MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA

MODEL AIRCRAFT OPERATIONS ABOVE 400 FEET AGL

MOP004

APPROVED: MAAA PRESIDENT

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This Policy and/or Procedure forms part of the MAAA Manual of Procedures. This entire document is for the use of all classes of members of the MAAA in the conduct of activities associated with the MAAA and is not to be used for any other purpose, in whole or in part, without the written approval of the MAAA Executive.

Glossary

Acronyms and abbreviations

Acronym / abbreviation	Description
AGL	Above Ground Level
ALA	Authorised Landing Area
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations
ERSA	En Route Supplement Australia
HLS	Helicopter Landing Site
MAAA	Model Aeronautical Association of Australia Inc.
MOS	Manual of Standards
NM	Nautical Miles
NOTAM	Notice to Airmen
RP	Remote Pilot (or UAV Controller)
RPA	Remotely Piloted Aircraft (same meaning as UAV)
UAV	Unmanned Aerial Vehicle (same meaning as RPA)
VLOS	Visual Line of Sight

Definitions

Term	Definition
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations 1998
Club field	A Club field or location properly affiliated with a State Association and registered on the MAAA Location Register.
controlled aerodrome	an aerodrome to which a determination under regulation 5(1)(b) of the Airspace Regulations 2007 has been made.
Flight line	The designated location of where the remote pilot(s) are controlling the model aircraft from.
MAAA	Model Aeronautical Association of Australia Inc.
relevant airspace	each of the following: • the no-fly zone of a non-controlled aerodrome 3 NM from the movement area • the no-fly zone of an HLS 1.5 NM diameter.
relevant event	means that a manned aircraft is within relevant airspace, including when the aircraft is in the course of approaching, landing at, taking off from, or maneuvering on the movement area of, the aerodrome
Risk Assessment	See MOP022 Risk Assessment Procedure
State Association	A State Association properly affiliated with MAAA Inc.

Reference material

Document type	Title
Regulations	*Civil Aviation Safety Regulations 1998*
Part 101 of CASR	Part 101 of the *Civil Aviation Safety Regulations 1998 (CASR)*
Part 101 MOS	Manual of Standards to Part 101 of the CASR 1998
CASA 22/22	Operation of Certain Unmanned Aircraft

Forms

Form no.	Title
CASA-04-4634	Model Aircraft Flight Authorisation Area Approval/Permission See Appendix A
MAAA031	Risk Assessment Template See Appendix B

Revision history

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

Version no.	Date	Parts / sections	Details
1.0			First Issue
2.0	15 November 2024	All	Major Revision

1. PURPOSE

1.1 This document outlines the process and procedures required for operation of model aircraft above 400 Feet AGL.

1.2 All model aircraft operations are limited to a maximum ceiling height of 400 Feet AGL, unless approved by CASA. An MAAA affiliated model club or event, may hold a CASA instrument of approval for operations above 400 Feet AGL.

2. POLICY

2.1 The MAAA requires that model aircraft conform to ceiling height as defined by the CASR (1998) Part 101 and CASA instrument 22/22 (or the version of this instrument in force).

3. PROCESS

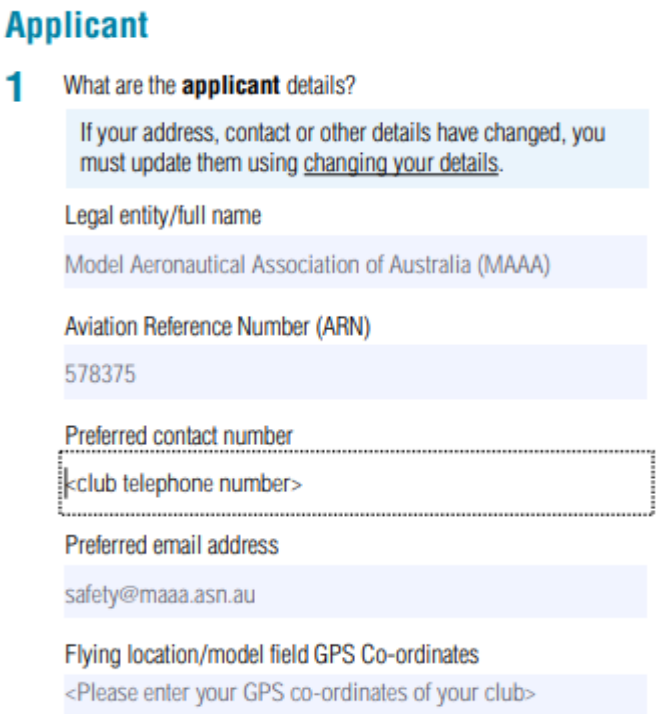
3.1 There are two pathways available for a club to seek CASA approval for operations above 400 Feet AGL, these are described below:

Pathway 1

Club to Perform

3.2 Applications seeking CASA approval for model aircraft operations above 400 Feet AGL can be submitted to the MAAA on Form MAAA007.

