Australian Government
Civil Aviation Safety Authority

RPAS Platform - Operating Rules

April 2024

Acknowledgement of Country

The Civil Aviation Safety Authority (CASA) respectfully acknowledges the Traditional Custodians of the lands on which our offices are located and their continuing connection to land, water and community, and pays respect to Elders past, present and emerging.

Inside front cover artwork: James Baban.

This document becomes an uncontrolled document when printed. Refer to the CASA website for the current version.

This document contains guidance material intended to assist CASA officers, delegates and the aviation industry in understanding the operation of the aviation legislation. However, you should not rely on this document as a legal reference. Refer to the civil aviation legislation including the *Civil Aviation Act 1988* (Cth), its related regulations and any other legislative instruments—to ascertain the requirements of, and the obligations imposed by or under, the law.

Contents

Revision history

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

Table 1. Revision history

Version number	Date	Parts and sections	Details
3.2	April 2024		Introduction of [UAA0045] mandating the version number of the product be available to view in the app. [HBY0010] & [ReOC0020] amended to clarify how prohibited areas and MOAs are to be represented. [HBY0035] & [ReOC0030] amended and [HBY0036] & [ReOC0031] created due to changes in the no-fly zones of HLS. [HBY0080] & [ReOC0050] (HLS with instrument approach) deleted. Attachment C amended to include HLS no-fly zone. [ASD0055] authoritative data rule for Helicopter Landing Sites (HLS) with instrument approaches has been deleted. Introduction of [ASD0061] identifying the authoritative source of GCDs other than controlled aerodrome GCDs. Amended attachment C section C.2 to clarify existing requirements for approach and departure paths.
3.1	November 2023		Formatting and document style changes including all section numbers. [HBY0010] & [ReOC0020] amended to include military operating areas. Added [ASD0021] to attachment A for Military Operating Areas Minor changes to Attachment C and inclusion of attachment D. Attachment D - AAA service user validation process added. Attachment E - Fire Hazards and Incidents Authority Data source added.
3.0	June 2023		Amendment to AD0060 Note Section 11 amended, added new section 12 & 13
2.5b	August 2022		Table and text formatting Amendment to Attachment C.
2.5	May 2022		Addition of rules [HBY0031], [AA0011], [AA0056] and [AA0057]. Amendment to section 11.1 and rules [ReOC0025], [ReOC0026] and [AA0055]. Amendments to Attachment A rules [ASD0025], [ASD0030], [ASD0035] and [AD0005]. Amendment to whole of Attachment C.
2.4	September 2021		Updated emergency services data feeds Addition of airspace authorisations simulation flights

Version number	Date	Parts and sections	Details
2.3	April 2021		Remove instrument conditions, amend multiple requirements in sections 11 & 12
2.2	April 2021		Final airspace authorisations instrument conditions
2.1	March 2021		Provisional airspace authorisations content for onboarding release
2.0	October 2020		Addition of airspace authorisations rules and data sources
1.5	September 2020		Updated emergency services data feeds
1.0	November 2019	All	Initial Issue

Related Documents

Documents	Available at
The rules: Civil Aviation Safety Regulations 1998 (CASR) Part 101 – Unmanned aircraft and rockets Part 101 (Unmanned Aircraft and Rockets) Manual of Standards 2019 CASA 55/20 – Operation of Certain Unmanned Aircraft Directions 2020	https://www.casa.gov.au/drones/documents-and-forms
RPAS Platform onboarding documents RPAS Platform Concept of Operations RPAS Platform – Example Test Procedure Part 1 RPAS Platform – Example Test Procedure Part 2 RPAS Platform Terms and Conditions RPAS Platform Application Form	https://www.casa.gov.au/drones/industry- initiatives/digital-platform

1 Introduction

1.1 Purpose

1.1.1 The purpose of this document is to define the criteria a compliant software application must achieve to be onboarded to the RPAS Platform.

1.1.2 The operating rules detailed in this document will be tested against an RPAS Platform Test Procedure. Software providers must demonstrate their application meets these test activities to become approved for connection to the RPAS Platform.

1.1.3 This document should be read in conjunction with the RPAS Platform Example Test Procedure - Part 1 (Declaration Procedure), RPAS Platform Example Test Procedure - Part 2 (Test Procedure) and RPAS Platform Concept of Operations documents.

1.2 Overview

1.2.1 The operating rules are the rules that each software provider is required to follow. The rules identified here define the minimum behaviour of the application. Further processes, features, and capabilities are up to each software provider to determine as they develop their unique service offerings.

1.2.2 Operating rules set out in this document are aligned with the three categories of drone operations in Australia:

- recreational (model aircraft) - predominantly drone users flying for fun
- excluded RPA - operations flying RPA commercially (weighing more than 250 g up to 2 kg) or flying over their own land (weighing more than 250 g up to 25 kg), complying with standard operating conditions
- ReOC - commercial operations conducted by organisations who hold an operators certificate issued by CASA

1.2.3 In the following operating rules:

(a) **shall** means the functionality must be demonstrated during the approval process,

(b) **may** means the functionality is suggested by CASA but not mandatory.

1.3 Prefixes

1.3.1 Each operating rule is assigned an identifier enclosed by brackets and comprised of a grouping prefix and a number. For example, [UAA0005], [HBY0025].

1.3.2 This document uses the following prefixes:

- UAA - User Accounts, Access and Disclaimer
- ASD - Airspace Data
- AD - Additional Data
- HBY - Recreational
- CEX - Commercial Excluded Operation
- ReOC - Commercial Included Operation
- AA - Airspace Authorisations

1.3.3 Additional prefixes may be added as needed. Rule numbers are deliberately incremented by 5 to support future rule insertion. Restatements and clarifications of rules are not given a new identifier.

2 Required Content

The following requirements are mandatory and must be applied by all approved applications, regardless of the RPAS Platform functions being delivered.

2.1 Privacy Policy

2.1.1 [UAA0015] The application **shall** have a published privacy policy and abide by the Australian Privacy Principles.

2.2 Disclaimer

2.2.1 [UAA0020] The application **shall** include the following CASA-provided disclaimer:

Displayed to the user:

“The information provided is not for use in air navigation in Australia.” In

Terms of Service:

“Airspace information related to Australia is not approved under Australian Civil Aviation Safety Regulation Part 175 (CASR Part 175), is advisory only, and is not to be used for the purpose of air navigation.”

2.3 CASA Notifications

2.3.1 [UAA0030] The application **shall** display notifications provided by CASA for the applicable time range and filter by type of RPA operator.

2.4 Reporting Unsafe Drone Operations

2.4.1 [UAA0040] The application **shall** include a reference to CASA’s *Report Unsafe Drone Operations* webpage (https://www.casa.gov.au/about-us/contact-us).

2.5 Production Version

2.5.1 [UAA0045] The application shall include the products version number.

3 Authoritative Data

3.1 Data Sources

3.1.1 Some operating rules require an underlying data source. The operating rules identify the authoritative data that **shall** be used by compliant implementations.

