Australian Government
Civil Aviation Safety Authority

TEMPORARY MANAGEMENT INSTRUCTION

Broad Area BVLOS Operations - 2025-03

September 2025

Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and the places to which we travel for work. We also acknowledge the Traditional Custodians' continuing connection to land, water and community. We pay our respects to Elders, past and present.

Artwork: James Baban.

Contents

References

Acronyms

The acronyms and abbreviations used in this Temporary Management Instruction (TMI) are listed in the table below.

Table 1. Acronyms

Acronym	Abbreviation
ABS	Australian Bureau of Statistics
AGL	Above ground level
BVLOS	Beyond visual line of sight
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
ERP	Emergency Response Plan
FTS	Flight Termination System
iGRC	Intrinsic ground risk class
IREX	Instrument Rating Examination
JARUS	Joint Authorities on Rulemaking for Unmanned Systems
NAA	National Aviation Authorities
OSO	Operational safety objectives
ROC	Remote Operations Centre
RPA	Remotely piloted aircraft
RPAS	Remotely piloted aircraft system
RPAS & AAM Roadmap	Remotely Piloted Aircraft Systems (RPAS) and Advanced Air Mobility (AAM) Strategic Regulatory Roadmap
SORA	Specific Operations Risk Assessment
TMI	Temporary management instruction
TMPR	Tactical mitigation performance requirements
VFR	Visual Flight Rules
VHF	Very High Frequency
VLOS	Visual line of sight

Definitions

Terms that have specific meaning within this TMI are defined in the table below.

Table 2. Definitions

Term	Definition
Active participant	A person who is participating directly in the activity to which the RPA is operated. Note: The scope of persons who may be an active participant is broader than the scope of persons 'directly associated with the operation of the RPA' under CASR 101.245 and may include persons such as performers and emergency services personnel
BVLOS feasibility assessment	The documented practices and procedures approved for the purpose of this TMI.
Controlled environment	An area where no persons other than active participants and RPA crew are permitted and that has access control to prevent third party entry.
Emergency services operation (for the purpose of this TMI)	An RPA operation conducted by an emergency services organisation, and for: • law enforcement purposes; or • the purpose of saving or protecting persons, property, or the environment. Note: this definition is only for the purpose of this TMI and does not relate to any other definition within the CASR 1998.
Emergency services organisation	Any of the following: • the Australian Federal Police • the Australian Defence Force • the Australian Maritime Safety Authority • the Australian Border Force • a State or Territory police service • a State or Territory fire service • a State or Territory emergency service • a State or Territory parks, wildlife, or forestry service • a State or Territory surf lifesaving service
Gross weight	• Total weight of the RPA at take-off, including fuel, equipment, payloads (if any) and anything attached to the RPA.
Impact energy	Impact energy is the kinetic energy of the RPA at the point of impacting a person or object.
Maximum airspeed	Maximum possible commanded airspeed of the RPA. This is the highest speed the RPA is capable of under normal operation, as specified in official documentation such as the flight manual. It applies regardless of any software or operational limitations that may restrict the speed during actual use.
Measurement Point	any point on the actual or notional centreline of a runway between the 2 threshold centrepoints.
Responsible Person	a nominated individual who is an employee of the ReOC holder and who is responsible for the conduct of the BVLOS area feasibility assessments
RPA crew	Persons with duties essential to the control or navigation of the RPA.
Sheltering	The use of a structure or barrier to physically segregate a person from an RPA.
Transferred energy	Transferred energy is the energy transferred from an RPA to a person or object following a collision. This excludes energy that is dissipated in the collision, e.g., energy loss due to RPA frangibility or deformation.

Reference material

The reference material used in this TMI are listed in the table below.