3.3 CASA form: Model aircraft flight authorisation must also be completed and submitted to the MAAA as part of the application documents. When completing the applicant section, use ARN: 578375, (see below):



Applicant

1 What are the **applicant** details?

If your address, contact or other details have changed, you must update them using changing your details.

Legal entity/full name

Model Aeronautical Association of Australia (MAAA)

Aviation Reference Number (ARN)

578375

Preferred contact number

<club telephone number>

Preferred email address

safety@maaa.asn.au

Flying location/model field GPS Co-ordinates

<Please enter your GPS co-ordinates of your club>

3.4 Ensure the ceiling height is stated. e.g. 1000 feet AGL.

Note – *only request what height is required. CASA approval to operate above 400 feet AGL does not restrict operations in the same airspace by other aircraft i.e. A CASA instrument of approval for model aircraft operations above 400 Feet AGL does not provide exclusive airspace use by model aircraft.*

3.5 Perform a risk assessment of the proposed model aircraft operation (MOP022). The completed risk assessment is to be included with the application. Ensure the following risks/hazard topics are covered (but not limited to):

3.5.1 Impact with terrain
3.5.2 Height incursion
3.5.3 Airspace –

3.5.3.1 Use of an air-band radio (where relevant)
3.5.3.2 Use of observer/spotter
3.5.3.3 Operations near/from an aerodrome
3.5.3.4 Fly-away / Loss of orientation

3.5.4 Ground Risks

3.5.4.1 Fire – periods of TOBAN, impacts/crashes etc
3.5.4.2 Neighbouring property

3.5.5 Risks not associated with the purpose of the application are not to be submitted as part of the risk assessment.

3.6 A site plan (Google Earth preferred) – showing the boundaries of the area for the application. Each corner of relevant co-ordinate should be listed in the following format:

e.g. 27 01 59.78S, 123 45 67.89E

Where a single digit occurs in the GPS co-ordinates, use a ‘0’ as shown above.

3.7 Include a copy of correspondence for stakeholder engagement performed. Any agreements or objections raised through stakeholder engagement should also be included as part of the application.

3.8 The completed application is provided to the relevant state secretary for review.

State Association/MAAA to Perform

3.9 The State Association shall consider the application and check that all details are provided. If supported, the application is forwarded to the MAAA (safety@maaa.asn.au) for submission to CASA.

3.10 Upon receiving the application, CASA will raise a fee estimate for payment and will commence the application assessment when payment is made.

Pathway 2

3.11 Under this pathway, a club may apply to the MAAA seeking authorisation to operate under the CASA instrument CASA.MODEL.0093. This instrument permits a club to operate model aircraft above 400 Feet AGL up to 1000 or 1500 or 2000 Feet AGL (respectively), and over a non-controlled aerodrome.

3.12 This pathway takes advantage of a CASA instrument issued to the MAAA for its clubs and members to use, without each individual club having to seek a specific approval from CASA. Where a club falls outside of the criteria to satisfy CASA.MODEL.0093, Pathway 1 must be used.

3.13 Refer to MOP067 – MAAA Club Field Location assessment under CASA General Instrument which provides more detail on the assessment of an application using Pathway 2.

4. NOTAM Request and/or Model Aircraft Symbols on Aviation Charts

4.1 With each submission, a NOTAM request must be submitted for consideration. Requests for publishing a NOTAM are to be submitted to the MAAA via email (safety@maaa.asn.au).

4.2 A NOTAM request must contain the following information:

4.2.1 date or dates of the proposed operation

4.2.2 time of the operation in the local time zone; and

4.2.3 GPS co-ordinates, in decimal degrees, for the location from which the MAAA member will conduct the operation; and

4.2.4 radius of the area measured from the GPS coordinates (listed in 4.2.3) within which the operation will be conducted; and

4.2.5 proposed maximum height at which the operation will be conducted; and

4.2.6 telephone, address and email address details of the person responsible for the operation at the Club or State Association.

4.2.7 A copy of the CASA instrument of approval

5. Procedures for Operating above 400 Feet AGL

General Procedures

VLOS Requirements

5.1 When operating above 400 Feet AGL, certain precautions must be followed to ensure aviation safety is maintained.

5.2 Operating at increased heights and distance may disorientate a remote pilot. During flight, a remote pilot must be able to satisfy the requirements for visual line of sight (regulation 101.073 of the CASR), whereby a remote pilot must be able to:

5.2.1 continually see the aircraft; and

5.2.2 orientate the aircraft; and

5.2.3 navigate the aircraft.