3.1.2 Some data sources are provided through the RPAS Platform via API. Other data is to be directly sourced from the data custodian.

3.1.3 There are two categories of data: airspace data and additional data. For each category, the data type, the authoritative source, the minimum refresh rate and the associated operating rule/s are provided in **Attachment A**.

3.1.4 In some cases, data must be retrieved with authentication by a central service.

3.2 Airspace Data

3.2.1 Authoritative airspace data is identified in **Attachment A**.

3.2.2 Airspace data originates from Airservices Australia (ASA). Software Providers will need to source this data directly from Airservices Australia. There is a cost for accessing this data.

4 Applying Data to Operating Rules

4.1 Operating Rule Structure

4.1.1 Subsections are provided in the operating rules for each of the three types of RPAS operations: recreational, excluded RPA, and ReOC. Each section contains a table with the rules unique to that operation type and the responsibilities of a compliant Software Provider implementation. For each rule, the authoritative data source is provided, and the Software Provider's responsibility is described.

4.1.2 There are 3 ways in which authoritative data can be applied:

Block: this implies that the intended flight should be not allowed, for a variety of potential reasons (e.g. altitude exceeds limit, flight in restricted airspace). In the context of a user planning a flight, Block indicates the flight plan cannot be accepted; if simply viewing information, the user should be informed of applicable rules.

Advise: this implies that information should be highlighted to the user but does not currently represent a restriction on the intended flight.

No Action: this applies to rules with which the operator must comply independent of the application. For example, a Software Provider cannot practically know if a flight is over people. The operator is required to comply with the rule, but no specific requirement is levied on the Software Provider to assist the operator.

4.1.3 Operating rules are aligned with the three categories of drone operations in Australia, and these **shall** be applied according to these categories:

4.2 Recreational (Model Aircraft) Rules

Guidance material:

- CASA's Know Your Drone website at:

https://www.casa.gov.au/knowyourdrone

Rule	Description	Data Source	Application
[HBY0005]	You must not fly your drone higher than 400 ft above the ground	N/A	Block
[HBY0010]	You must not operate your drone in prohibited, restricted or military operating areas, including temporary restricted or prohibited airspace.	[ASD0015] [ASD0005] [ASD0010]	Block **Note** if NAIPS subscription is not available: - Prohibited & RA3 should be Block - RA1, RA2 & MOAs should be Advise.
[HBY0015]	You must not fly your drone over or near an area affecting public safety or where emergency operations are underway (without prior approval). This could include situations such as a car crash, police operations, a fire and associated firefighting efforts, and search and rescue operations.	[AD0005]	Block

Rule	Description	Data Source	Application
[HBY0030]	You must keep your drone at least 3 NM away from controlled aerodromes (usually those with a control tower)	[ASD0025] [ASD0030]	Block **Note:** Method for generating 3nm no- fly areas defined in Attachment C
[HBY0031]	You must not operate your drone within the 'no flying' areas of the approach and departure paths of a controlled aerodrome (usually those with a control tower)	[ASD0030]	Block **Note:** Method for generating approach and departure path geometries defined in Attachment C
[HBY0035]	You may fly within 3 NM of a non- controlled aerodrome only if manned aircraft are not operating to or from the aerodrome. If you become aware of manned aircraft operating to or from the aerodrome, you must manoeuvre away from the aircraft and land as soon as safely possible. This includes: 1. not operating your drone within the airfield boundary (*without approval) 2. not operating your drone in the approach and departure paths of the aerodrome (*without approval)	[ASD0035] [ASD0030]	Advise **Note:** Method for generating 3nm no- fly areas defined in Attachment C An application may show approach and departure paths for non-controlled aerodromes
[HBY0036]	You may fly within 0.75 NM of a helicopter landing site (HLS) only if manned aircraft are not operating to or from the HLS. If you become aware of manned aircraft operating to or from the HLS, you must manoeuvre away from the aircraft and land as soon as safely possible. This includes: 1. not operating your drone within the HLS boundary (*without approval)	[ASD0035]	Advise **Note:** Method for generating 0.75 nm no- fly areas defined in Attachment C
[HBY0040]	Provide additional awareness of danger areas	[ASD0020]	Advise (text provided in danger area)
[HBY0045]	Provide additional awareness of risks (electricity lines)	[AD0010]	Advise
[HBY0050]	You must only fly during the day	Known sunrise and sunset calculation	Block

Rule	Description	Data Source	Application
[HBY0070]	CASA Advisories - CASA-generated airspace activation data to inform RPA users of locations where it may be unsafe or unlawful to operate a RPA for a specified period, and where those locations are not otherwise identified in an authoritative data source.	[ASD0050]	- Block if “Block” is designated for this type of operator - Advise if “Advise” is designated for this type of operator If “No Action” the advisory should not be displayed for this type of operator.
[HBY0075]	Marine Parks below 500ft AGL	[AD0015]	Block

4.3 Excluded RPA Operations Rules

Guidance material:

- CASA's website at: https://www.casa.gov.au/drones/rules/sub2kg
- Micro and Excluded Category RPA Plain English Guide available at: https://www.casa.gov.au/drones/Related rules and publications

Operating rules for Commercial Excluded Operations are the same as Recreational. The rule IDs for these operations are identical to Recreational but use the prefix [CEX].

4.4 ReOC Operations Rules

Guidance material:

- CASA's website at https://www.casa.gov.au/drones/get-your-operator-credentials

The ReOC operates under a certificate provided by CASA and therefore can operate outside the Standard Operating Conditions, these rules err on the side of Advise rather than Block. Where applicable, Software Providers may create specific rules based on a ReOC authorisation in addition to the required rules below.

Rule	Description	Data Source	Application
[ReOC0005]	You must not fly your drone higher than 400 ft above the ground	N/A	Advise
[ReOC0010]	You must not fly your drone over or near an area affecting public safety or where emergency operations are underway (without prior approval)	[AD0005]	Advise
[ReOC0015]	You must only fly during the day	Known sunrise and sunset calculation	Advise (can fly at night with CASA Instrument 01/17)
[ReOC0020]	You must not operate your drone in prohibited, restricted or military operating areas without authorisation. It is recommended to point to the AirServices Restricted Area Briefing webpage at https://www.airservic esaustralia.com/naips/fua	[ASD0015] [ASD0005] [ASD0010]	Advise **NOTE** If NAIPS subscription is not available: - Prohibited should be block. - RA1, RA2, RA3 & MOAs should be Advise.
[ReOC0025]	You must keep your drone at least 3 NM away from controlled aerodromes (usually those with a control tower) unless you have a CASA approval.	[ASD0025] [ASD0030]	Advise **Note**: Method for generating 3nm no- fly areas defined in Attachment C

