Yarra Valley Aeromodellers' (YVA)

www.yarravalleyaeromodellers.com.au

Risk Management Protocols

MAAA Risk Assessment Before and After Control Measure Format

Version 9-2 May 2025

Club Location

Bleases Lane
Dixon's Creek VIC 3775

GPS

- 37 38 07.8 S (-37.635500)
- 145 25 14.5 E (145.420694)

MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA
RISK ASSESSMENT BEFORE & AFTER CONTROL MEASURES – YVA MAY 2025 – v9.2

Risk No 1: Impact between model, field or local infrastructure, vehicle or personnel	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: Model aircraft crash due to loss of radio signal, interference, pilot error or structural failure			
The Consequence: 1. Personal injury 2. Vehicle damage 3. Infrastructure damage			
Existing Controls/measures: 1. Operate in accordance with conditions of the YVA Area Approval and Club Safety Rules. 2. All members present act as Safety officers and are responsible for maintaining visual lookout for risks from manned aircraft or other sources 3. No over flying of pits or carpark; no taxiing in the pits 4. Pilots to be flying "solo" have passed assessment for their Silver wings. Students to fly under supervision of Instructor or authorised trainer. 5. Pre-flight checks to be completed, including security and functionality of radio control systems. 6. Radio range check to be completed for each model prior to its first flight and after any incidents. 7. Visual structure check of aircraft, including all flying surfaces and control points.	2	3	5
Additional Control Measures: **1.** All Members familiar with and operate to **MAAA MOP056 SAFE FLYING CODE** and follow **MOP014 GENERAL MODEL RULES** 2. All Large Models adhere to **MAAA MOP015 HEAVY MODEL AIRCRAFT INSPECTION AND OPERATION PROCEDURE** and **MAAA MOP006 APPOINTMENT AND REAPPOINTMENT OF INSPECTORS PROCEDURE.** 3. All Gas Turbine Models to adhere to **MAAA MOP030 GAS TURBINE RULES** 4. Models > 60kg not to be flown; 5. Giant Models (>25 to 60kg) require Committee permission and limited to 1,000 FT AGL 6. Pilots to ensure radio equipment 'Fail Safe' option is set to contain the aircraft distance and minimize potential impact **7.** Compliance with **Part 101 of the Civil Aviation Safety Regulations** and **CASA Directive 22/22**	LIKELYHOOD (L) 1	CONSEQUENCE (C) 3	REESULTANT (R) (L+C=R) 4

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Risk No 2: Fire caused by or involving model aircraft	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: Fire caused by ignition of model fuel or batteries – in pits or impact with ground			
The Consequence: **1.** Personal Injury **2.** Property loss **3.** Infrastructure damaged			
Existing Controls/measures: 1. All LiPo batteries are charged on the ground away from vehicles, club buildings and other models. 2. Members encouraged to use **fireproof bags when** charging LIPO batteries. 3. Firefighting equipment sand/fire blanket to be available. 4. Turbine aircraft to have fire extinguisher within the startup area during startup sequence. 5. In the event of a model aircraft crash during dry weather, all aircraft should be grounded, and help given to reduce the chance of fire by accessing suitable fire equipment on site and assisting with clean up.	2	3	5
Additional Control Measures: 1. Water fire extinguisher to be located in pits area 2. Sand buckets to be located in the pilot area for LiPo incidents 3. **Emergency Response Plan**, including emergency contact numbers, displayed on the clubhouse external notice board	LIKELYHOOD (L) 1	CONSEQUENCE (C) 3	REESULTANT (R) (L+C=R) 4

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Risk No 3: **Manned Aircraft Approaches - Model Aircraft flying below 400 ft AGL**	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: Manned aircraft approaches or enters YVA field Operational Area when models flying below 400 ft AGL	2	3	5
The Consequence: 1. Impact with manned aircraft 2. Loss of life 3. Damage or crash of manned aircraft			
Existing Controls/measures: 1. Operate in accordance with conditions of the YVA Area Approval and Club Safety Rules. 2. All members present act as Safety officers and are responsible for maintaining visual lookout for manned aircraft and advising model aircraft pilots. 3. On observing a Manned aircraft pilots are to move in the opposite direction, remain below 400 FT AGL and avoid any interactions or crossing of path with the manned aircraft; **4.** If the manned aircraft indicates intent to land, do precautionary search or otherwise descend to a level where model aircraft flight below 400 FT could cause any risk, pilots are to land immediately and clear the runway area.			
Additional Control Measures: 1. All club members are to be conversant with the latest YVA Area Approval, area of operation and the associated conditions as of May 2025 updates, and the associated CASA issued instrument 2. Where possible have a flightline / safety observer spotting for aircraft and located within clear verbal communication range of the Pilot Box.	LIKELYHOOD (L) 1	CONSEQUENCE (C) 3	REESULTANT (R) (L+C=R) 4

