

Risk Register for Race Meetings



How the CAMS Web Risk Register has been developed

A document has been designed to collaborate the potential risks/potential hazards associated with motor sport in Australia conducted under the sanction of CAMS. The potential risks/potential hazards were identified in real time using the CAMS Targeted Risk Assessment (TRA) form and the encompassing assessment and actioning criteria. This ensures that the document complies with the methodology prescribed in Australian Standard AS/NZS 4360:2004 (Risk Management). See <http://www.cams.com.au/go/riskmanagement>. The potential risks/hazards have been established by use of techniques described within the standard utilising appropriate stakeholders. This edited version is for Race Meetings.

For more information on the full unedited version risk register please contact Andrew Fisher at the CAMS National Office.

In the full version of the Risk Register, once the Targeted Risk Assessment has been completed, the risk/hazards have been numbered using a code. This code consists of three (3) numbers. The first number stipulates the discipline that the risks/hazards are associated with (i.e. 1,2,3,4,5). Number 1 represents the Race Meeting discipline. The second number stipulates the type of risk/hazard, these range from 1 to 19. The third number will be an number associated to a unique Targeted Risk Assessment. This third digit will allow the tracking of individual Targeted Risk Assessments for future records. The code numbers and associated information can be found in the Risk Type page. An example of a code is 1.1.10, thus the risks/hazards are associated with Racing (1): the risk/hazard type is Fire (1) and it has been generated from Targeted Risk Assessment No. (10).

Once the Targeted Risk Assessment has been completed, the information identified on the Targeted Risk Assessment is entered (data entry by CAMS) into this spreadsheet including the risk score and any potential controls/actions suggested on the TRA form and the areas of the venue that are generally considered for that potential risk/potential hazard to occur. The 3 areas recognised for Race Meetings are the Competition Area, Paddock Area and the Public Area. The spreadsheet has enabled the likelihood and consequence to be entered and the risk score generated automatically.

This document will be continually updated. The spreadsheet and the associated processes and procedures will be reviewed on an annual basis. For more information regarding the TRA form and risk management processes please refer to the CAMS web site at www.cams.com.au/go/riskmanagement.

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Disclaimer

The content of the Risk Register has been compiled by the Confederation of Australian Motor Sport Ltd and should be used in conjunction with the Targeted Risk Assessment process at www.cams.com.au/go/riskmanagement which complies with the methodology of AS/NZS 4360:2004.

Organisers are encouraged to use this as a guide in considering some of the risks which may occur in the environment of an event. The potential hazards identified are examples only and are not exhaustive. The controls outlined are suggestions only and it is the responsibility of those managing the risks to determine the appropriate controls for the specific risks.

CAMS assumes no legal responsibility for any risks either included or not included in the Risk Register or in relation to any other risk management material prepared by CAMS.

The Risk Register is a useful tool but cannot capture all possible risks therefore all organisers, CAMS Members and other participants in motor sport events are encouraged to maintain vigilance in identifying, assessing and controlling risks.