Table 3. Reference material

Document type	Title
BVLOS application form	Beyond visual line-of-sight (BVLOS) application form
Checklist for SORA application	SORA for BVLOS application
JARUS Document Package JAR_doc_09	JARUS SORA Package
JARUS Document JAR-DEL-WG6-D.04	JARUS guidelines on Specific Operations Risk Assessment (SORA)
Annex B to JARUS document JAR-DEL-WG6-D.04	JARUS guidelines on Specific Operations Risk Assessment (SORA) – Annex B
JARUS document JAR-DEL-SRM-SORA-F-2.5	JARUS guidelines on SORA – Annex F: Theoretical Basis for Ground Risk Classification and Mitigation
Part 101 of CASR	Part 101 of the Civil Aviation Safety Regulations 1998
Part 101 MOS	Part 101 (Unmanned Aircraft and Rockets) Manual of Standards 2019
CASA EX51/24	Remotely Piloted Aircraft Operations Beyond Visual Line of Sight Exemption 2024

Revision history

This version of the TMI is approved by the National Manager, Regulatory Services 1

Revisions to this TMI are recorded below in order of most recent first.

Table 4. Revision history

Version number	Date	Parts and sections	Details
1.0	September 2025	All	Initial issue

1 Introduction

1.1 Purpose

This TMI sets out information regarding four new broad area approval pathways for the operation of remotely piloted aircraft (RPA) beyond visual line of sight (BVLOS).

CASA is trialling these new approval pathways over the next 12 months for ReOC holders.

The criteria and requirements that form the basis of the four approval pathways have been carefully developed to manage air and ground risk considerations so that the overall aviation safety risk of BVLOS operations that conform to those requirements is low.

A ReOC holder who meets the requirements and criteria of these pathways is generally eligible for a broad area approval for the purposes of CASR 101.029 or 101.030 that would permit compliance with Section 7(3)(a) of CASA 20/25, CASR 101.073, CASR 101.085, CASR 101.095, CASR 101.245 and CASR 101.300. ReOC holders who are granted broad area approvals are responsible for self-assessing the residual air and ground risk, and identifying and implementing appropriate risk mitigators, for operational areas within the approved broad area.

During the trial, CASA will issue broad area approvals in accordance with this TMI for a maximum period of 12 months (from the date the approval is granted).

This TMI will be reviewed by the end of 12 months and CASA will assess whether the broad area approval pathways achieve anticipated safety and efficiency outcomes. Feedback from industry participants, information gathered through surveillance and oversight of operations conducted under these pathways and feedback from CASA officers, will inform CASA's future policy direction in relation to BVLOS approvals.

1.2 Background

Industry demand for BVLOS operations is increasing. CASA is seeing a steady increase in BVLOS applications each year.

CASA is committed to ensuring that its regulatory processes are not a barrier to safe BVLOS operations. CASA's RPAS-AAM Strategic Regulatory Roadmap[1] identifies the development of policy and pathways for the assessment of complex RPA operations as an action for CASA.

The applicable pathways in this TMI have been developed using the SORA methodology, which CASA has identified as a suitable framework for assessing complex operations in TMI 2025-02.

It is anticipated that the broad area approval pathways will enable a greater range of RPA operations within lower risk contexts and reduce regulatory impost on the RPA industry, without detrimentally affecting existing aviation safety levels. CASA will assess whether these benefits have been realised and further adjust its BVLOS approvals policy and processes as required at the end of the 12-month trial period.

BVLOS RPA operations that do not meet the requirements or conditions for the pathways in this TMI will be assessed by CASA under the existing BVLOS pathway under which the specific operational area proposed for the BVLOS operation is assessed and approved by CASA.

The BVLOS broad area approval pathways in this TMI are not intended for model aircraft operations or RPA operations that are not conducted under the authority of a ReOC, e.g. excluded[2] and micro RPA.[3]

1.3 Application of this TMI

This TMI applies to CASA officers responsible for or delegated to assess and approve ReOC holder applications and validate related data for BVLOS RPA operations. Applicants for wide area BVLOS

[1] See OP8 Operations | Civil Aviation Safety Authority

[2] Excluded RPA are defined in regulation 101.237 of the CASR.

