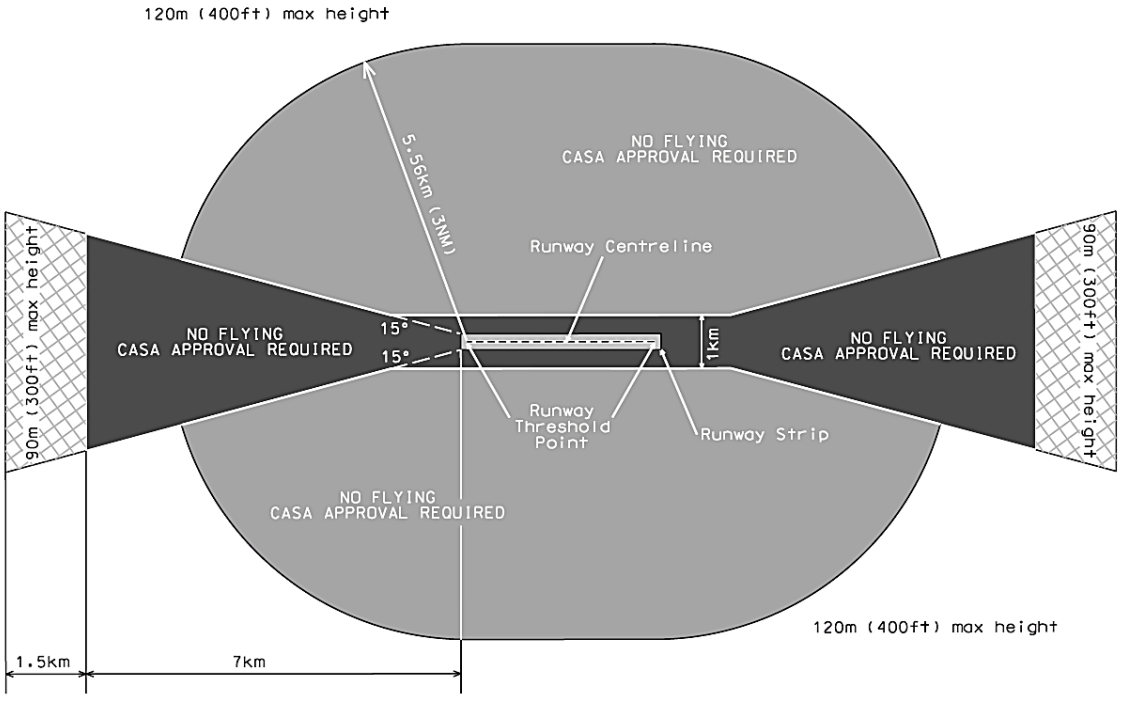

Figure 4.05 (1)-1 Controlled aerodromes approach and departure paths (shows matters, but shape only illustrates matters)

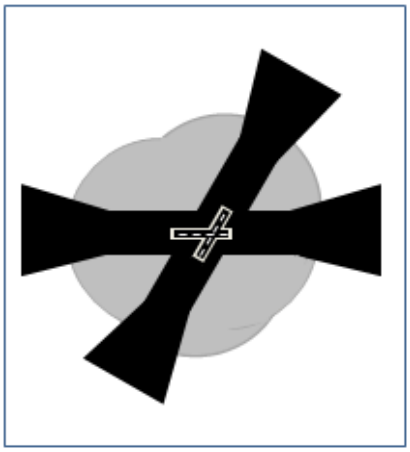

Figure 4.05 (1)-2: Intersecting runways (illustrates matters)

CHAPTER 5 RPA OPERATIONS BEYOND VLOS

5.01 Application

(1) This Chapter applies only for RPA operations of a certified RPA operator.

(2) Only a certified RPA operator may be granted an approval under paragraph 101.029 (2) (b) of CASR:

(a) for subparagraph 101.300 (4) (b) (i) — to operate an unmanned aircraft beyond the operator's visual line of sight; or

(b) for subparagraph 101.300 (4) (b) (ii) — for a RePL holder who is a member of the operator's personnel to operate an unmanned aircraft beyond the RePL holder's visual line of sight.

Note An approval would be granted to the certified RPA operator only if the requirements of Chapter 5 are met — see paragraph 101.029 (2) (b) of CASR.

(3) Only a RePL holder:

(a) who is a certified RPA operator holding an approval for paragraph (2) (a); or

(b) who is a member of the personnel of a certified RPA operator holding an approval for paragraph (2) (b);

may be granted an approval under paragraph 101.029 (2) (b) of CASR for subregulation 101.073 (2) to operate an unmanned aircraft beyond the RePL holder's visual line of sight.

Note An approval for a RePL holder would only be granted in association with the grant of a relevant approval for a certified RPA operator.

5.02 Requirements for RPA operations do not apply in certain approved areas

(1) Subject to subsection (2), this Chapter applies to any area that is an area approved by CASA for regulation 101.030 of CASR.