Without the use of an binoculars, a telescope or other similar device.

5.3 Operating a model aircraft where the conditions in 5.2 are not met, means a remote pilot is operating beyond their visual line of sight.

Radio (Airband) Requirements

5.4 Where required, use of an aviation VHF radio (Airband) may be operated by MAAA members. If a radio is available at your club, use of the radio is encouraged, even if not required by CASA regulations.

***Important** - Unless a person holds a CASA radio qualification or CASR Part 61 flight crew license to transmit on the Airband radio, a person is only permitted to monitor Airband radio transmissions.*

5.5 A suitable person should be chosen to monitor the radio during club operations. The person should be located in such a manner, to effectively communicate important information, and to relay information to remote pilots on the flight line.

Observer Requirements

5.6 An observer (aka spotter) is required when operating above 1000 Feet AGL. A person undertaking responsibilities must:

5.6.1 Be located on the flight line during model aircraft operations

5.6.2 Maintain a vigilant lookout for any conventionally piloted aircraft that may be operating in the vicinity of the model aircraft field; and

5.6.2.1 Upon becoming aware a conventionally piloted aircraft is operating in the vicinity, command all remote pilots to descend to a height not above 400 Feet AGL, and remain at that height until the conventionally piloted aircraft has passed; or

5.6.2.2 Command all remote pilots to land their model aircraft, as soon as it is practically safe to do so. Model aircraft must remain grounded until the conventionally piloted aircraft has left the vicinity of the model aircraft field.

Height Requirements

5.7 Operations up to 1000FT AGL

5.7.1 An observer/spotter is encouraged, but not a mandatory requirement.

5.7.2 Use of an Airband radio is not a mandatory requirement (unless when specified by CASA or operating within 5NM of a certified aerodrome).

5.8 Operations from 1000FT AGL up to 1500FT AGL

5.8.1 An observer/spotter is mandatory.

5.8.2 The operator is required to ensure that they are operating within the heights noted. For example, this may be assured through the use of technology such as telemetry, reference to other aircraft operating in the same airspace that are fitted with telemetry, or other distance and altitude measuring equipment.

5.8.3 Use of an Airband radio is not a mandatory requirement (unless when specified by CASA or operating within 5NM of a certified aerodrome).

5.9 Operations from 1500FT AGL up to 2000FT AGL

5.9.1 An observer/spotter is mandatory.

5.9.2 The operator is required to ensure that they are operating within the heights noted. For example, this may be assured through the use of technology such as telemetry, reference to other aircraft operating in the same airspace that are fitted with telemetry, or other distance and altitude measuring equipment.

5.9.3 Use of an Airband radio is mandatory.

Giant Models

5.10 When operating a model aircraft weighing >25kg above 400 Feet AGL, the remote pilot must confirm prior to commencing flight:

5.10.1 The Club field is permitted to operate giant models above 400 Feet AGL in accordance with an instrument issued by CASA; and

5.10.2 Any conditions relating to giant model aircraft operation outlined in the CASA instrument must be followed.

Aerodrome Requirements

5.11 When conducting model aircraft operations near or from an Aerodrome (including Aerodromes called Aircraft Landing Areas – commonly referred as ALA's), helicopter landing sites or Controlled Aerodromes (e.g. Brisbane Airport), additional considerations below must be performed.

For non-controlled Aerodromes:

5.12 When operating above 400 Feet AGL, an observer is required if the Aerodrome is not Prior Permission Required (PPR) designated.

Prior Permission Required (PPR) Aerodromes

5.13 The club must liaise with the aerodrome operator to ensure there are no expectant aircraft movements during proposed model aircraft activities. If it is identified that a conventionally piloted aircraft may operate to or from the aerodrome, appropriate measures should be identified and put in place to ensure deconfliction occurs.

During a relevant event

5.14 Part 101 Manual of Standards, Section 9 states the following action on becoming aware of a relevant event:

5.14.1 All remote pilots of model aircraft must: descend to below 400 Feet AGL, and land as soon as practically safe to do so; and remain grounded until the relevant event passes; or

5.14.2 If a model aircraft is unable to safely descend to below 400 Feet AGL and land, the remote pilot must ensure the model aircraft is flown in a holding pattern, such that the model aircraft will not come into conflict with the conventionally piloted aircraft.

Certified non-controlled Aerodromes

5.15 Use of an Airband radio is mandatory within 5 nautical miles of a certified aerodrome. Refer to the En Route Supplement Australia (ERSA) for aerodrome classification.