[3] Types of RPA are defined in regulation 101.022 of the CASR.

approvals should refer to this TMI for information about the pathways, application requirements and procedures and requirements they will need to comply with.

1.4 Commencement

This TMI will commence on 15 October 2025, from which date eligible ReOC holders may apply for approvals under the pathways set out in this TMI.

2 BVLOS Pathways

The TMI outlines four pathways for a broad area BVLOS approval. Applicants for broad area BVLOS approvals should ensure their proposed operations fall within the limitations and criteria for their selected pathway.

2.1 BVLOS Pathway A

Pathway A is available where the RPA's characteristics are less than one (1) metre dimension and less than 25 m/s maximum - airspeed. Maximum speed means the maximum possible commanded airspeed of the RPA, as defined by the designer or manufacturer. This refers to the highest speed the RPA is capable of under normal operation, as specified in official documentation such as the flight manual. It applies regardless of any software or operational limitations that may restrict the speed during actual use.

2.1.1 Pathway A1 – Sparsely populated environment

BVLOS RPA operations may be approved where all of the following apply:

a) The RPA is operated in an environment that resembles up to and including a sparsely populated environment (<500 ppl / km^2)
b) The operator must employ one of the following ground risk mitigation options:
   - **Option 1** – Reduction of people at risk:
     The operational area contains suitable structures that would prevent an RPA penetrating the structure; and it is reasonable to presume that more than 90% of non-active participants would be within a suitable structure during the time of operations.
   - **Option 2** – Reduction of impact dynamics:
     A parachute recovery system (PRS) is fitted to ensure that in the event of hitting a person, the transferred energy is less than 80j. The system must also have been deemed compliant by CASA and any additional requirements implemented.

2.1.2 Pathway A2 – Suburban environment

BVLOS RPA operations may be approved where all of the following apply:

a) The RPA is operated in an environment that resembles up to and including a suburban environment that has a quantitative population value of <2,500 ppl / km^2.
b) The operational area contains suitable structures that would prevent an RPA penetrating the structure; and it is reasonable to presume that more than 90% of non-active participants would be within a suitable structure during the time of operations.
c) A parachute recovery system (PRS) is fitted to ensure that in the event of hitting a person, the transferred energy is less than 80j. The system must also have been deemed compliant by CASA and any additional requirements implemented.

2.2 BVLOS Pathway B

Pathway B is available where the RPA's characteristics are between one (1) and three (3) metres dimension and less than 35 m/s maximum airspeed.

2.2.1 Pathway B1 – Lightly populated environment

BVLOS RPA operations may be approved where all of the following apply:

a) The RPA is operated in an environment that resembles up to and including a lightly populated environment (< 50 ppl / km^2).
b) The operator must employ one of the following ground risk mitigation options:
   - **Option 1** – Reduction of people at risk:
     The operational area contains suitable structures that would prevent an RPA penetrating the structure; and it is reasonable to presume that more than 90% of non-active participants would be within a suitable structure during the time of operations.

- **Option 2** – Reduction of impact dynamics:
  A parachute recovery system (PRS) is fitted to ensure that in the event of hitting a person, the transferred energy is less than 80j. The system must also have been deemed compliant by CASA and any additional requirements implemented.

2.2.2 Pathway B2 – Sparsely populated environment

BVLOS RPA operations may be approved where all of the following apply:

a) The RPA is operated in an environment that resembles up to and including a sparsely populated environment that has a quantitative population value of < 250 ppl / km^2.
b) The operational area contains suitable structures that would prevent an RPA penetrating the structure; and it is reasonable to presume that more than 90% of non-active participants would be within a suitable structure during the time of operations.
A parachute recovery system (PRS) is fitted to ensure that in the event of hitting a person, the transferred energy is less than 80j. The system must also have been deemed compliant by CASA and any additional requirements implemented.

