

# Risk Register for Speed Events



## 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 Speed Events.

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 2 represents the Speed Event 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 2.1.10, thus the risks/hazards are associated with Speed Events (2): 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 Speed Events 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](http://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](http://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.

# CAMS SPEED EVENT RISK REGISTER



## SPEED EVENTS

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RISK TYPE	POSSIBLE HAZARD	INITIAL ASSESSMENT			AREA OF RISK	AREA OF RISK	AREA OF RISK	POSSIBLE CONTROLS
		Likelihood	Consequence	Risk Score	COMPETITION AREA	Paddock AREA	SPECTATOR AREA	
					Competition Areas	Paddock Areas	Spectator Areas	
<b>1</b> Fire/Explosion								
	Vehicle fire	C	3	HIGH	✓	✓		<ul style="list-style-type: none"> <li>•Safety check on all vehicles to minimise mechanical failures</li> <li>•Medical and fire response on standby</li> <li>•Fire extinguishers at manned observation points.</li> <li>•Driver's briefing-reinforce correct behaviour for competitors (i.e. get out of car in event of fire, do not attempt to open bonnet)</li> <li>•Competitor to wear appropriate clothing</li> <li>•Race control cease activity until safe</li> </ul>
	Fuel fire	B	3	HIGH	✓	✓		<ul style="list-style-type: none"> <li>•Ban refuelling in pit lane-unless in accordance with Schedule N of National Competition Rules</li> <li>•Designated refuelling area to be set up</li> <li>•No person within vehicle when refuelling takes place</li> <li>•Competitors to fuel cars before arriving at the event</li> <li>•Free-standing extinguisher to be placed by the vehicle when refuelling taking place</li> </ul>
	Grass/Building fire	D	3	MEDIUM	✓	✓	✓	<ul style="list-style-type: none"> <li>•If necessary grass must be cut prior to competition day and checked before any competition may start</li> <li>•Area kept clear of flammable material</li> <li>•No open fires allowed</li> <li>•Fire services at venue</li> <li>•Provide emergency services phone numbers to all officials</li> </ul>
<b>2</b> Equipment								
	Cars falling off trolley jack or car stands	C	4	EXTREME		✓		<ul style="list-style-type: none"> <li>•Use the driver's briefing to direct competitors and officials that mechanical work requiring the use of jack/stands to be:                             <ul style="list-style-type: none"> <li>- carried out on firm flat surfaces at all times.</li> <li>- the unlifted wheels to be chocked</li> <li>- the load should be located on the head cap when raising</li> <li>- the jack should be used for lifting and lowering only, the raised vehicle should be supported on vehicle support stands</li> </ul> </li> </ul>
<b>3</b> Dangerous Goods								
	Oil/fuel spill on track.	B	4	EXTREME	✓			<ul style="list-style-type: none"> <li>•Provide for an absorbent material in readiness for immediate use by officials, either at a flag point or in a recovery vehicle</li> <li>•Utilise the black flag with orange disc (meatball flag) against the offending vehicle, to get it off the track for inspection</li> <li>•Have vehicle re-checked by Chief Scrutineer for any leakages or damage</li> </ul>
<b>4</b> Mechanical								