For Controlled Aerodromes (including Military):

5.16 Operation of model aircraft (weighing >250grams) is prohibited within 3 nautical miles (5.5km) unless CASA approval is held by the model aircraft operator. As part of a CASA approval, model aircraft operations must consider:

5.16.1 Any pilot or person under the authority of the CASA approval is subject to Air Traffic Control requirements.

5.16.2 The following requirements are mandatory:

5.16.2.1 Use of a VHF air-band radio

5.16.2.2 Use of a dedicated flight line observer/spotter

5.16.2.3 A fail safe system that will terminate the aircraft upon a fly-away event.

Note: *Applications for model aircraft operating within 3NM of a military controlled aerodromes (e.g. Richmond RAAF Base, Amberley RAAF Base, Darwin RAAF Base etc.) must be submitted to CASA. Unlike certified RPA operators, Military ATC is not permitted to authorise operations near military aerodromes unless CASA authorises the model aircraft operation though a CASA instrument of approval.*

Slope Soaring Locations

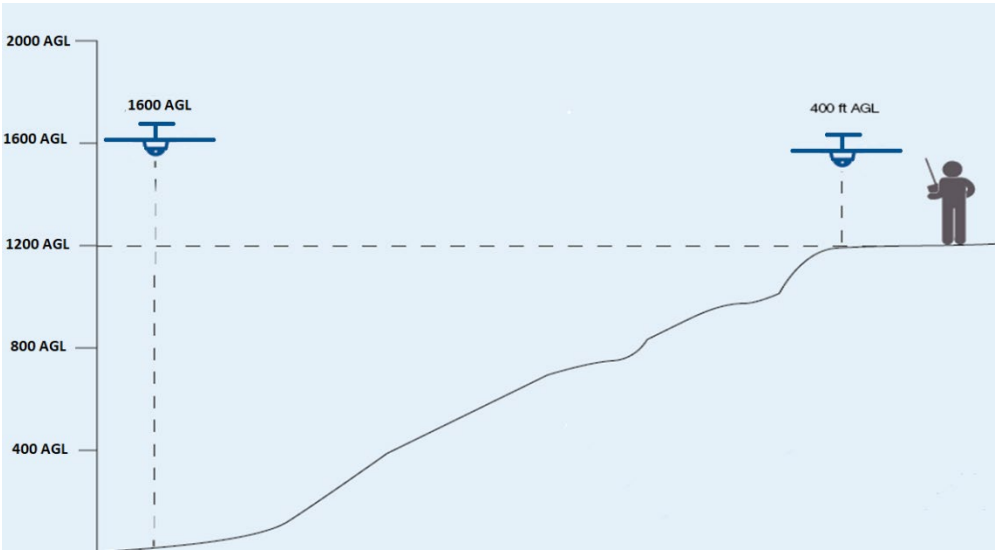
5.17 For slope soaring locations – an application must be submitted to CASA.

Note *- where a club wishes to operate at heights above 400FT AGL (measured from the take-off location), an application must be made to CASA.*

5.18 Slope heights must take into consideration the fall in elevation of the slope (see Figure 1).

5.19 Model aircraft must not operate above the maximum height permitted (considering the location of where the model aircraft may be down the slope).

FIGURE 1 - SHOWING MODEL AIRCRAFT AT TAKE-OFF LOCATION OPERATING UP TO 400FT AGL, AT A SLOPE OF 1200FT ELEVATION



APPENDIX A

CASA Application Form - Model Aircraft Flight Authorisation Form

A copy of the CASA Model aircraft Flight authorisation form can be downloaded from the CASA website here:

https://www.casa.gov.au/model-aircraft-flight-authorisation-area-approval

Note: *See Step 2 in the 'How To Apply' section on this page of the website.*

APPENDIX B – Form MAAA031

MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA
RISK ASSESSMENT BEFORE & AFTER CONTROL MEASURES.

(Use as many sheets as needed) Sheet ____ of _____

Risk No 1: Manned Aircraft flying in vicinity of glider competition event	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard 1: Impact between Manned aircraft and Model Aircraft			
The Consequence: 1. Damage or crash of manned aircraft 2. Loss of life	5	1	6
Existing Controls/measures: 1. Operate in accordance with conditions of Area Approval 2. NOTAM must be issued prior to event.			
Additional Control Measures: 1. Monitor CTAF frequency for Manned radio calls in the vicinity of the AD 2. Assigned Safety officer who is responsible for maintaining visual lookout and radio watch 3. All Model aircraft operators to descend immediately below 400FT upon identifying a manned aircraft in vicinity of competition	LIKELYHOOD (L) 4	CONSEQUENCE (C) 1	REESULTANT (R) (L+C=R) 5

Sample

Note: A copy of the form is available from the MAAA website for download. See the link in the 'Forms' section of this document.