2.3 Operational requirements applicable to all pathways

The following requirements apply to all pathways:

- The planned operational volume – including the contingency volume and ground risk buffer[1] – is not within:
  - 10 NM from the measurement point of a controlled aerodrome (including Military).
  - the no-fly zone of a non-controlled aerodrome, except:
    - where the operator has coordinated with the aerodrome and other airspace users to ensure that a relevant event will not occur during the BVLOS operation, and:
    - the RPA is equipped with an ADS-B IN receiver, and:
    - An anti-collision high intensity strobe, such as a white or red strobe (anti-collision beacon) is attached to the RPA. Except for take-off and landing, the strobe must be operational for the entirety of the BVLOS flight and must project/ emit light above the horizontal plane of the RPA.
  - designated danger areas for the purpose of flying training activities.
  - areas of higher population density above the identified maximum values.
- The operator's documented practices and procedures includes the *BVLOS area feasibility assessment* process (refer **Appendix A** of this TMI).
- RPA weighs less than 25 kg gross weight.
- A 400 ft (120 metres) AGL maximum operating height, unless the RPA is operated over the excavated area of an active mining operation (such as a mining pit), up to 400 ft above the height of the natural surface of the earth at the edge of the excavated area (such as the edge of the pit) closest to the RPA whilst in flight.
- Not within 1 NM either side and 300 ft of a published VFR route.
- Airspace within 10 NM radius of the RPA 's position must be continuously monitored for ADS-B traffic.
- Aeronautical VHF radio broadcasts (the remote pilot shall ensure broadcasts are made at least 15 minutes prior to launch, on launch and as appropriate to meet air risk mitigation requirements).
- The RPA must have a technical means to end the flight prior to entering the ground risk buffer, e.g., an automatic or remote pilot-initiated motor cut off, automated logic to deflect flight surfaces inducing a stall. Notably, an alternate/dual propulsion system does not meet this requirement, e.g. vertical propulsion on powered-lift RPA.
- A geofence system is active during all BVLOS operations that is configured to contain the operation within the flight geography, i.e., the geofence would stop the RPA entering the contingency volume.
- A minimum ground risk buffer ratio of height to horizontal distance of one to one (1:1). For example at 400 ft (120 m) AGL, the minimum buffer would be 400 ft (120 m).
- The RPA must not be operated when:

  i. the forecast visibility is less than 5000 m, within the planned operational area of the RPA, and

  ii. the cloud base is less than 1000 ft AGL within the planned flight area.

The weather requirements in i. and ii. do not apply in the event of an emergency services operation when the RPA is operated by an emergency services organisation.

- The operator must maintain a record of the authorised areas with additional information prescribed within the instrument of approval. The operator will need to submit a record of authorised areas to rpas.reporting@casa.gov.au, unless otherwise advised, within the timeframes prescribed by the instrument of approval. A template reporting record can be found in annex C of this TMI.
- The operator must report to CASA any instance where the RPA operates outside of the flight geography, the actions taken and if the flight termination system (FTS) was activated. If the FTS was activated, also record whether the FTS functioned correctly and the location of the impact site reference to the planned operational volume. Reporting timeframes will be prescribed within the instrument of approval.

2.4 RPA characteristic dimension calculation

The maximum RPA characteristic dimension should be calculated as follows:

- wingspan for fixed wing RPA,
- blade diameter for rotorcraft RPA,
- maximum distance between blade tips for multi-copter RPA.

3 Application requirements - overview

3.1 Responsible person

3.1.1 Nomination of responsible person

Each ReOC holder must nominate a '**responsible person'**. In this TMI, a 'responsible person' means a nominated individual who is an employee of the ReOC holder and who is responsible for the conduct of the BVLOS area feasibility assessments.

The responsible person can only be nominated to perform the role for a single (one) ReOC. CASA will interview the nominated person to ensure their suitability to conduct BVLOS area feasibility assessments.