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					Competition Areas	Paddock Areas	Spectator Areas	
<b>5</b>	<b>Cuts/Burns /Trips</b>							
	Burns in scrutineering bay	C	2	MEDIUM		✓		<ul style="list-style-type: none"> <li>•Competitors not having their engines running unnecessarily</li> <li>•Wearing suitable protective apparel when checking cars with hot parts</li> <li>•All injuries to be reported directly to race control so suitable medical assistance can be provided</li> </ul>
	Trip hazards	C	1	LOW	✓	✓		<ul style="list-style-type: none"> <li>•Ensure marshalling points are cleared of debris</li> <li>•Ensure all equipment in garages and surrounding area is organised, so that it is not posing a risk to crews or public- have marshals monitor</li> </ul>
	Slips	C	2	MEDIUM	✓	✓	✓	<ul style="list-style-type: none"> <li>•Pit crews to be suitably attired with correct footwear</li> <li>•Ensure pit area is correctly maintained and all spills are immediately cleaned up</li> <li>•Monitor wet areas (consider signage in high foot traffic areas - especially where stairs are used)</li> </ul>
<b>6</b>	<b>Sprains</b>							
<b>7</b>	<b>Falls from height</b>							
<b>8</b>	<b>Vehicle Collisions</b>							
	Cars colliding with cars	C	3	HIGH	✓	✓		<ul style="list-style-type: none"> <li>•Use of pit entry and pit exit to separate entering and exiting cars</li> <li>•All officials observe driving standards, drivers briefing to reinforce correct behaviour</li> <li>•Safety check on all vehicles(as per Targeted Scrutiny Program) to minimise mechanical failures</li> <li>•Fire extinguishers at manned observation points</li> <li>•Medical and Fire response to be on standby - to respond as required</li> <li>•Officials placed along track with line of sight, communicating via two-way radio. Next car not cleared to run until notified by radio marshal, that proceeding car has cleared the finish line.</li> <li>•Driver's briefing to stress importance of car separation at the start of each super sprint.</li> <li>•Marshals to monitor traffic flow coming off and on track</li> </ul>
	Cars colliding with barriers/armco	B	2	HIGH	✓			<ul style="list-style-type: none"> <li>•If possible have sand traps before armco/barriers to reduce speed before impact</li> <li>•Inform competitors of any unusual changes to the track in Driver's Briefing.</li> <li>•Inspect barriers after incident-they may need to be re-secured, re-erected or relocated</li> </ul>

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					Competition Areas	Paddock Areas	Spectator Areas	
	Cars colliding with officials/pit crews	D	3	MEDIUM	✓	✓		<ul style="list-style-type: none"> <li>No officials, spectators, or photographers to enter the track area without approval and direction from Clerk of Course-place marshal at pit exit/entry</li> <li>Competition to be immediately stopped if anyone is observed to be in a 'no go' area</li> <li>Only designated rescue vehicles and / or ambulance to enter the track area, if an incident occurs</li> <li>Ensure drivers maintain pit lane speed limits -remind at drivers briefing and reinforce correct behaviour including patience in the marshalling area</li> <li>Ensure pit crew remain in designated areas</li> <li>Briefing of Marshals with regard to personal safety whilst attending to on track incidents</li> <li>Marshalling area- Marshals to wear high visibility reflective vests</li> <li>Provide traffic control measures for cars in paddock area and marshalling (e.g. signage, safety tape, speed limit signs or barriers)</li> <li>Pit 'return' roads and pit area clearly marked</li> <li>No moving of cars within the paddock area with bonnets up</li> <li>Cars to maintain a speed of walking pace through the paddock and forming up area</li> </ul>
<b>9</b> Debris Strike								
	Debris strike to officials	C	3	HIGH	✓			<ul style="list-style-type: none"> <li>Trackside officials behind debris protection.</li> <li>Officials in vehicles behind first line of protection.</li> <li>All vehicles subjected to a safety check to minimise chances of mechanical failure</li> <li>Ensure marshals are adequately briefed with regard to personal safety</li> <li>No car may start a run until all start line officials are in their 'box'</li> </ul>
	Debris strike to spectators	D	3	MEDIUM			✓	<ul style="list-style-type: none"> <li>Spectators only in approved spectator areas behind approved first line of protection</li> </ul>
	Debris on track causing incident	C	2	MEDIUM	✓			<ul style="list-style-type: none"> <li>Check and remove any debris from circuit prior to commencing event</li> <li>Monitor track surface for 'objects' during the event -may need to be swept or cleared</li> <li>Make sure all loads and debris are secured and fastened on recovery vehicle before recovery vehicle moves on</li> <li>Medical and fire response to be on standby to respond as required</li> </ul>
<b>10</b> Crush								
	Injury through non use of jack stands.	c	3	HIGH		✓		<ul style="list-style-type: none"> <li>Marshal's checking to ensure cars are on stands and on safe ground. Reinforce in Driver's Briefing.</li> <li>Cars to be raised only on concreted area.</li> <li>Cars being raised are cordoned off from the public-trolley jack should be used for lifting and lowering only, the raised vehicle should be supported on vehicle support stands</li> </ul>
	Car rollover during competition	C	3	HIGH	✓			<ul style="list-style-type: none"> <li>All officials to observe driving standards</li> <li>All participants to wear seat belts</li> <li>Safety check on all vehicles to minimise mechanical failures</li> <li>Medical and fire response to be on standby</li> <li>Fire extinguishers at manned observation points</li> <li>Driver's briefing to reinforce correct behaviour</li> <li>Race control cease other activity until safe</li> </ul>
<b>11</b> Public Safety								