	Fuel spillage	C	3	High	✓	✓		<ul style="list-style-type: none"> Clearly defined areas and regulations for refuelling Provide for an absorbent material in readiness for immediate use by officials, either at a flag point or in a recovery vehicle and within the refuelling station and the paddock area. If using cement dust, user should wear dust mask and the product should be in a sealed container to reduce dust occurring whilst in motion. On-hand there should be the Material Safety Data sheet. An MSDS is a document that has information on using and storing of hazardous substances safely-it will provide the user with first aid measures if required.
	Oil spillage	D	3	Medium	✓	✓		<ul style="list-style-type: none"> Flag Marshals to display yellow with red stripes where oil in circuit. Inspection of the circuit by officials prior to resumption of competition. Provide for an absorbent material in readiness for immediate use by officials, either at a flag point or in a recovery vehicle and within the refuelling station and the paddock area. If using cement dust user should wear dust mask and the product should be in a sealed container to reduce dust occurring whilst in motion. On hand there should be the Material Safety Data sheet. An MSDS is a document that has information on using and storing of hazardous substances safely-it will provide the user with first aid measures if required.
	Exposure of personnel to fuel	C	2	Medium	✓	✓		<ul style="list-style-type: none"> All refuellers to have all limbs covered. No thongs or bare feet or shorts-as specified in the National Competition Rules (NCR) Ensure that all pit crew are in fire retardant uniforms, briefed on fire procedures Refuelling to be conducted in a nominated area only, with appropriate fire extinguishers in place. Rules on refuelling should be posted in each of the garage or temporary marquee. All movement of large quantities of fuel should be on a fuel trolley with accompanying strap to hold in place.
	Fireworks	D	2	Low	✓		✓	<ul style="list-style-type: none"> Obtain Work Safe/Workcover approval for the discharging of fireworks before discharging takes place Inform the Police and Fire Brigade of the event, also local residents Review the area for any fire hazards-especially long grass Cordon off an area where the public is not allowed - this is best done with the licensed contractor.
4	Mechanical							
	Vehicle breakdown	C	2	Low	✓			<ul style="list-style-type: none"> Recovery vehicles to be on standby. Recovery vehicle to have towing capability.
5	Cuts/Burns /Trips							
	Burn from hot car parts	B	2	High	✓	✓		<ul style="list-style-type: none"> Chief Scrutineer to ensure that team is briefed about the dangers of working in, and around vehicles Advise scrutineers to exercise caution with hot components and wear protective gloves Ensure Recovery has protective clothing and gear is well maintained and adequate for the tasks
	Trip hazards	C	1	Low	✓	✓	✓	<ul style="list-style-type: none"> Power cords to be secured correctly -relocate leads off ground and secure where necessary Repair and level out marshal zone -remove any debris in the area Treat stairs with non-slip treatment either tape or paint. Brief competitors and crews for the necessity to remove trolley jacks from immediate area when not in use, reduce number of trolley jacks to only required number. Brief marshals prior to competition commencing about need to exercise caution when negotiating guard rail and uneven surfaces Stairs placed over the barriers to aid entering and exiting the track-seek approval from Clerk of Course
6	Sprains							
	Injury getting up/down wall (S/F)	C	2	Medium	✓			<ul style="list-style-type: none"> Use the officials briefing to highlight the risk of getting over the wall Utilise capable, fit officials in a role that requires repeat occurrences of going over the wall Use of a retractable ladder system
7	Falls							
	Marshal control point	B	2	Medium	✓			<ul style="list-style-type: none"> Level surrounding area at marshal control point and possibly install steps or gentle slope for access and exit to flag point. Marshals briefed by Sector Marshal to highlight any areas of with height issues Attach safety rail where practical

	On track delivery of supplies/recovery	C	2	Medium	✓	✓		<ul style="list-style-type: none"> •No standing on the tray when vehicle in motion •Vehicle to be equipped with hand rail, seat and seat belt or harness if an occupant is to sit outside the cabin •Vehicle to have non-slip surface in the tray of the vehicle •Vehicle must stop prior to the official arising and handing out of equipment or supplies •Officials need to be re-seated before moving
8	Vehicle Collisions							
	Cars colliding with barriers/armco	C	3	High	✓			<ul style="list-style-type: none"> •All passenger and drivers to wear FIA compliant helmets and are covered from wrist to ankle cotton clothing-as specified in the National Competition Rules (NCR) •All drivers to receive briefing of layout of track •Fire & Rescue, Vehicle Recovery and First Aid officials available on standby at all times whilst vehicles are on circuit.
	Cars colliding with officials/pit crew	B	2	High	✓	✓		<ul style="list-style-type: none"> •Positioning of official at allotted distances in pit lane to marshal foot traffic. •Officials to keep suitable distance from barrier. •Pit lane officials to use a whistle to advise all in pit lane of incoming vehicles •Marshals to monitor foot and vehicle traffic in paddock area and at marquees. Limit traffic speed to 10km in the area •Competitors and teams to be reminded at the briefing that vehicles are to be pushed into and out of the scrutiny bay/scales - not driven •Install a standard set of road traffic lights to provide traffic management options •Ensure all grid officials are dressed in Hi-Vis clothing •Train officials on how to position themselves at an incident scene the correct with race vehicles •Conduct all vehicle demonstrations on a closed track. •Pit Lane speed is limited to 40kph and under and no greater than 60kph
	Cars colliding with spectators	C	3	High	✓	✓	✓	<ul style="list-style-type: none"> •Place marshal at access point that spectators use to cross any part of the circuit. •Place high portable fence with gateway manned by Marshal.
	Cars colliding with cars/equipment	D	3	Medium	✓	✓		<ul style="list-style-type: none"> •Application of a speed limit on return roads with marshals in attendance •Official to monitor gate at pit entrance. •Fire vehicle on standby, medical crew on standby •Have officials at flag points with radio contact and an ambulance in attendance •Marshals placed at pit entry, in the pit lane and at the pit exit. Speed limit in pit lane. •Recovery to obtain clearance from race control before entering track. White flag to be displayed whilst Recovery on track with other vehicles. Recovery personnel to wear high visibility vests. •Pit lane entry marshal to be in control.
9	Debris Strike							
	Debris strike to officials/crew				✓			<ul style="list-style-type: none"> •Make sure debris fence is in working order •Ensure officials have good vision of circuit to enable them to take evasive action if needed-discuss at briefing •Officials to maintain watch in direction of approaching vehicles and not to turn their back on oncoming traffic-discuss at briefing •Discuss and nominate an escape route to safety prior to event commencing from any marshalling point •Ensure exit point provides quick egress in case of incident. •Flag Marshals to report debris to senior official.
	Debris strike to spectators						✓	<ul style="list-style-type: none"> •Make sure debris fence is in working order •Ensure barriers, retention fencing and the distance clear for spectators is sufficient. •Ensure track condition is safe- to minimise incidents •All spectators confined to the designated areas •Review/relocate spectator areas if debris is found from an incident . Spectator or Flag Marshals to report debris to senior official.
10	Crush							