The term 'responsible person' may be replaced with an alternative position title in the ReOCs documented practices and procedures. The responsible person may hold other roles within the organisation as well, such as, Chief Remote Pilot, Maintenance controller, however, all associated responsibilities and requirements must remain in accordance with the conditions set out in this TMI.

3.1.2 CASA assessment of suitability of the responsible person

CASA will assess the responsible person to determine their suitability to conduct BVLOS area feasibility assessments.

The assessment will include a scenario-based activity focused on the duties and responsibilities outlined in this TMI. The individual will be provided with a scenario involving a specific requested area of operation. In addition, they must nominate a second area and develop a scenario of their own, aligned with the requested pathway.

For both scenarios, the individual will be required to conduct a BVLOS area feasibility assessment and present the relevant supporting documentation. Further guidance will be provided to the nominated individual during the application process.

If an individual has previously held the role of responsible person under another organisation, an interview will not be required if it is within six (6) months since they finished in the previous role.

This TMI also includes recommended skills that a person in the role of responsible person should hold.

3.1.3 Replacing a responsible person

If the responsible person role becomes vacant after a broad area approval is granted, the ReOC holder must, within 21 days of the vacancy, inform CASA and should nominate a new 'responsible person'. CASA will assess the responsible person to determine their suitability to conduct BVLOS area feasibility assessments. Until CASA approves a new nominated responsible person:

- the operator may conduct BVLOS operations only in areas that had already been assessed and approved by the former responsible person; and,
- no new BVLOS area feasibility assessments may be undertaken.

3.2 Documented practices and procedures assessment

All applicants must incorporate CASA's BVLOS Area Feasibility Assessment procedures (**Appendix A of this TMI**), unchanged in intent, into their documented practices and procedures. An applicant may digitise these procedures, provided they reflect the same process as the published version.

Documented practices and procedures must also list the roles within the organisation and amend the organisational chart accordingly. Additionally, the duties and responsibilities of the Responsible Person must be included, as outlined below.

Responsible Person - duties and responsibilities

- *Carry out BVLOS area-feasibility assessments for each proposed operational area.*

- *Ensure the appropriate contingency volume and ground risk buffers are applied to operational areas.*
- *Verify that each operational area complies with the instrument's conditions and with the organisation's documented practices and procedures.*
- *Document each BVLOS area feasibility assessment conducted and the outcome.*
- *Engage with relevant airspace users and create stakeholder engagement plans.*
- *Review each operational area at least every 12 months to ensure the initial assessment remains valid.*

3.3 Estimate of fees

The CASA assessment fee estimate for wide area BVLOS approval applications includes:

- review of an applicant's documented practices and procedures
- interview of the responsible person
- administration to issue the authorisation

The base assessment timeframe is estimated to be **12 hours**. That figure will be monitored during the trial and adjusted if data shows a different average workload.

> **Note:** First-time BVLOS applicants will require extra assessment criteria and time. An estimate **above 12 hours** should be anticipated to account for these additional tasks.

3.4 Applying for approval

3.4.1 Application form and documentation

Applicants may apply to CASA by submitting a completed application form with supporting documentation to rpas.pac@casa.gov.au.

The supporting documentation will need to include the documented practices and procedures which includes BVLOS Area feasibility assessment process (**Appendix A** to this TMI) and other updates related to the inclusion of the Responsible Person position.

3.4.2 Application from applicants not previously approved for BVLOS operations

Applicants who have not previously applied for approval for a BVLOS operation to CASA, will also need to submit the BVLOS application form, the Checklist to support SORA and any required supporting documentation.

NOTE: Applicants not previously assessed and approved by CASA to conduct BVLOS operations, will be required to complete an onsite operational check by CASA. This will include identifying a suitable area for the purpose of training and testing. The operational check is used to determine the ReOC holder has an acceptable level of competency to conduct BVLOS operations in accordance with documented practices and procedures; this is required prior to finalising the authorisation

3.4.3 Payment of fees

- Applicants will need to pay the estimated fees.