(2) This Chapter does not apply to an EVLOS operation if the area approval permits an EVLOS operation that is in accordance with alternative requirements specified in the approval.

5.03 Requirements for an approval to operate an RPA beyond VLOS

(1) For paragraph 101.073 (2) (a) of CASR, this Chapter prescribes the requirements for the grant of an approval by CASA under paragraph 101.029 (2) (b) of CASR (an ***approval***), for a person to operate an RPA, other than a large RPA, beyond the person's VLOS.

Note See also paragraph 101.300 (4) (b) of CASR.

(2) In this Chapter, the approval mentioned in subsection (1) is referred to as:

(a) an EVLOS operation approval; or

(b) an EVLOS operation class 1 approval; or

(c) an EVLOS operation class 2 approval.

(3) For the grant of an approval, the Certified RPA operator's documented practices and procedures must:

(a) provide for the matters mentioned in this Chapter; and

(b) be in accordance with the requirements of this Chapter; and

(c) ensure that RPA operations are conducted in accordance with the approval.

5.04 Definitions for this Chapter

In this Chapter:

EVLOS means extended visual line of sight.

EVLOS operation class 1 means an RPA operation that is beyond VLOS, and in which:

(a) at least 1 trained visual observer class 1 (the ***observer***) is used; and

(b) the location of the RPA, and the ground beneath and the airspace surrounding, the RPA, is:

(i) located within VLOS for each relevant observer throughout the operation; or

(ii) beyond VLOS but with the relevant observer knowing the exact location of the RPA; and

(c) the observer is in the same location as the remote pilot; and

(d) an FPV system may be used, but not as a substitute for any observer; and

(e) the observer's duty is to:

(i) either:

(A) keep the RPA constantly within VLOS; or

(B) know the exact location of the RPA; and

(ii) maintain constant situational awareness of the airspace surrounding, and the ground below, the RPA; and

(iii) remain in continual, direct, verbal communication with the remote pilot without the use of any device; and

(iv) do the following:

(A) advise the remote pilot if the RPA is likely to become a hazard to any other aircraft, or any person or property;

(B) direct the remote pilot on the action required to ensure that the RPA does not become a hazard to another aircraft, person or property;

(C) immediately direct the safe termination of the operation if:

(I) the exact location of the RPA is lost to the relevant observer's direct sight or knowledge; or

(II) the RPA becomes a hazard to another aircraft, person or property and termination of the operation is the only safe course of action.

Note 1 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 are exhausted.

Note 2 An EVLOS operation extends the distance of operation of an RPA. However, by virtue of the definition, the remote pilot, while operating the RPA using FPV, cannot be the observer for an EVLOS class 1 operation.

EVLOS operation class 2 means an RPA operation that is beyond VLOS in which:

(a) at least 1 trained visual observer class 2 (the ***observer***) is used; and

(b) the RPA, and the ground beneath and the airspace surrounding the RPA, is:

(i) located within VLOS for each relevant observer throughout the operation; or

(ii) beyond VLOS but with the relevant observer knowing the exact location of the RPA; and

(c) the observer is in a different location from the remote pilot; and

(d) an FPV system may be used, but not as a substitute for any observer; and

(e) the observer's duty is to:

(i) either:

(A) keep the RPA constantly within VLOS; or

(B) know the exact location of the RPA; and

(ii) maintain constant situational awareness of the air space surrounding, and the ground below, the RPA operation; and

(iii) remain in continual direct, verbal communication with the remote pilot using an effective communication system; and

Note The system must use reliable modern technology that enables effective spoken communication.

(iv) do the following:

(A) advise the remote pilot if the RPA is likely to become a hazard to any other aircraft, or any person or property;

(B) direct the remote pilot on the action required to ensure that the RPA operation does not become a hazard to another aircraft, person or property;

(C) immediately direct the safe termination of the operation if:

(I) the exact location of the RPA is lost to the relevant observer's direct sight or knowledge; or

(II) the RPA becomes a hazard to another aircraft, person or property and termination of the operation is the only safe course of action.

Note 1 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 are exhausted.

Note 2 An EVLOS operation extends the distance of operation of an RPA. By virtue of the definition, the remote pilot may be the initial EVLOS class 2 observer provided that the remote pilot is not simultaneously using an FPV system.

EVLOS operation means:

(a) an EVLOS operation class 1; or

(b) an EVLOS operation class 2.

first person view system is a system that:

(a) uses a camera on an RPA to produce a video display of the flight as it would be seen if a pilot were notionally on board the RPA in order to assist the remote pilot to navigate, orient, and avoid obstacles to the RPA; and

(b) is sufficiently powerful, sensitive and robust to remain effective for the duration of the EVLOS operation; and

(c) is approved by CASA for the EVLOS operation.

Note Use of an FPV may assist a remote pilot but its use cannot transform the remote pilot into an observer for an EVLOS operation. A remote pilot cannot simultaneously use an FPV and be an observer.