Rule	Description	Data Source	Application
[ReOC0026]	You must not operate your drone within the 'no flying' areas of the approach and departure paths of a controlled aerodrome (usually those with a control tower) unless you have a CASA approval.	[ASD0030]	Advise **Note**: Method for generating approach and departure path geometries defined in Attachment C
[ReOC0030]	You may fly within 3 NM of a non- controlled aerodrome only if manned aircraft are not operating to or from the aerodrome. If you become aware of manned aircraft operating to or from the aerodrome, you must manoeuvre away from the aircraft and land as soon as safely possible. This includes: 1. not operating your drone within the airfield boundary (*without approval) 2. not operating your drone in the approach and departure paths of the aerodrome (*without approval)	[ASD0035] [ASD0030]	Advise **Note**: Method for generating 3nm no- fly areas defined in Attachment C An application may show approach and departure paths for non-controlled aerodromes
[ReOC0031]	You may fly within 0.75 NM of a helicopter landing site (HLS) only if manned aircraft are not operating to or from the HLS. If you become aware of manned aircraft operating to or from the HLS, you must manoeuvre away from the aircraft and land as soon as safely possible. This includes: 1. not operating your drone within the HLS boundary (*without approval)	[ASD0035]	Advise **Note:** Method for generating 0.75 nm no- fly areas defined in Attachment C
[ReOC0035]	Marine Parks below 500ft AGL	[AD0015]	Advise
[ReOC0040]	Provide additional awareness of danger areas	[ASD0020]	Advise (text provided in danger area)
[ReOC0045]	CASA Advisories - CASA-generated airspace activation data to inform RPA users of locations where it may be unsafe or unlawful to operate a RPA for a specified period, and where those locations are not otherwise identified in an authoritative data source.	[ASD0050]	- Block if "Block" is designated for this type of operator - Advise if "Advise" is designated for this type of operator - If "No Action" the advisory should not be displayed for this type of operator.
[ReOC0055]	Provide additional awareness of risks (electricity lines)	[AD0010]	Advise

5 Airspace Authorisations

5.1 Overview – Controlled Aerodrome Authorisations

5.1.1 Regulation 101.072 of CASR provides that the Part 101 MOS may prescribe requirements relating to the operation of unmanned aircraft in controlled airspace. Chapter 4 of the Part 101 MOS prescribes requirements relating to the operation in controlled airspace, below 400 FT AGL, of an unmanned aircraft. Attachment C defines how these requirements are to be implemented by a third-party application developer.

5.1.2 The Airspace Authorisations function allows RPA operators to submit a request to operate within 3 NM of a controlled aerodrome using a third-party application. Requests that meet pre-determined criteria may be granted through the third-party application.

5.1.3 The primary method to assess whether an RPA airspace authorisation can be granted within 3nm of a controlled aerodrome is known as the Grid Cell Definition (GCD). GCDs are maps of airspace which, in the case of requests within 3 NM of a controlled aerodrome, indicate areas and heights that RPA operations can operate based on local terrain, infrastructure and anticipated air traffic volumes. GCDs are similar to the FAA's Facility Maps which indicate maximum operation heights as a grid of cells.

5.2 Overview – Restricted Area Authorisations

5.2.1 Regulation 101.065 of CASR allows operation in a prohibited area, or in a restricted area, only with the permission of, and in accordance with any conditions imposed by, the authority controlling the area.

5.2.2 The Airspace Authorisations function allows RPA operators to submit a request to operate within a restricted area using a third-party application. Requests that meet pre- determined criteria may be granted through the third-party application.

5.2.3 As described in 11.3, the primary method to assess whether an RPA airspace authorisation can be granted within a restricted area is though the GCD. In the case of requests within a restricted area, the GCD indicate areas and heights that RPA operations can be conducted based on anticipated air traffic volumes and the procedures used by the controlling authority to assess requests for access.

5.3 Overview – Automated Airspace Authorisations

5.3.1 Third-party applications must demonstrate compliance with the RPAS Platform operating rules and complete a checkout before they will be verified by CASA to provide this functionality.

5.3.2 Third-party applications which are verified by CASA to provide this functionality may, at their discretion, provide controlled aerodrome authorisations, restricted area authorisations, or both.

5.3.3 GCD files are available for download via the RPAS platform [AD0025] to verified third- party applications. Requests that comply with the appropriate GCD for that location and that meet the airspace authorisation operating rules are notified to the RPAS Platform via the RPAS Platform Third-party (3P) API.

5.3.4 The following section defines the criteria that a compliant software application must achieve to be onboarded to process airspace authorisation requests in the RPAS Platform.

5.3.5 The Airspace Authorisations function will follow a crawl, walk, run approach – with the rules expected to evolve as this function matures. The initial trial for controlled aerodrome authorisations is provided at three controlled aerodromes and the restricted area authorisations is provided for R405A/B. Chief Remote Pilots (CRPs) of current ReOC holders may opt in to take part. This initial trial of airspace authorisations is not intended for the general public (recreational RPAS operators). CASA expects compliance requirements to be modified or added over time, which may include increased information security requirements such as ISO27001 compliance.

5.4 Required Content

5.4.1 [AA0051] The application **shall** display the following authorisation text to the user after the airspace authorisation has been confirmed with a digital response from the CASA RPAS Platform API. Text enclosed by brackets [ ] indicates dynamic content corresponding to the declaration API schema.

- The operator must ensure the RPA operation is conducted in accordance with the conditions specified in the CASA Instrument that is in force at the time of the authorised operation, available at Automated airspace authorisations trial | Civil Aviation Safety Authority (casa.gov.au)
- For the purposes of the CASA Instrument that is in force at the time of the authorised operation, this airspace authorisation [id] is issued to ReOC [operator_number] on [create_date/time].
- The operator is authorised to fly the remotely piloted aircraft [uas_serial_number] in the operating area in the approved area.
- The operator is authorised to operate the RPA in the operating area in the approved area on [start_time – displayed as the start date in local time] from [start_time – displayed as the start time in local time] until [start_time + duration – displayed as the end time in local time].

5.4.2 [AA0051] The application **shall** include a graphical depiction of the approved operating area including height limitation/s that is clearly labelled as '**Operating Area**'. Where the original request falls partly outside the GCD area, this must be displayed either as an area trimmed to the GCD or clearly indicate that the authorisation applies only to the portion of the operation within the GCD area.

5.4.3 [AA0052] The application **shall** include the following declaration:

- I am authorised to make this application as the Chief Remote Pilot for this ReOC.
- I acknowledge that I must not submit an airspace authorisation application for an RPA with a maximum take-off weight of 25 kg or more.
- I declare that all statements in this application are true and correct in every particular and that I have read and understood all provisions of the Civil Aviation Safety Regulations 1998 which are relevant to this application.

5.4.4 [AA0050] The application **shall** display the following text when a user requests access to the Airspace Authorisation functionality:

> "Thank you for agreeing to participate in a trial enabling [insert name of Third Party Application] ("the app") to process requests to operate RPAS in CASA approved areas (airspace authorisation requests). During the trial, you will be able to submit airspace authorisation requests through the app. When you do, CASA will need to share some of your personal information with [insert name of Third Party Application provider] ("us" or "we") and Airservices Australia so your identity can be verified. This information will include the aviation reference number (ARN) and

remotely piloted operator certificate (ReOC) number CASA has issued you. Neither we nor Airservices Australia will use this information for any other purpose. We will protect your personal information in accordance with our privacy policy [insert link to app developer privacy policy]. For information about how Airservices Australia may handle your personal information, refer to its privacy policy.