3.5 Current applications with CASA

If a BVLOS application is already under assessment (or awaiting allocation) with CASA when this TMI takes effect, operators may email rpas.pac@casa.gov.au with completed forms and documentation, and request a variation:

3.5.1 Paid applications in queue

CASA will update/ vary the application without affecting the queue position.

3.5.2 Applications with an assigned inspector

- Applicants may vary an application that is with an assigned inspector to a broad-area BVLOS approval.

This may result in a change of the overall assessment time and estimated fees.

- CASA will provide revised estimate advice following notification of the variation request and the requested evidence/ documentation is supplied.

4 Assessment steps

4.1.1 Assessment phase

a. Documented practices and procedures assessment.

> **Note:** The BVLOS area feasibility assessment procedure (**Appendix A to this TMI**) must be incorporated into the documented practices and procedures.

b. SORA validation:

- Emergency Response Plan assessment
- Operational Safety Objectives compliance assessment
- Tactical Mitigation Performance Requirements assessment

c. Interview (Responsible Person).

4.1.2 Operational check (Initial BVLOS applicants only)

a. Assess and authorise training area approval.

b. Onsite operational check.

4.1.3 Close out phase

a. finalise outstanding assessment items

b. issue authorisation

> **Note:** Applicants not previously assessed and approved by CASA to conduct BVLOS operations, will be required to complete an onsite operational check by CASA. This will include identifying a suitable area for the purpose of training and testing. The operational check is used to determine the ReOC holder has an acceptable level of competency to conduct BVLOS operations in accordance with documented practices and procedures; this is required prior to finalising the authorisation.

5 Approvals outside of defined Broad Area BVLOS pathways

Applications for BVLOS RPA operations that do not meet the requirements or conditions outlined in any of the pathways in TMI 2025-02 will be processed in accordance with existing policy. To avoid doubt, this TMI does not provide the only pathway to obtain a BVLOS approval. Applicants will need to submit an application using the form and checklist – refer to Beyond visual line-of-sight operations | Civil Aviation Safety Authority.

5.1 Remote Operations Centre (ROC)

The pathways in this TMI may apply to operations conducted using a ROC. A ROC is subject to an additional, separate assessment by CASA unless it has been previously approved.

Where an operator intends to include the use of a ROC as part of a BVLOS application under this TMI, CASA will assess this aspect independently of the pathway assessment.

5.2 Operations of more than one RPA at a time

The pathways in this TMI may also apply to operations involving the operation of more than one RPA at a time by a remote pilot. Operation of more than one RPA at a time is subject to an additional, separate assessment by CASA unless it has been previously approved.

Where an operator intends to include operation of more than one RPA at a time as part of a BVLOS application under this TMI, CASA will assess this aspect independently of the pathway assessment.

5.3 Operations over or near people

Operations where the RPA is to be operated within 30 metres (in any direction) from a non-active participant, or below the minimum safe deployment height of a parachute recovery system (where required) is not within the scope of this TMI and will be assessed under existing policy.

6 Data collection and reporting requirements

All operators approved in accordance with this TMI will be issued an instrument that, among other things, will require the operator to provide data to CASA to support the assessment of the adequacy and effectiveness of the controls set out in this TMI.

Information requested by CASA may include, but is not limited to:

- the type and model of the RPAS operated
- whether the RPA exited the approved flight geography
- whether the RPA collided with a person, shelter, or object, including the location of any impact site
- the consequences of any collision, including whether abnormal operating procedures were initiated
- whether a flight termination system was activated, and the outcome of its activation
- a report identifying operational sites authorised by the responsible person (refer to appendix C)

CASA may use this data to inform future policy and assess whether the safety objectives of the TMI are being achieved.

Approval instruments will require operators to retain collected data for a period of 7 years and provided to CASA upon request or as prescribed within the instrument of approval.