	Cars hitting flag point	B	3	High	✓			<ul style="list-style-type: none"> •Secure all tyres firmly together with a securing mechanism so that projectiles are not created from the tyres if hit. •Ensure integrity of structure to be occupied by Marshals prior to commencement of event. •Sector Marshals to brief officials at sector briefings daily on how to operate at that particular flag point-drawing attention to any site specific issues in performing on track issues.
	Cars falling on mechanics.	C	3	High	✓	✓		<ul style="list-style-type: none"> •Make sure cars have jack stands underneath when there is someone underneath. •Brief drivers in drivers briefing of requirement to support vehicle while working on it
	Officials injured after leaving sector marshals tent	C	2	Medium	✓			<ul style="list-style-type: none"> •Install tent exit viewing area to allow a clear view of approaching boundary rider from a safe location •Brief Boundary Riders to take extra care and speed reduction when approaching sector marshals' tents.
11	Public Safety							
	Public being hit by competition cars	C	3	High	✓	✓	✓	<ul style="list-style-type: none"> •Officials to use whistle to alert public when cars are going on track or coming off the track and to assist spectator movement •Spectator access controlled by placing physical barriers around the dummy grid •Air horn used to alert spectators that look like straying onto the dummy grid. •Display 10km/h signs along any return roads- ban spectators from area of roadway. •Set up bunting along transit route to separate crowd from vehicles •Check integrity of fencing before allowing spectators into an area-additional spectator marshals may be required Ambulance/first aid in attendance
	Public in the paddock area	D	2	Medium		✓		<ul style="list-style-type: none"> •Ensure access from the paddock to pit lane is restricted to only competitors, crew, and officials, signage for access may be required - controlled by marshal's •Pit Lane Marshals instructed to ensure all spectators are out of pit lane. •Competitors briefed on the need for caution and low speed on entering and traversing pit lane •Speed limits enforced within the paddock area (10 kmph) - Drivers briefing to emphasize speed limit within paddock area •Walkway created for pedestrians to separate people from moving vehicles. •Competitors to fence off any area when performing major work on vehicles. •Ambulance/first aid in attendance
	Public in spectator area	C	2	Medium			✓	<ul style="list-style-type: none"> •Clearly define parking areas and spectator areas with signage •Where possible, have fencing to restrict access to track •Constant patrols of viewing areas to monitor behaviours •Provide adequate rubbish bins or bottle bins.
	School Children	C	3	High	✓	✓	✓	<ul style="list-style-type: none"> •Children kept in tight groups of up to twelve, under the care of an adult •Children restricted to low traffic area by officials and supervisors •Children briefed on the required behaviour and access restrictions to the areas they are not allowed to go •Children are briefed to go straight to Control Tower if separated from others or another designated area of choice
12	Medical							
	Attendance of Medical/Intervention vehicles	B	2	High	✓			<ul style="list-style-type: none"> •Strategic placement of FIV and Fire Crews. Placement of lift vehicles adjacent to gravel traps. •Leave vehicles in position behind barrier, but only shift for response when field under control.
	Patient care	C	2	Medium	✓	✓	✓	<ul style="list-style-type: none"> •Have medical plan in place- as per National Competition Rules •First Aid in attendance, Paramedic available in close by location, contactable by radio •Dial 000 if ambulance is required to transport patient -if an ambulance is not in attendance at event.
13	Electrical							
	Power leads	C	2	Medium	✓	✓	✓	<ul style="list-style-type: none"> •All electrical leads to be secured and kept above ground where possible,where not possible, rectify the matter by placing proper covers over the cords •A system of locking or tethering the connections should be used to guard against accidental separation •Review power leads to see if connections need to be water proofed •Safety (earth leakage) switches should be employed •Test and tag leads and equipment operating in a hostile environment