Please click the boxes below to indicate your consent to your personal information being used in this way. Without this consent, we will be unable to process any airspace authorisation request you may make.

- ☐ I consent to CASA sharing my ARN, ReOC number and other relevant personal information with you and Airservices Australia for the purpose of verifying my identity during the trial.
- ☐ If I have opted-in to the trial on behalf of an organisation I work for, I confirm I am authorised by the organisation to provide its ARN, ReOC number and other company identifiers for that purpose during the trial."

5.4.5 [AA0050] The application **shall** only grant access to airspace authorisation functionality after the Chief Remote Pilot has been verified by CASA according to the method specified by CASA in Attachment D.

5.5 Functional Rules

<table>
<tr><th>Rule</th><th>Description</th></tr>
<tr><td>[AA0005]</td><td>The Third Party Application shall conform with the mandatory elements of the RPAS Platform 3P API.</td></tr>
<tr><td>[AA0006]</td><td>The Third Party Application may use the RPAS Platform 3P API to submit simulated flights for the purpose of Third Party Application testing. Where used, the Third Party Application shall confirm with those elements of the RPAS Platform 3P API.</td></tr>
<tr><td>[AA0010]</td><td>The Third Party Application shall identify to the user areas where GCD cells apply.</td></tr>
<tr><td>[AA0011]</td><td>The Third Party Application shall capture the following data from the user and provide it with the RPAS Operation request:

1. Phone number: (pilot_phone_number)
2. ARN: (pilot_license_number)
3. ReOC number: (operator_number)
4. RPA serial number: (uas_serial_numbers)
5. RPA Type: (uas_type)
6. Flight profile: (uas_profile)

Note: The Third-Party Application shall display the RPA Type options from the left column and convert to the corresponding right column (uas_type) for submission to the platform which utilises the ASTM standard format.

<table>
<tr><th>RPA Type:</th><th>(uas_type)</th></tr>
<tr><td>Fixed Wing</td><td>Aeroplane</td></tr>
<tr><td>Helicopter</td><td>Helicopter</td></tr>
<tr><td>Multirotor</td><td>Helicopter</td></tr>
<tr><td>Powered Lift</td><td>HybridLift</td></tr>
<tr><td>Airship</td><td>Airship</td></tr>
<tr><td>Fixed Wing</td><td>Aeroplane</td></tr>
</table>
Note: The Third-Party Application shall display the following flight profile options for (uas_profile).

<table>
<tr><th>(uas_profile)</th></tr>
<tr><td>Automated (Grid)</td></tr>
<tr><td>Automated (Waypoint)</td></tr>
<tr><td>Manual</td></tr>
</table>
</td></tr>
<tr><td>[AA0015]</td><td>The Third Party Application shall only submit RPAS Operation requests that fall completely within GCD areas. The Third Party Application shall trim a request that partly falls outside the GCD area, and submit the portion to the RPAS Platform that is completely within the GCD area.</td></tr>
</table>

Rule	Description
[AA0020]	The Third Party Application **shall** record and make viewable to the user their successful requests for an RPAS Operation for a period of at least 30 days from the planned start date of an operation.
[AA0025]	The Third Party Application **shall** provide the ability for the user to cancel an RPAS Operation request. "Cancel" indicates that the operation is no longer planned.
[AA0030]	The Third Party Application **shall** provide the ability for the user to close an RPAS Operation request. "Close" indicates the operation is complete before the submitted RPAS Operation end time.
[AA0035]	The Thirty Party Application **shall** manage RPAS Operation requests as a service to operators. The Third Party Application **shall** manage users using individual accounts (requiring a login) and reasonably secure identification mechanisms (e.g. usernames and passwords)
[AA0040]	The Third Party Application **shall** follow industry best practices for app releases including HTTPS encryption for all API calls. **Note:** apps in the PlayStore and AppStore are vetted via the PlayStore and AppStore launch process
[AA0045]	The Third Party Application **shall** make reasonable efforts to notify the user in the event that an authorised RPAS Operation is no longer valid. The Third Party Application **shall** cancel Approved RPAS Operation if no longer valid.
[AA0050]	Airspace authorisations **shall** only be available to verified Chief Remote Pilots of a valid ReOC holder. The ReOC number (Operator_number) **shall** be validated by RegEx [0-9]{4} The ARN (pilot_license_number) **shall** be validated by RegEx [0-9]{4,7} **Note:** There is currently no query to CASA's licencing system.
[AA0051]	The Third Party Application **shall** display "conditions of approval" to the user when an RPAS Operation request has been confirmed with a digital response from the CASA RPAS Platform API
[AA0052]	The Third Party Application **shall** display a declaration for the user to accept when submitting an RPAS Operation request

5.6 Performance Rules

Rule	Description	Data Source	Application	Assumption
[AA0055]	The Third Party Application can automatically approve an RPAS operation request if the following criteria are met: 1. Maximum height of the RPAS operation must be less than or equal to the height of the relevant GCD cells (relevant cells are all those which are intersected by the RPAS operation request) 2. Where the airport flag of all relevant GCD cells are "true" 3. Where the tower is active (in airspaces which transition from uncontrolled to controlled in tower hours, as defined in ERSA) 4. The following operating rules do not block flight: (AA0056, ReOC0045) 5. Data is successfully transferred to the RPAS platform (confirmed by a digital response from the CASA RPAS API) with the detail as defined in AA0011.	[AD0025]	BLOCK if any approval criteria failed	The Third Party Application should only allow for one serial number per flight request. The Third Party Application will not submit RPAS operation requests to the RPAS Platform which do not pass the flight operation rules. Aerodromes selected in initial trial phases will not require Rule 3. Third-party applications must also demonstrate compliance with [ReOC0026].
[AA0056]	You must not operate your drone within the 'no flying' areas of the approach and departure paths of a controlled aerodrome with an active GCD.	[ASD0030]	Block **Note**: Method for generating approach and departure path geometries defined in Attachment C	

Rule	Description	Data Source	Application	Assumption
[AA0057]	You must notify the applicant that the RPA be registered with CASA and the serial number used is the manufacturers serial number for the RPA or, where there is no manufacturer serial number, the registration mark provided by CASA at the time of registration.		Advise	
[AA0060]	The Third Party Application **shall** only submit RPAS operation requests which start up to 30 days after the date of submission.		BLOCK if start time in past BLOCK if start time > 30 days from submission date	
[AA0065]	The Third Party Application **shall** only submit RPAS operation requests which are wholly within daylight hours.		BLOCK if any portion of the operation falls outside of civil twilight	