In the event of an RPA operating outside of the established flight geography, the operator must provide data on the relevant flight to CASA (by email rpas.reporting@casa.gov.au) within 7 days of completion of the operation.

Appendix A - BVLOS area feasibility assessment

A.1 Operational Volume requirements

A.1.1 Operational volume

The operational volume is made up of the flight geography, contingency volume and ground risk buffer.

The responsible person must ensure the operational volume complies with the following:

- Not within 10NM of the measurement point of a controlled aerodrome, including military controlled aerodromes
- Not within the no fly zone of a non-controlled aerodrome, except where the operator has coordinated with the aerodrome operator and/or other airspace users to ensure deconfliction with other airspace users during the BVLOS operation. i.e. there is no relevant event occurring or scheduled to occur during planned BVLOS operations.
- Not within 1NM horizontally and 300ft vertically of any published VFR route.
- No above the prescribed maximum population value.
- Areas where there is an increased population at certain times above the maximum are identified and excluded.

A.1.2 Contingency volume

1. The responsible person is required to determine the contingency volume applicable for each RPA they wish to operate. For these procedures, a figure of 15 seconds is used at the maximum possible commanded airspeed of the RPA to determine the value of the contingency volume; this includes the detection of the RPA entering the contingency volume, total flight error and execution of a contingency manoeuvre. There are two methods available to be used as follows.
2. Method 1 – prescribed CV distance:
    a. Column 1 RPA – 375 metres
    b. Column 2 RPA – 525 metres
3. Method 2 – Calculating the CV distance:
    a. Distance travelled in 15 seconds at maximum airspeed of the RPA.

A.1.3 Ground risk buffer

The ground risk buffer horizontal distance is the maximum height planned for the operational volume, i.e., for operations at 400ft AGL, the ground risk buffer is 400ft (120m) horizontally.

For operations over an active mining operation, a 400ft ground risk buffer is applicable, regardless of the height whilst operating over excavated areas.

A.1.4 Ground risk assessment

The ground risk assessment must consider all areas within the operational volume. This includes the flight geography, contingency volume and ground risk buffer. The maximum population density must be determined across all areas using a 1 km × 1 km grid resolution. The calculation should identify the grid cell with the highest population count within the operational volume.

1. Population assessment
    a. Identify the population count (people/km^2) within the operational volume and ensure it is below the approved quantitative figure. (e.g. 500 people for sparsely populated environment)
    b. Use imagery or onsite assessments to determine if the quantitative figure is equivalent or less than the respective qualitative descriptor.

c. Identify areas within the **operational volume** where it could be likely there would be a higher population density at some point in time during planned operations. This may include schools, sporting ovals, stadiums, markets, mine site shift changeover periods, etc.
d. Adjust the **operational volume** to avoid these areas or identify no flying periods during the times where it is reasonable to expect the population density is higher than the quantitative assessment. (e.g. lunch time in industrial areas would likely increase the number of exposed individuals)

Table A – Qualitative descriptors

Qualitative descriptors	Area Description
Lightly populated environment	Areas of small farms and residential areas with very large lot sizes (approximately 4 acres or larger).
Sparsely populated environment	Areas of homes and small businesses, with large lot sizes (approximately 1 acre or larger).
Suburban environment	Areas of single-family homes on small lots, with multi-story buildings of no more than 3 levels. Low rise industrial areas.

2. Assessment of sheltering within operational volume
    a. Determine whether there are structures within the operational volume that would not prevent the RPA from causing harm if individuals were inside them, e.g. tents in camping grounds or market stalls. Adjust the **operational volume** to avoid these areas.

    b. Identify any area where it is reasonable to assume that majority of non-active participants would not be within suitable structures during the BVLOS operations. Adjust the **operational volume** to avoid these areas or identify no flying periods during the times where it is reasonable to expect majority of non-active participants would not be within a structure. E.g. school pickup time, weekend sport events, community fairs etc.