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Risk No 4: Manned Aircraft Approaches - Model Aircraft flying above 400 ft AGL but below 1,000 ft	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: Manned aircraft approaches or enters YVA field Operational Area when models are flying above 400 Ft AGL but below 1,000 ft AGL			
The Consequence: 1. Impact with manned aircraft 2. Loss of life 3. Damage or crash of manned aircraft			
Existing Controls/measures: 1. Operate in accordance with conditions of the YVA Area Approval and Club Safety Rules. 2. All members present act as Safety officers and are responsible for maintaining visual lookout for manned aircraft and advising model aircraft pilots. 3. On observing a Manned aircraft pilots are to move in the opposite direction, descend below 400 ft AGL and avoid any interactions or crossing of path with the manned aircraft; 4. If the manned aircraft indicates intent to land, do precautionary search or otherwise descend to a level where model aircraft flight below 400 ft could cause any risk, pilots are to land immediately and clear the runway area.	2	3	5
Additional Control Measures: **1.** All Members familiar with and operate to **MAAA MOP004 Model Aircraft Operations Above 400 ft AGL** **2.** When flying above 400 ft AGL but below 1,000 ft AGL, a flightline / safety observer is highly recommended to watch for manned aircraft and provide guidance on actions to avoid risk of impact between models and manned aircraft. 3. If flying above 400 ft AGL but below 1,000 ft AGL without a flightline / safety observer, on hearing any noise likely from a manned aircraft immediately descend below 400 ft AGL until the noise abates or you are otherwise sure there is no risk. If in any doubt land immediately and clear the runway.	LIKELYHOOD (L) 1	CONSEQUENCE (C) 3	REESULTANT (R) (L+C=R) 4

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Risk No 5: Manned Aircraft Approaches - Model Aircraft flying above 1,000 ft but below 1,500 ft	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: Manned aircraft approaches or enters YVA field Operational Area when models are flying above 1,000 ft AGL but below 1,500 ft			
The Consequence: 1. Impact with manned aircraft 2. Loss of life 3. Damage or crash of manned aircraft			
Existing Controls/measures: 1. Operate in accordance with conditions of the YVA Area Approval and Club Safety Rules. 2. All members present act as Safety officers and are responsible for maintaining visual lookout for manned aircraft and advising model aircraft pilots. 3. On observing a Manned aircraft pilots are to move in the opposite direction, descend below 400 ft AGL and avoid any interactions or crossing of path with the manned aircraft; **4.** If the manned aircraft indicates intent to land, do precautionary search or otherwise descend to a level where model aircraft flight below 400 FT could cause any risk, pilots are to land immediately and clear the runway area.	2	3	5
Additional Control Measures: **1.** All Members familiar with and operate to **MAAA MOP004 Model Aircraft Operations Above 400 ft AGL** **2.** When flying above 1,000 ft AGL but below 1,500 ft AGL, a flightline / safety observer is mandatory. The flightline / safety observer must remain in verbal communication range with the Pilot Box at all times. A flightline / safety observer must be a clear communicator who understands the basics of flight operations at YVA. 3. For any flight likely above 1,000 ft AGL the operator is required to use telemetry or other altitude measuring equipment to ensure they remain below 1,500 ft AGL at all times.	LIKELYHOOD (L) 1	CONSEQUENCE (C) 3	REESULTANT (R) (L+C=R) 4

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Risk No 6: Manned Aircraft take-off or landing on airstrip	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: The YVA runway is on a piece of land the owner used to use for their GA aircraft hangered on the property. The owner no longer uses the airstrip. However there are occasions when a GA aircraft may land or take-off from the airstrip. Note it is not and has never been a licensed aerodrome.	2	5	7
The Consequence: 1. Impact with manned aircraft 2. Damage or crash of manned aircraft 3. Loss of life			
Existing Controls/measures: 1. As it is not a licensed aerodrome the owner's permission is required for any use of the airstrip by manned aircraft. 2. If the property owners are aware of any potential manned aircraft activity on the airstrip they will ALWAYS drive down to YVA pit area to talk to any club members present about the intended arrival or departure. They also advise a time estimate e.g., "I'll be ready in 20 minutes and will sit to the far end of the runway until you acknowledge me". 3. If an arrival is not advised but appears likely then follow the actions for rules 3, 4 and 5 of this document.			
Additional Control Measures: 1. On advice of a likely traffic movement by the property / aircraft owner, a club member stands watch for full size entering the runway to take-off or approaching for landing. He alerts all fliers to land immediately and then signals the full size pilot the runway is his to use.	1	5	6

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Risk No 7: Livestock on airstrip.	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: Property owner occasionally has livestock in the fields surrounding the airstrip, or on the airstrip itself.	2	4	6
The Consequence: 1. Hoof prints all over the runway. 2. Impact between model and livestock 3. Impact between person and livestock			
Existing Controls/measures: 1. When the owner uses the airstrip for cattle, the model strip is surrounded by a temporary electric fence, installed by the property owner to protect the runway area from damage by his cattle. 2. Any livestock typically wander-off if there is activity near our runway. 3. Pilots do not fly if livestock are near runway and not constrained by a fence			
Additional Control Measures: 1. The property owner is notified and he takes appropriate action to remove cattle. 2. Members advised not to approach livestock if they are unconstrained and near our runway	1	4	5