Attachment A - Authoritative Data

A.1 Airspace Data

Rule and Data Type	Authoritative Source	Refresh Rate (Minimum)	When applied	Notes	Related Operating Rules
[ASD0005] Restricted Airspace	Airservices Australia Product Group B Dataset 14 – PRD (Prohibited Restricted Danger Areas)	When updated by data provider (currently bi-annually)	AIRAC effective date	If NAIPS subscription or ERSA is not available, all restrictions should be considered 24H restrictions. It is allowed for this airspace to be filtered 500ft and below. Airspaces with a lower value of NOTAM or Surface level must be included.	[HBY0010] [CEX0010] [ReOC0020]
[ASD0010] Temporary Restricted Airspace	Airservices Australia National Aeronautical Information Processing System (NAIPS)	At least every 15 minutes	Data effective date	It is allowed for this airspace to be filtered 500ft and below.	[HBY0010] [CEX0010] [ReOC0020]
[ASD0015] Temporary Prohibited Airspace	Airservices Australia National Aeronautical Information Processing System (NAIPS)	At least every 15 minutes	Data effective date	It is allowed for this airspace to be filtered 500ft and below.	[HBY0010] [CEX0010] [ReOC0020]
[ASD0020] Danger Areas	Airservices Australia Product Group B Dataset 14 – PRD (Prohibited Restricted Danger Areas)	When updated by data provider (currently bi-annually)	AIRAC effective date	It is allowed for this airspace to be filtered 500ft and below.	[HBY0040] [CEX0040] [ReOC0040]

Rule and Data Type	Authoritative Source	Refresh Rate (Minimum)	When applied	Notes	Related Operating Rules
[ASD0021] Military Operating Area (MOA)	Airservices Australia Product Group B Dataset 14 – PRD (Prohibited Restricted Danger Areas)	When updated by data provider (currently bi-annually)	AIRAC effective date	MOA has the "M" prefix within the dataset commencing 30 November 2023. If NAIPS subscription or ERSA is not available, all restrictions should be considered 24H restrictions. It is allowed for this airspace to be filtered 500ft and below. Airspaces with a lower value of NOTAM or Surface level must be included.	[HBY0010] [CEX0010] [ReOC0020]
[ASD0025] Controlled Aerodromes	Airservices Australia Product Group A Dataset 1 – Australian Landing Sites - AD, ALA, HLS, CTAF Frequencies (applicable only to those aerodromes printed in FAC section of ERSA)	When updated by data provider (currently quarterly)	AIRAC effective date	See Attachment C for instructions on generating the 3nm no-fly zone. If NAIPS subscription or ERSA is not available, all aerodromes should be considered 24H active. Controlled aerodromes are determined by using the airport code to evaluate where the following conditions are true: - Aerodrome in Dataset 10 (ATS Communications Frequencies) where Service Type is TWR (Tower). - Aerodrome in Dataset 6 has runway threshold coordinates Aerodromes not meeting both of these criteria are non-controlled and are subject to ASD0035.	

Rule and Data Type	Authoritative Source	Refresh Rate (Minimum)	When applied	Notes	Related Operating Rules
[ASD0030] Approach and departure paths of an aerodrome	Airservices Australia Product Group A Dataset 6 – Runway Thresholds Dataset 7 – Runway Details Dataset 10 – ATS Communications Frequencies	As updated by data provider (currently quarterly)	AIRAC effective date	For controlled aerodromes, these are to be defined by section 4 of the Part 101 Manual of Standards. For non-controlled aerodromes, these are to be defined by section 9 of the Part 101 Manual of Standards. Approach and departure paths at non- controlled aerodromes must be included where runway thresholds are provided. Approach and departure paths at non-controlled aerodromes may be optionally included where runway thresholds are not provided. **Note**: Non-controlled aerodromes can be identified in Group A Dataset10 where “Service type” is NOT “TWR” and which have runway threshold coordinates in Group A Dataset6.	[HBY0030] [CEX0030] [ReOC0025] Optional: [HBY0035] [CEX0035] [ReOC0030]
[ASD0035] Non-controlled aerodromes including helicopter landing sites	Airservices Australia Product Group A Dataset 1 – Australian Landing Sites - AD, ALA, HLS, CTAF Frequencies Dataset 25 – NON-FAC- ERSA Australian Landing Sites	As updated by data provider (currently quarterly)	AIRAC effective date	An area with a radius of 3 nautical miles (nm) for aerodromes and 0.75nm for HLS, that extends from the aerodrome reference point. If the aerodrome has runway threshold coordinates, the area is a 3nm buffer of the measurement point (as defined in Attachment C). If NAIPS subscription or ERSA is not available, all aerodromes should be considered 24H active. **Note:** Non-controlled aerodromes are all sites from Dataset 25, in addition to the sites from Dataset 1 which do not meet the criteria of controlled aerodrome (see ASD0025). **Note:** The information in Dataset 25 has not been validated by the relevant aerodrome and the landing sites are not certified or registered by CASA. These locations appear in ERSA as Decode or Encode with the ID and location name listing only.	[HBY0035] [CEX0035] [ReOC0030]

Rule and Data Type	Authoritative Source	Refresh Rate (Minimum)	When applied	Notes	Related Operating Rules
[ASD0050] CASA Advisories	CASA RPAS Platform https://data.casa.rpasplatform.net/advisories.geojson	At least every 15 minutes	Data effective date	URL needs authentication with a service account.	[HBY0070] [CEX0070] [ReOC0045]
[ASD0060] Grid Cell Definition (GCD) - Controlled Aerodrome GCD Digital Facility Maps	CASA RPAS Platform https://data.casa.rpasplatform.net/GCD	At least every 24 hours	Data effective date	Geometry and properties of each GCD cell area, including maximum ceiling height allowed of RPAS operation, airport readiness (flag) status, and allowed operation categories. Where two or more concurrent and valid GCD files for the same airport/area exist, the drone safety app should only display and use (issue authorisations against) the GCD file with the latest valid_from date. **Note:** GCD data for controlled aerodromes is sourced from and owned by Airservices Australia. Use of this data is subject to Airservices' conditions.	[AA0015] [AA0055]
[ASD0061] Grid Cell Definition (GCD) - Other GCD area maps	CASA RPAS Platform https://data.casa.rpasplatform.net/GCD https://data.casa.rpasplatform.net/casa-gcds	At least every 24 hours	Data effective date	Geometry and properties of each GCD cell area, including maximum ceiling height allowed of RPAS operation, airport readiness (flag) status, and allowed operation categories. Where two or more concurrent and valid GCD files for the same airport/area exist, the drone safety app should only display and use (issue authorisations against) the GCD file with the latest valid_from date. **Note**: GCD data for R405A/B is not subject to Airservices' conditions.	[AA0015] [AA0055]