14								
Food								
15								
Noise								
16								
Personal Environment								
	Sunburn/heatstroke/hypothermia to officials	C	2	Medium	✓	✓	✓	<ul style="list-style-type: none"> •Ensure all officials have access to cool drinks during events- regular drink runs to be scheduled on hot days •Remind all officials at the briefing for the need to remain hydrated (during the event- provide rest periods if needed) •Monitor officials during event for signs of heat-stroke/heat-exhaustion (weakness/dizziness, moist cool skin, sweating, irritable, confused, nausea, vomiting).-for more information please go to:www.cams.com.au/downloads/competitors/Hot_Weather.pdf •Remind officials that the cold (hypothermia) affects as well, and to keep warm •Monitor officials during event for signs of hypothermia(slurred speech, stumbling, shallow breathing, skin that is cold to touch) •Provide all officials with appropriate sun screen and urge them to use it, encourage the use of broad brimmed hats and sunglasses- when the weather is hot. •Provide shade structures if practical •Ensure that a lunch break is taken - to allow officials to rest and recover
17								
Animals								
	Animals straying on to competition circuit	C	3	High	✓			<ul style="list-style-type: none"> •Check fences before competition, and repair fences if damaged. •No unrestrained animals to be permitted within fenced area of circuit •Flag Marshals to utilise yellow flag when animal appears on the circuit. •Utilise ultrasonic sound devices in highly populated areas to ward off animals i.e. kangaroos •Signage at entrance excluding animals- other than those required
	Companion / Assistance animal causing incident	C	3	High		✓	✓	<ul style="list-style-type: none"> •Animal to be restrained in a suitable environment -out of all possible traffic paths •Dog handler informed of the risks when entering the circuit and the need for the animals to be restrained at all times-Marshals to enforce
18								
Venue Layout								
	Severe wet weather - effecting track conditions	D	2	Low	✓			<ul style="list-style-type: none"> •Stewards to inspect track prior to declaring open •Inspect all tyre barriers and gaurd rail to ensure that they are satisfactory •Stewards to sususpend the event - Stewards to conduct a course inspection and declare the track condition to the Clerk of Course. •Reconvene Drivers Briefing to inform of the changed conditions to the track
	Injury from tyre wall/bundles	C	3	High	✓		✓	<ul style="list-style-type: none"> •Fitting of adequate rubber mat over top of tyre wall to fill gaps -allowing for Marshals to safely reach the track •Tyre bundles to be secured with chains, each individual tyre joined within the bundle.
19								
Administration								
	Driver /Passenger missing briefing	D	2	Low	✓			<ul style="list-style-type: none"> •Delay drivers briefing to ensure all drivers at briefing •Drivers arriving late receive briefing notes prior to receiving their wrist bands.. •All passengers briefed before ride & helped into car by officials who will also adjust and fasten seatbelts
	lack of OHS documentation from contractors	B	4	Extreme	✓	✓	✓	<ul style="list-style-type: none"> •Contact contractor before event to notify them that it is a requirement before entering the event to provide documentation that provide evidence of appropriate duty of care Please see CAMS web site for more information on contractors at events. •Conduct a risk assessment on the duties to be conducted to assess the risk-use the CAMS TRA Form •Discuss with the contractor what they are doing and how this is to be done, •Contractor to write down what they do and any risks that need to be addressed before any work commences-this needs to be documented. •Organisers/Safety Officers present during bump-in and operations to assist contractors to comply as required