FPV system means first person view system.

observer means:

(a) a trained visual observer class 1; or

(b) a trained visual observer class 2.

trained visual observer class 1 means a person who has been:

(a) trained by a certified RPA operator, in accordance with the requirements in its documented practices and procedures, to observe and communicate about an RPA in an EVLOS operation class 1; and

(b) certified by the RPA operator to have successfully completed the training in accordance with the documented practices and procedures.

trained visual observer class 2 means a person who has been:

(a) trained by a certified RPA operator, in accordance with the requirements in its documented practices and procedures, to observe, and communicate about, an RPA in an EVLOS operation class 1 or class 2; and

(b) certified by the RPA operator to have successfully completed the training in accordance with the documented practices and procedures.

VLOS means visual line of sight.

5.05 Documented practices and procedures for EVLOS operations

For an EVLOS operation approval, a certified RPA operator must have documented practices and procedures containing the following:

(a) for each matter, activity or requirement mentioned in this Chapter — procedures and requirements that comply with this Chapter;

(b) the operator's statement to its remote pilots and observers that the procedures and requirements for relevant operations must be complied with.

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

5.06 Remote pilots for EVLOS operations

Before conducting an EVLOS operation, the remote pilot:

(a) must have completed, in addition to the 5 hours' experience required under paragraph 101.295 (2) (c) of CASR, at least the number of hours of flight time, as relevantly specified in the operator's documented practices and procedures, operating in VLOS operations an RPA of the same type as the RPA that is to be used in the EVLOS operation; and

(b) must have been trained and certified by the RPA operator, in accordance with its documented practices and procedures, as competent to carry out the particular EVLOS operation; and

(c) must have successfully completed a proficiency check that was:

(i) conducted by:

(A) the chief remote pilot of the certified RPA operator; or

(B) a RePL holder of the certified RPA operator who is:

(I) is authorised under the operator's ReOC to conduct the relevant proficiency check; and

(II) approved in writing for the purpose by the operator's chief remote pilot; or

(C) CASA; and

(ii) undertaken not more than:

(A) 12 months before the EVLOS operation; or

(B) 24 months before the EVLOS operation, provided the remote pilot has completed at least 3 EVLOS flights in each of the 12-month periods before the EVLOS operation; and

(iii) carried out in accordance with the relevant certified RPA operator's documented practices and procedures for proficiency checks under this section.

Note Under subregulation 101.300 (4), a RePL is subject to the condition that an RPA must be operated within VLOS unless the licence holder has met certain requirements set out in that subregulation.

5.07 Observers for EVLOS operations

(1) An EVLOS operation class 1 may only be conducted using a trained visual observer class 1 or class 2, certified by the RPA operator as competent to carry out the particular EVLOS operation in accordance with the documented practices and procedures.

(2) An EVLOS operation class 2 may only be conducted using a trained visual observer class 2, certified by the RPA operator as competent to carry out the particular EVLOS operation in accordance with the documented practices and procedures.

(3) An observer for subsection (1) or (2) must have no duties during the operation of an RPA, other than those mentioned in paragraph (e) of the definition of ***EVLOS operation class 1*** or ***EVLOS operation class 2***, as the case requires.

(4) An observer for subsection (1) or (2) must not be required to observe more than 1 RPA for more than 1 remote pilot in any EVLOS operation unless the operation is:

(a) approved in writing by CASA; and

(b) operated in accordance with any conditions of the approval.

(5) An observer for subsection (1) or (2) may use a device, for example, binoculars or a telescope, to assist in carrying out their duties, but must not use the device as the primary means of keeping the surrounding airspace and ground in sight.

(6) For subsection (4), the duties mentioned in paragraph (e) of the definition of ***EVLOS operation class 1*** or ***EVLOS operation class 2*** are to be read as also referring to more than 1 RPA or more than 1 remote pilot, as the case requires.

5.08 Handover procedures between 1 remote pilot and another remote pilot for EVLOS operations

(1) Control of an RPA must not be transferred (***handed over***) from the remote pilot (the ***handing-over remote pilot***) to another person (the ***new remote pilot***) unless:

(a) the other person is also a remote pilot who complies with section 5.06; and

(b) the handover is in accordance with the certified RPA operator's documented practices and procedures.

(2) After a handover occurs, the new remote pilot is:

(a) the remote pilot of the RPA; and

(b) responsible and accountable for ensuring that the EVLOS operation complies with all requirements of the relevant civil aviation legislation as if the operation were first commencing from the time, date and location at which the new remote pilot assumes control of the RPA.

5.09 Pre-flight briefing for an EVLOS operation

The certified RPA operator must ensure that each remote pilot and each observer who is to be involved in an EVLOS operation is briefed, before the operation commences, on the emergency and collision avoidance procedures relevant to the operation.

5.10 Communications in an EVLOS operation class 2

For an EVLOS operation class 2, the communication system (the ***primary communication system***) used by the remote pilot and each observer must be