5.7 Additional Data

Rule and Data Type	Authoritative Source	Refresh Rate (Minimum)	Notes	Related Operating Rules
[AD0005] Fire Hazards and Incidents	See Attachment E for each states incident data feed.	At least every 15 minutes	Additional sources may be displayed for each state (where applicable) in addition to the incident feeds listed in Attachment E. Where no radius or polygon is supplied, default to a 30m standoff distance. If displaying GeoJSON burn areas for Victoria, only features of feedType "Burn Area" should be displayed. To display Fire and Rescue Victoria incidents, only features where sourceOrg = "VIC/FRV" in the GeoJSON.	[HBY0015] [CEX0015] [ReOC0010]
[AD0010] High Voltage Electricity Transmission Lines	Geoscience Australia http://pid.geoscience.gov.au/dataset/ga/83105	As updated by data provider	See Attachment B for the mapping of kilovolt ratings to height and width.	[HBY0045] [CEX0045] [ReOC0055]
[AD0015] Marine Zones	Parks Australia https://parksaustralia.gov.au/marine/maps/	As updated by data provider	It is allowed to trim parks to the Australian country boundary with a minimum of 12 NM from shore.	[HBY0075] [CEX0075] [ReOC0035]

Rule and Data Type	Authoritative Source	Refresh Rate (Minimum)	Notes	Related Operating Rules
[AD0020] CASA Notifications	CASA RPAS Platform https://data.casa.rpasplatform.net/notifications.json	At least every 15 minutes	URL needs authentication with a service account. The software provider may elect to maintain state to ensure that users are not presented with the same notification multiple times once read or acknowledged.	[UAA0030]

Attachment B - Electricity Transmission Lines

B.1 High Voltage Electricity Transmission Lines

The Electricity Transmission Lines Database does not include the height or width of any tower or transmission line, only their kilovolt rating.

https://researchdata.edu.au/electricity-transmission-lines/1203985

It is recommended to use this table to calculate the expected height and width:

Kilovolts	Height (metres)	Width (metres)
11	11	10
22	17	10
33	17	10
66	21	10
132	42	20
275	55	25
More than 275	60	25

If a kilovolt rating is between two table entries, the entry for the next higher rating **shall** be used.

B.2 Sourcing

Height and width values have been sourced here:

SA.GOV.AU - Identifying powerlines (www.sa.gov.au)

SA.GOV.AU - Building safely near powerlines www.sa.gov.au)

Attachment C - Generating Aerodrome No-fly Zones

The *no-fly zone* of an aerodrome consists of the 3nm no-fly zone (1) and the approach and departure paths (2), below 400 FT AGL, and which is defined in the Part 101 MOS chapter 4 and chapter 9. Both zones are derived from the *runway centreline*, which is in turn derived from the *runway thresholds*.

Runway threshold has the same meaning as in the Part 139 Manual of Standards. The points are contained in Airservices General Aviation Data Product Group A, Dataset 6.

Measurement point is defined in the Part 101 MOS as any point on the actual or notional centreline of a runway between the 2 threshold centrepoints.

For the purpose of this attachment, **the notional centreline will be defined as a geodesic line joining the runway threshold points**.

All references to bearings and distances **shall** be calculated using the WGS84 Ellipsoidal model.

Note: None of the drawings below are to scale.

Diagram 1

C.1 Producing the runway or HLS no-fly zone

A runway (3nm) no-fly zone is produced using one of the following two methods, depending on the data available for the relevant aerodrome. A HLS (0.75nm) no-fly zone is produced using method B only.

A. Where **runway thresholds are available**, the 3nm no-fly zone is the area generated when a 3 NM (5.56km) buffer is applied to the measurement point.

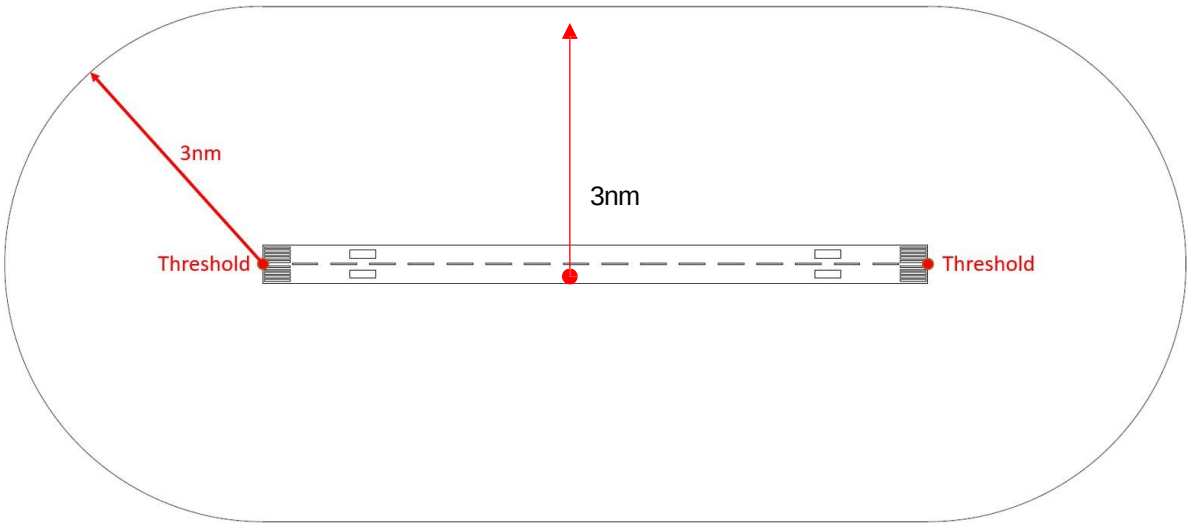


Diagram 2

In the case where an airport has more than one runway, the 3nm no fly zone is the union of the buffers.