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Number	Abbreviation	Type of Risk	MOTOR SPORT DESCRIPTION
1	FIRE	Fire/Explosions/Falling objects	Situations and substances that could cause a fire or explosion, including gas bottle explosions, sudden release of pressure, failed pressure vessels (gas bottles or manifolds) or components under pressure (e.g. air hoses, regulators and gauges). Also objects including cars, trees, signs, equipment etc that could fall unexpectedly on persons
2	EQUIP	Plant/Equipment	This includes all tools and mechanical equipment, such as car jacks, spanners, car stands, quick jacks, air tools, rattle guns, trolleys, portable workshops, trailers, pantechs etc. This includes the training, use, and maintenance of all tools and equipment used at the venue.
3	DANGEROUS GOODS	Dangerous Goods and Hazardous Substances, Radiation, Spills and Leaks	The storage and handling of Dangerous Goods/Hazardous Substances. These include fuel and oils used in race cars, solvents, cleaning products, gases (LPG, nitrogen, Oxy-acetylene etc and any chemicals used in any area of the venue including the paddock areas and pit garages ("on site"). Radiation hazards from chemicals/compounds. Spilt fluids (water, fuel, oil etc) and leaks from liquid storage containers, which may be large (fuel storage for a race meeting) or small (split radiator in a competition car)
4	MECHANICAL	Mechanical	Mechanical failure of equipment including competition and official cars.
5	CUTS/BURNS/FALLS	Slips, Trips, Falls, Lacerations and Burns	Anything hazardous that can lead to personnel injuring themselves from slipping, tripping or falling over in any area of the venue. Injuries to any personnel on the site which result in cuts (lacerations) or burns from other than explosions, or fires.
6	SPRAINS	Manual Handling, Sprains and Strains	The manual lifting and any consequent injury to persons involved in the moving and use of equipment and material, which includes use of tools, wheels, spare parts, use of jacks, welding equipment, grinders etc.
7	FALLS	Working at heights, falls from Heights and Confined spaces	Personnel working at heights and resultant injuries if they fall or are required to conduct their activities from confined spaces. May include areas where officials are required to operate from. Includes all areas of the venue
8	VEHICLE COLLISIONS	Vehicle Collisions	Cars colliding with each other, trees, barriers, gravel traps, buffers, banks or something else. Also includes competition cars colliding with people in the restricted competition area/paddock area, such as unauthorised cars or persons on closed roads, officials being struck by cars at a race track or other competition.
9	DEBRIS STRIKE	Debris Strike	Injury received to any personal from flying debris as a result of an on-track/stage vehicle incident.
10	CRUSH	Entanglement/Crush	Situations where persons could become entangled and or crushed by tools, plant and equipment or competition or other vehicles
11	PUBLIC SAFETY	Public Safety, Vehicles and Pedestrians	Safety of the public (spectators), in all areas of the venue including paddock and competition areas as well as spectator areas. Also includes the hazards which exist in areas where competition and/or any vehicles move about in an environment where people are walking, e.g. the paddock area.
12	MEDICAL	Emergency / Medical Intervention	Risk posed through response times & locations of those required to respond, response times determined by location of emergency services, on or off track or off venue e.g. nearest ambulance station, the location through a stage or around a circuit of medical staff or rescue officials etc.
13	ELECTRICAL	Electrical	The possible electrocution of personnel from use, siting and connections for electrical equipment and cords. This also includes hazards arising from the training in the use of electrical equipment and maintenance of that equipment.
14	FOOD	Food Poisoning	Sickness or injury caused by bacterial contamination of food, food poisoning gaining of local permits, correct sullage, protection of food and non-mechanical refrigeration
15	NOISE	Noise	Noise that is produced by any means at the venue.
16	PERSONAL ENVIRONMENT	Personal Comfort, Personal Environment (heatstroke, hypothermia, hyperthermia, etc)	Concerns personal comfort and hygiene and the effect that the environmental conditions could have on personnel.
17	ANIMALS	Animals	Hazards arising from the presence of animals, including wildlife (birds, kangaroos, rabbits) and domestic animals (trained and untrained, including assistance animals) which may impact on any part of a venue or event.
18	VENUE LAYOUT	Environment, Layout and Weather Conditions	Injuries which may be effected by changes to the layout of a competition or the general environment (geographical, demographic etc) and variables relating to weather conditions, including daylight/nighttime light conditions. Also competitions affected by weather (e.g. sun, rain, snow, high winds) conditions.
19	ADMIN	Administration, OH&S Compliance, Policy, Practices	Risk posed by incomplete or incorrect application of documentation and procedures, e.g. CAMS licence not issued correctly; staff shortage, Issue of policies, no policy or procedures present, may include safe working method statements and site inductions