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	Public being hit by competition cars	C	3	HIGH	✓		✓	<ul style="list-style-type: none"> <li>•Ensure all spectators remain in approved areas. Signs to be put in place warning spectators of areas not allowed</li> <li>•First aid services at venues</li> <li>•Access official to be placed at crossover point (if access available) at all times -with directions to instruct spectators to stand behind gate until they are instructed it is safe to cross over track</li> <li>•Access official to have radio contact with start/control tower to be able to delay start, or red flag, competitors, if there is a possible hold up with crossing</li> <li>•Competition area fencing checked prior to competition starting</li> </ul>
	Public in paddock area	C	2	MEDIUM		✓		<ul style="list-style-type: none"> <li>•Place crowd barriers around entrance to pit/marshalling area</li> <li>•Spectators excluded from marshalling area</li> <li>•Spectator control/security staff to patrol marshalling area</li> <li>•Enforce speed limit in paddock area (10km limit)-use drivers briefing to remind</li> <li>•Place speed limit signs within the spectator area</li> </ul>
	Public in spectator areas	C	2	MEDIUM			✓	<ul style="list-style-type: none"> <li>•Spectators are fenced off from competition areas.</li> <li>•Marshal the spectator area</li> <li>•Ensure fencing is erected properly and it is checked before competition starts</li> <li>•Ensure correct signage for restricted areas are in place</li> </ul>
	Children	D	3	MEDIUM		✓		<ul style="list-style-type: none"> <li>•Children to be supervised by an adult at all times</li> <li>•Restrict access for children (designate areas)</li> </ul>
<b>12</b>	<b>Medical</b>							
<b>13</b>	<b>Electrical</b>							
<b>14</b>	<b>Food</b>							
<b>15</b>	<b>Noise</b>							
	Hearing damage	B	2	HIGH	✓			<ul style="list-style-type: none"> <li>•Start Marshals should be made to wear hearing protection</li> <li>•Rotate if possible Start Marshals, to limit their exposure</li> <li>•Officials to be offered hearing protection</li> </ul>