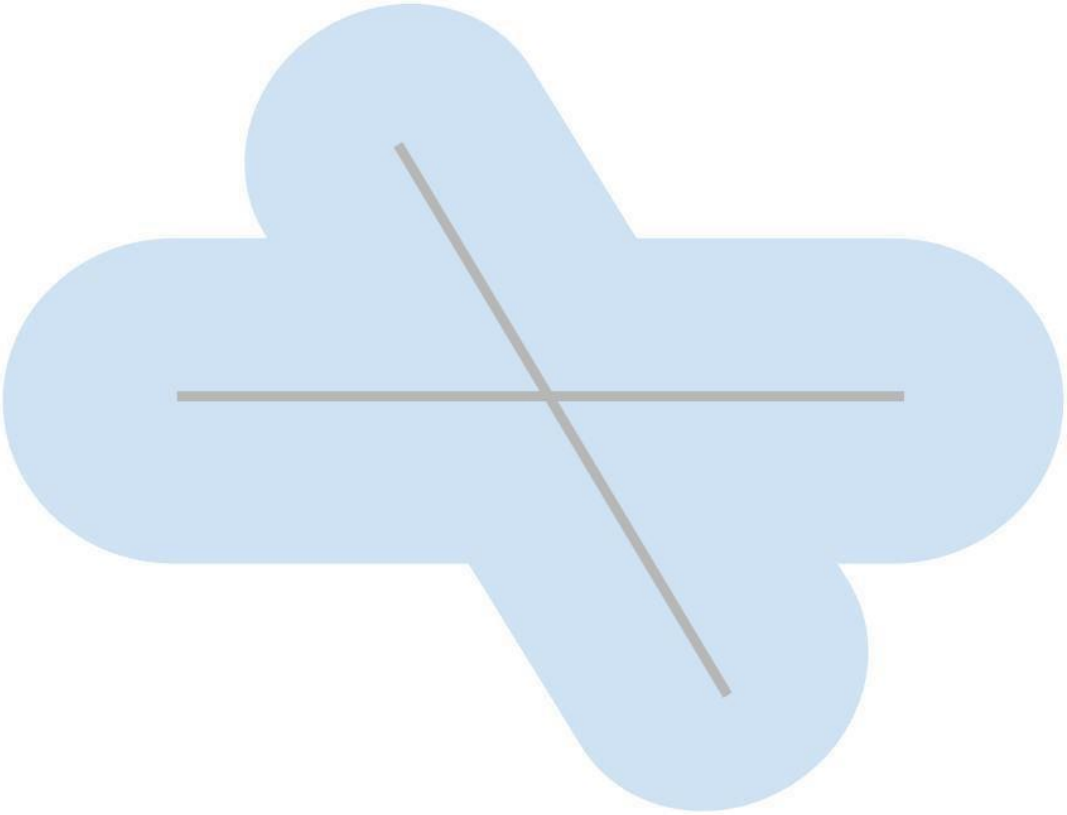


Diagram 3

B. Where **runway thresholds are not available**, the runway no-fly zone is the area generated when a 3nm (5.56km) buffer is applied to the aerodrome reference point.

A HLS no-fly zone is the area generated when a 0.75nm (1.39km) buffer is applied to the aerodrome reference point.

Diagram 4

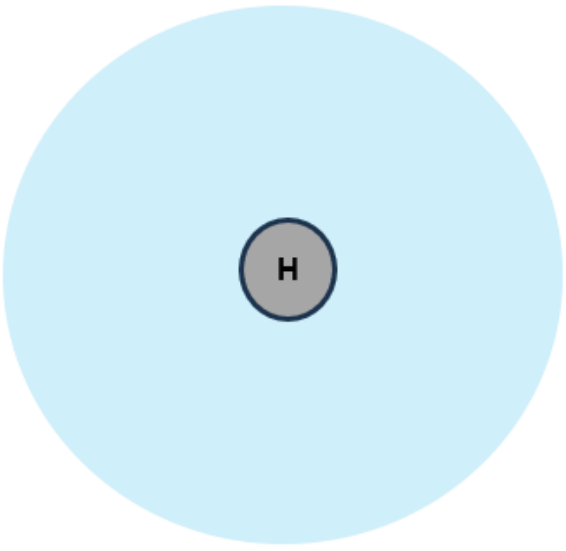


Diagram 5

C.2 Producing the approach and departure path

Producing an approach and departure path relies on the availability of the runway threshold data. Where runway threshold data is available, an approach and departure path should be generated.

Approach and departure paths are comprised of the following combined two or three shapes (depending on whether the aerodrome is a controlled aerodrome):

1. A rectangle extending 500 m on either side perpendicular to the runway centreline and extending parallel to the runway strip for 2km past the runway threshold points, ensuring that the corners of the rectangle are within the trapezoids of the approach and departure paths.

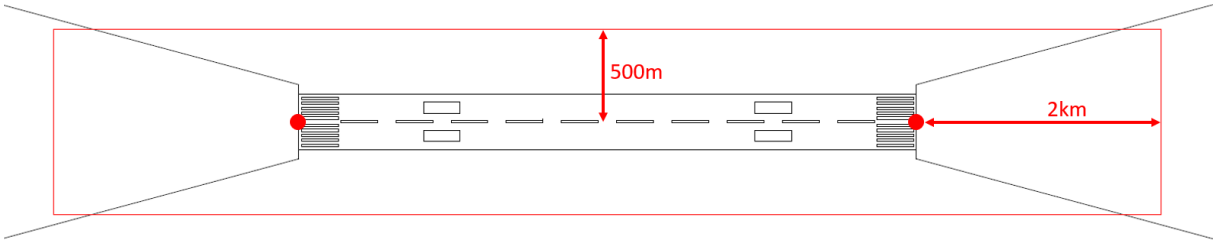


Diagram 6

2. Symmetrical trapezoids with the shorter side coincident with the runway threshold point, extending 50m in either direction perpendicular to the runway centreline. This side is extended out at an angle of 15° from the runway centreline out to 7km (as measured along the extended runway centreline).

3. Applicable only for a controlled aerodrome, the symmetrical trapezoids as described in 2 extended to a further distance of 1.5km.

   Note: The no-fly zone of this area (7km-8.5km) exists only between 300ft-400ft AGL.