A.1.5 Air risk assessment

1. Identify areas where it is possible other airspace users may be present during the planned operations. These include:
    a. Low level aerial work activities such as agricultural spraying, power-line inspections, sling operations.
    b. Hang-gliders (including powered)
    c. Paragliders (including powered)
    d. Gyroplanes
    e. Parachutists
    f. Model aircraft fields
    g. Other low level aircraft operations

Note: Some sport or recreation aircraft, like those listed above, are legally permitted to fly below 500 feet AGL. When planning operations, it is important to consider the surrounding airspace and identify other potential low-level airspace users. Aviation maps and charts are useful references for spotting areas of likely low-level activity. Additionally, consulting with relevant sport aviation bodies and local clubs can help identify typical low-level flight patterns and assist in mitigating residual airspace risks. Examples of these aviation bodies include:

- Sport Aviation Federation of Australia (https://safa.asn.au/local-clubs/)
- Australian Sport Rotorcraft Association (https://www.asra.org.au/)
- Australian Parachute Federation (https://www.apf.com.au/dropzone-locator/dropzone-locator)
- Recreational Aviation Australia (https://raaus.com.au/)
- Gliding federation of Australia (https://glidingaustralia.org/)

2. Review all NOTAMs applicable to the area of operation, notably, this includes FIR NOTAMs.
3. For operations within the no-fly zone of non-controlled aerodromes, consult with relevant stakeholders to ensure an agreed deconfliction plan is in place with airspace users or the aerodrome operator to ensure a relevant event is not planned to occur during the time of BVLOS operations.
    a. Consider level of activity at the aerodrome
    b. arrival and dep procedures
    c. common flying routes,
    d. common operators
    e. etc.
4. Implement additional controls to mitigate the risks to other airspace users. This may include:
    a. Radio broadcasts at certain intervals
    b. Operational restrictions during certain periods of activity
    c. Stakeholder engagement plan
    d. Etc.

Record keeping

1. A copy of the BVLOS area authorisation form must be kept with the operational release for at least 7 years after the day of the operation.

A.1.6 Authorisation form

BVLOS area authorisation form	
Location / area identifier	
kml / shapefile reference	
Applicable pathway	
RPA (make/model)	
Contingency volume dimension	
Maximum population (Quantitative, actual highest population count of 1km x 1km grid resolution)	
Qualitative population descriptor	
Ground risk operational restrictions	
Airspace operational restrictions	

Map of operational volume

Responsible Person Authorisation	
I confirm that the operational volume identified complies with all requirements within the instrument of approval and the BVLOS area feasibility assessment procedures.	
Name	
Signature	
Date	

Appendix B Responsible Person skills guide

Category	Skills
Area Assessment	• Assess the feasibility of BVLOS areas using maps, imagery, and tools • Ability to perform population assessments quantitatively and qualitatively • Ability to calculate contingency volumes and ground risk buffers • Create accurate overlays to be displayed on the ground control station
Technical Knowledge	• Understand RPAS characteristics and typical flight behaviour • Ability to ensure safety critical equipment meets the requirements (e.g. ASTM 3322 compliant parachute recovery system)
Regulatory Knowledge & Compliance	• Understand and interpret aviation legislation • Interpret aeronautical information publications • Understand and apply conditions of an instrument of approval
Communication & Liaison	• Ability to identify and engage with aerodrome operators and airspace stakeholders • Create and implement a stakeholder engagement plan
Decision-Making	• Adjust operational areas based on ground and air risk considerations • Determine no-fly zones or time-based exclusions • Ability to determine areas that would not be feasible for BVLOS operations under the specified pathways
Record-Keeping and oversight	• Complete and retain authorisation forms • Recognise changes in air or ground risk within pre-authorised areas

Appendix C Operational area record template

Operational area record template				
ReOC Name			ReOC Number	
Operational Area Name/ID	Date Authorised	Flights in Last Month	Total Accumulated Flights	RPA Used (Make/Model)