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Risk No 8: Access Driveway	LIKELYHOOD (L)	CONSEQUENCE (C)	REESULTANT (R) (L+C=R)
Hazard: Use of the access driveway under flight path of GA or model aircraft approaching / departing from the East end of the YVA strip	2	4	6
The Consequence: 1. Impact between model and vehicle			
Existing Controls/measures: 1. On entering or existing along the driveway, all vehicles are to stop and check for any operating aircraft (model or GA) and only enter / exit when clear and safe to do so.			
Additional Control Measures: 3. Warning signs to be installed	1	4	5

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RISK ASSESSMENT MATRIX - LEVEL OF RISK

Table 1 - Consequence Values

	Consequence					
	0	1	2	3	4	5
People	No injury	Minor injury that does not require medical treatment	Minor injury that requires first aid treatment	Serious injury causing hospitalisation or multiple medical treatment cases	Permanent injury or disability (including blinding) that may result in hospitalisation of at least one person	One or more deaths, multiple severe injuries or permanent total disability
RPAS	Any element of the RPAS is degraded but task unaffected	A failure not serious enough to cause RPAS damage but which will result in unscheduled maintenance or repair or incomplete task	Minor RPAS damage resulting in damage to components, incomplete task and future unserviceability of RPAS	Significant RPAS damage but repairable	Complete loss of or destruction of a RPAS component (RPA, camera transmitter, sensor, etc.)	Loss of all RPAS elements
Reputation	Small delay, internal inconvenience only	May threaten an element of the service resulting in the task or objective being delayed	Risk does not violate any law and can be easily remedied. It has some effect on reputation and/or external stakeholders	Risk does not violate any law and can be easily remedied. It has some residual effect on reputation and/or external stakeholders and while reputation is damaged it is recoverable	Risk violates a law but can be remedied. It has a residual effect on reputation and/or external stakeholders and may result in damage to reputation	Risk violates a law and is unable to be remedied. It has a significant impact on reputation and/or external stakeholders and will result in loss of reputation
Cost/Property Damage	Negligible	Less than $1,000	More than $1,000 less than $10,000	More than $10,000 less than $100,000	More than $100,000 less than $1,000,000	Loss or damage exceeding $M1
Airspace	No aviation airspace safety implication	Minor breach of aviation safety regulations or RPA Area Approval	Serious issues of compliance with aviation safety regulations, RPA Area Approval or operations resulting in potential avoiding action by a manned aircraft but no collision	Serious issue of compliance with aviation safety regulations or operations or the loss of separation resulting in the potential for a collision with a manned aircraft but the manned aircraft is able to land with no serious injuries or fatalities	Potential for aviation safety incident/s involving multiple life threatening injuries, or fatalities, to less than 10 people	Potential for multiple fatal aviation safety incidents causing multiple fatalities, to 10 or more people
Equitable access of airspace	No effect on access to airspace users	Some users of the airspace may perceive or experience airspace inequality resulting in between 5 to 10 minute delay or minor detour	Some users of the airspace may perceive or experience airspace inequality resulting in more than 10 minute delay or major detours	Most users of the airspace will experience airspace inequality resulting in long delay (>30 minutes) or major detours	All users of the airspace will experience airspace inequality resulting in long delay (>30 minutes) or major detours	Airspace users are prohibited from operating in the airspace causing significant disruptions to operations and financial cost

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Table 2 - Likelihood

Likelihood	Almost Certain	5	>1 in 10	Is expected to occur in most circumstances
	Likely	4	1 in 10 – 100	Will probably occur
	Possible	3	1 in 100 – 1000	Might occur at some time in the future
	Unlikely	2	1 in 1000 – 10000	Could occur but considered unlikely or doubtful
	Rare	1	1 in 10000 - 100000	May occur in exceptional circumstances
	Extremely Rare	0	< 1 in 100000	Could only occur under specific conditions and extraordinary circumstances

Table 3 – Risk Rating

			Consequence					
			0	1	2	3	4	5
Likelihood	Almost Certain	5	5	6	7	8	9	10
	Likely	4	4	5	6	7	8	9
	Possible	3	3	4	5	6	7	8
	Unlikely	2	2	3	4	5	6	7
	Rare	1	1	2	3	4	5	6
	Extremely Rare	0	0	1	2	3	4	5

Untreated Risk Scores

8,9,10 (Extreme risk) - Task is not permitted. Risk controls are required to ensure residual risk is acceptable.

6,7 (High risk) - Task is not permitted. Risk controls are required to ensure residual risk is acceptable.

4,5 (Medium risk) - Task may proceed, however, risk must be reduced to 'as low as reasonably practicable' (ALARP).

1,2,3 (Low risk) - Task may proceed.