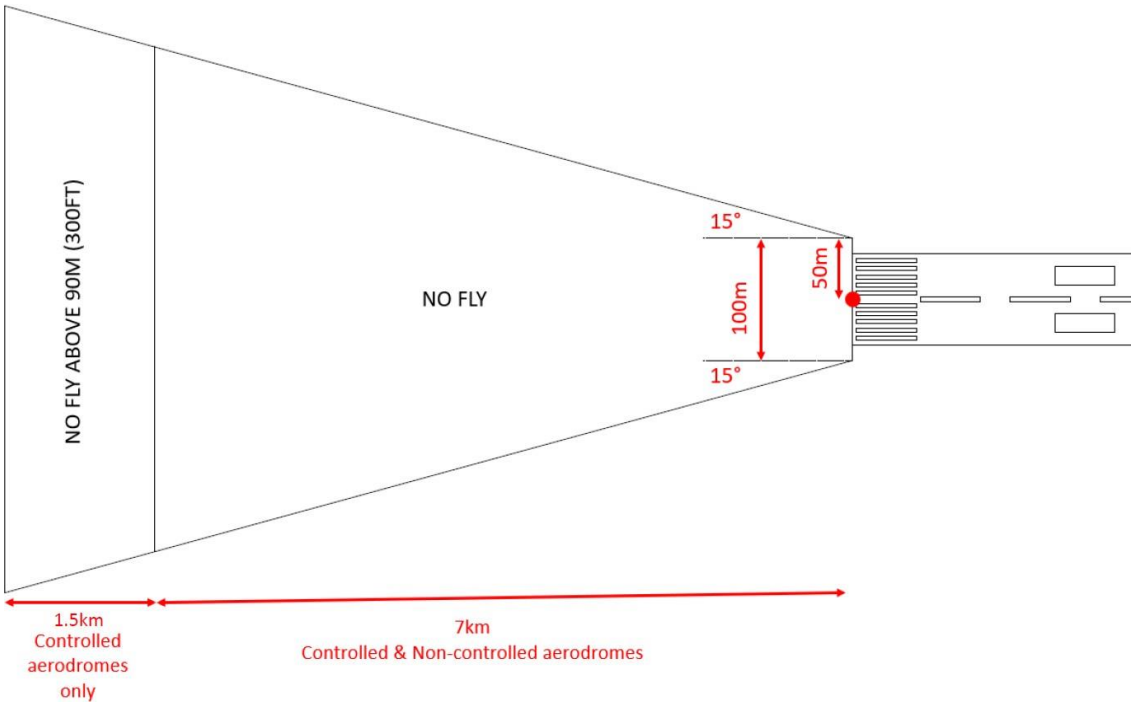
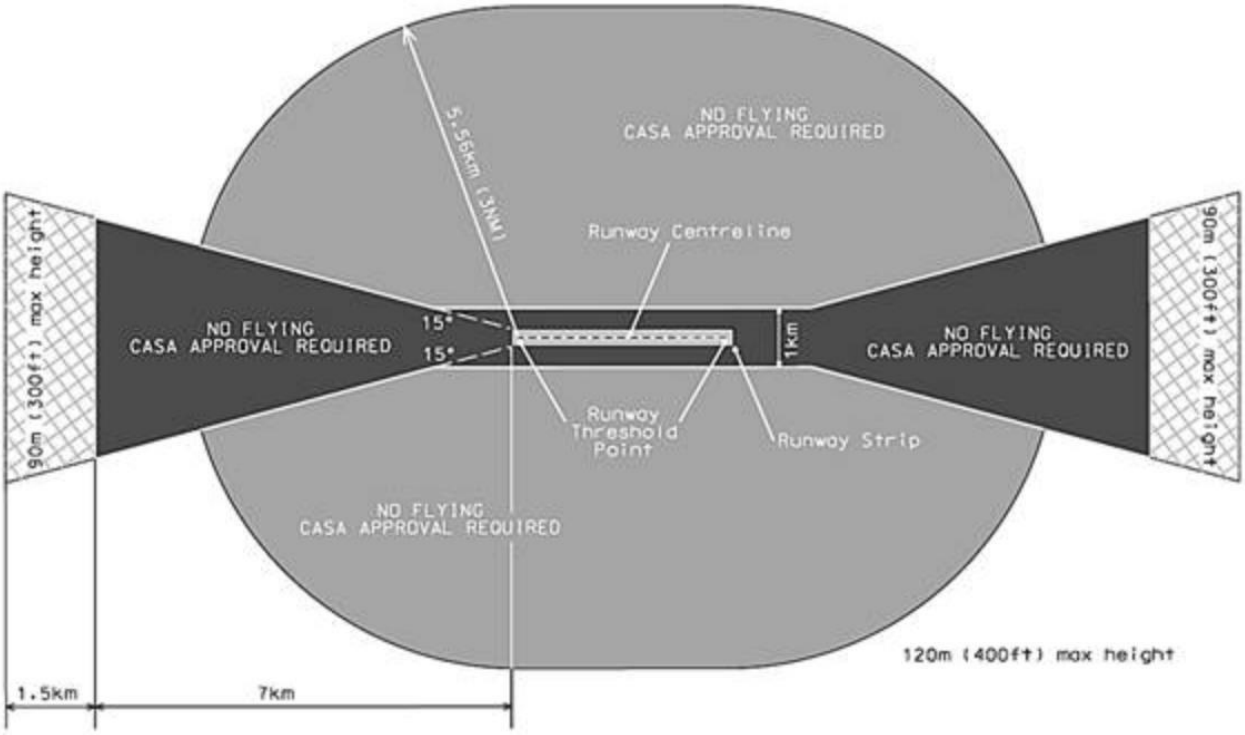


Diagram 7

The union of the rectangle and trapezoids form the approach and departure paths. For a runway, both the 3nm buffer and the approach and departure paths form the no-fly zone as depicted below.

Diagram 8



Attachment D - AAA Service User Validation Process

D.1 Purpose

In accordance with RAPS Platform Operating Rule [AA0050], the application shall only grant access to airspace authorisation functionality after the chief remote pilot has been verified by CASA according to the method specified by CASA.

To ensure only appropriate users request authorisations through the AAA service, users are validated through a manual process conducted by software providers and CASA.

D.2 Process

The procedure for a software provider to validate a new user to access the AAA service consists of the following processes:

1. The software provider has a procedure for users to submit a request to gain access to the Automated Airspace Authorisation service. The procedure must include attaining the users consent to share their details with CASA and the submission of the following user information:
   a. The RPA Operator's 4-digit ReOC number; and
   b. The service user's (CRP's) 6–7-digit Aviation Reference Number (ARN).
2. The software provider inputs the user's de-identified information into the *Template Validation Request*

   Excel file and submits this to CASA by uploading it into their CASA RPAS Platform ShareFile folder.
3. CASA validates the user's identity by confirming the user has entered the correct information and that the information is valid in the EMPIC-EAP data management system.
4. After the data is validated, CASA will input the user's validation request and the result of the request into the software provider's Master List Excel file. This will then be uploaded to the software provider's RPAS Platform ShareFile folder.

CASA will retain a record of the software provider's Master List Excel file within the software provider's RPAS Platform ShareFile folder. All valid users identified in this file can be provided access to use the AAA service. No other users, or users marked as invalid or inactive, can be provided access to the AAA service.

All user information within the file must remain de-identified due to privacy requirements and the security limitations of the CASA ShareFile platform.

Attachment E - Fire Hazards and Incidents Authority Data Sources

Australian Capital Territory (ACT) Emergency Services Agency:
http://www.esa.act.gov.au/feeds/currentincidents.xml
New South Wales (NSW) Rural Fire Service:
http://www.rfs.nsw.gov.au/feeds/majorIncidents.xml
Victoria (VIC) Emergency:
https://data.emergency.vic.gov.au/Show?pageId=getIncidentXML Additional sources: GeoJSON Burn Areas and Fire & Rescue Victoria incidents (optional data source): https://emergency.vic.gov.au/public/osom-geojson.json
Tasmania (TAS) Fire Service:
https://alert.tas.gov.au/data/incidents-and-messages.kml
South Australia (SA) Emergency Services:
https://data.eso.sa.gov.au/prod/cfs/criimson/cfs_current_incidents.xml Additional sources: https://data.eso.sa.gov.au/prod/cfs/criimson/cfs_current_incidents.json
Western Australia (WA) Emergency:
https://www.emergency.wa.gov.au/data/incident_FCAD.rss
Queensland (QLD) Fire and Emergency Services:
https://www.qfes.qld.gov.au/data/alerts/bushfireAlert.xml Additional sources: https://publiccontent-gis-psba-qld-gov-au.s3.amazonaws.com/content/Feeds/BushfireCurrentIncidents/bushfireAlert.xml https://publiccontent-gis-psba-qld-gov-au.s3.amazonaws.com/content/Feeds/BushfireCurrentIncidents/bushfireAlert_capau.xml https://publiccontent-gis-psba-qld-gov-au.s3.amazonaws.com/content/Feeds/BushfireCurrentIncidents/bushfireAlert.json
Northern Territory (NT) Police, Fire and Emergency Services (PFES):
https://www.pfes.nt.gov.au/incidentmap/json/incidents.json