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	Competition vehicles breach Environment Protection Authority noise levels.	C	2	MEDIUM	✓			<ul style="list-style-type: none"> <li>Utilise noise meters at the event to measure noise levels</li> <li>Inform competitor to rectify the problem or may risk exclusion from event-this may occur if the vehicle records over permitted noise limits as per National Competition Rules</li> </ul>
<b>16</b>	<b>Personal Environment</b>							
	Sunburn/heatstroke/wet weather to officials	C	2	MEDIUM	✓	✓	✓	<ul style="list-style-type: none"> <li>Ensure all official's have access to cool drinks during events</li> <li>Regular drink runs to be scheduled on hot days</li> <li>Remind all official's at the briefing for the need to remain hydrated ( during the event- provide rest periods if needed)</li> <li>Monitor official's 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</li> <li>Remind official's that the cold (hypothermia) affects as well, and to keep warm</li> <li>Monitor official's during event for signs of hypothermia(slurred speech, stumbling, shallow breathing, skin that is cold to touch)</li> <li>Provide all official's with appropriate sun screen and urge them to use it, encourage the use of broad brimmed hats and sunglasses- when the weather is hot.</li> <li>Provide shade structures if practical</li> <li>Ensure that a lunch break is taken - to allow official's to rest and recover.</li> </ul>
	Smoke from burnouts - reducing vision for officials	B	3	HIGH	✓			<ul style="list-style-type: none"> <li>Race control to wait for smoke to adequately clear - prior to commencing next burnout.</li> </ul>
	Dust inhalation to starting officials from 'dusty starts'	C	1	LOW	✓			<ul style="list-style-type: none"> <li>Locate starter as far as practicable away from starting cars</li> <li>Where possible, rotate the starter official to reduce exposure</li> <li>Provide the starter official with a dust mask</li> </ul>
<b>17</b>	<b>Animals</b>							
	Animals straying onto competition circuit from adjacent properties	B	1	MEDIUM	✓			<ul style="list-style-type: none"> <li>Check fences before competition, and repair fences if damaged.</li> <li>Place observer/s at strategic safe point/s around the track with radio communication to the start line.</li> <li>Contact local land owners informing them off the event taking place</li> </ul>
<b>18</b>	<b>Venue/Track Layout</b>							
	Severe wet weather-effecting track conditions	C	2	MEDIUM	✓			<ul style="list-style-type: none"> <li>Stewards to inspect track prior to declaring open.</li> <li>Inspect all tyre barriers and guarding to ensure that they are satisfactory.</li> <li>Stewarts to suspend the event - Stewards to conduct a course inspection and declare the track condition to the Clerk of Course.</li> <li>Reconvene driver's beifing to inform of the changed conditions to the track</li> </ul>

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	Competitor entering incorrect part of circuit.	D	2	LOW	✓			<ul style="list-style-type: none"> <li>•Use barriers and cones to block areas of the circuit that aren't being used</li> <li>• Brief drivers on circuit layout prior to racing</li> <li>•Publish a map of the circuit-placing it on the notice board</li> </ul>
<b>19 Administration</b>								
	Driver misses briefing - not signed on .	C	2	MEDIUM	✓			<ul style="list-style-type: none"> <li>•Wristband system for drivers. Officials to check wristbands</li> <li>•Continual briefings for drivers in the one area so they are aware of where to go</li> <li>•Officials to remind competitors where possible of their required attendance</li> <li>•Introduce sign-on sheet and follow up on non- attendees</li> </ul>
	Passenger not signed on.	C	2	MEDIUM	✓			<ul style="list-style-type: none"> <li>•Wristband system for passengers to make sure they sign-on .</li> <li>•Officials to check wristbands</li> <li>•Sign-on sheet to be utilised by event organisers</li> </ul>

## RISK CATEGORIES

Number	Abbreviation	Type of Risk	MOTOR SPORT DESCRIPTION
1	<b>FIRE</b>	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	<b>EQUIP</b>	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	<b>DANGEROUS GOODS</b>	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	<b>MECHANICAL</b>	Mechanical	Mechanical failure of equipment including competition and official cars.
5	<b>CUTS/BURNS/TRIPS</b>	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	<b>SPRAINS</b>	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	<b>FALLS</b>	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	<b>VEHICLE COLLISIONS</b>	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	<b>DEBRIS STRIKE</b>	Debris Strike	Injury received to any personal from flying debris as a result of an on-track/stage vehicle incident.
10	<b>CRUSH</b>	Entanglement/Crush	Situations where persons could become entangled and or crushed by tools, plant and equipment or competition or other vehicles
11	<b>PUBLIC SAFETY</b>	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	<b>MEDICAL</b>	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	<b>ELECTRICAL</b>	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	<b>FOOD</b>	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	<b>NOISE</b>	Noise	Noise that is produced by any means at the venue.
16	<b>PERSONAL ENVIRONMENT</b>	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	<b>ANIMALS</b>	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	<b>VENUE LAYOUT</b>	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	<b>ADMIN</b>	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