



Sanctioned Event – Targeted Risk Assessment

Form TRA-01

Venue	Adelaide International Raceway	Venue application to host activities under the CAMS Level 1 Venue Licence. Please note: Track 1 is defined as East to west Track 2 is defined as West to East and should not be used if wet, Obstacle's such as gates posts, opposing track surface, track narrowings etc are detailed as a potential impact with or effect on vehicle. Tyre Barriers are referred to with the following terms Height: Number of tyres from the Ground to the top tyre is approx. 1 Meter. Columns: Number of tyres from left to right (1 tyre width is 1 column = approx. 0.5 meter)
Area	S 34 deg 42.103 E 138 deg 34.202	
Date	TRA Updated November 22 nd 2016	
TRA Version	Version 3	

RISK MATRIX	Consequence			
	1 Insignificant	2 Minor	3 Moderate	4 Major
Likelihood				
A - Almost Certain	High	High	Extreme	Extreme
B – Likely	Medium	High	High	Extreme
C – Possible	Low	Medium	High	Extreme
D – Unlikely	Low	Low	Medium	High

ACTIONS REQUIRED FOLLOWING ASSESSMENT OF RISK:

- Extreme risk Immediate actions required
- High risk Senior Management (Senior Event Official) attention needed
- Medium risk Management (Organiser) responsibility must be specified
- Low risk Manage by current procedures / continue current process

Note: "Management" and "Official" are considered to be like terms

See reverse for descriptions of Likelihood and Consequence outcomes



IDENTIFIED RISKS:

Description of identified Risks	Likelihood (A-D)	Consequence (1-4)	Resultant Risk	Controls / Treatment What needs to be done about it?	Who will Implement?	Who will Check?	Confirmed by Stewards or Course Checker
<p>Point 1 TRACK 1 0.032km</p> <p>Vehicles meeting in opposing directions</p> <p>Vehicles exiting Pit Gate in the Eastern wall of the Bowl (A), are in a direct line from vehicles entering Hairpin (B) from infield Pit Straight to the West Point 6 refers</p>	B	3	High	<p>See Diagram 1 for placement of Barriers to avoid opposing traffic. 3 rows, Linked barriers either water filled or concrete would be ideal and would allow time interval between competitors to be at the discretion of the Clerk of Course.</p> <p>1 row of solid barrier (water filled or concrete, placed at position C is the minimum requirement. With this option waiting for 1 vehicle to pass B before next competitor is allowed to start through A</p>	Organiser	Course Checker and Stewards	
<p>Point 2a, 2b Track 1 0.34km</p> <p>Speed down back straight</p> <p>Average speed of entire stage – Fastest car at first event averaged 89.8kph on the data we have acquired and they will only get faster over time. Addition of a second lane change in this area will help to reduce this</p>	A	2	High	<p>As back straight is 200m long with positive camber,</p> <p>Point 2a) A single point lane change, enter Left exit Right placed half way down the straight.</p> <p>Point 2b) A second lane change device, this time entering right and exiting left placed part way around the high speed LH bowl turn to the west of the initial lane change device.</p> <p>Suggested spacing of the rows in each lane change is 12-15m</p> <p>This measure is designed to reduce the overall average speed and may be increased (multiplied) should it be required after review of competition data.</p> <p>Refer Diagram 6 and 11</p>	Organiser	Course Checker and Stewards	
<p>Point 3 Track 1- 0.60km</p> <p>Service vehicle bunker and shortcutting</p>	D	2	Low	<p>Define edge of track and create bunker for Service vehicles and officials.</p>	Organiser	Course Checker and Stewards	



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Point 4 Track 1 – 0.67km Collision with inside concrete wall	C	3	High	Fix tyre bundles currently along wall and have 1 Column lashed around corner of wall	Organiser	Course Checker and Stewards	
Point 5 Track 1 – 0.79km Concrete wall jutting out	C	1	Low	Cover two PA gates in inner pit wall, with a single tyre bundle	Organiser	Course Checker and Stewards	
Point 6 Track 1 – 0.89km SEE POINT 1	B	3	High	Please refer to Point 1	Organiser	Course Checker and Stewards	
Point 7 Track 1 – 0.93km Water tap in ground	C	3	High	Water filled barrier 1m before tap and aligned to guide competitors to the Southern Drag Lane Refer Diagram 1 - W	Organiser	Course Checker and Stewards	
Point 8 Track 1 – 0.95km Drag strip staging area concrete	C	2	Medium	Barriers to cover gaps in concrete, protecting leading edges.	Organiser	Course Checker and Stewards	
Point 9 Track 1 – 1.24 km Crossover gate posts in concrete wall.	C	2	Medium	The use of a hammerhead course reduces the approach angle and speed to the gate, a single half filled water barrier on the left post, 45 degrees and 500mm overlap into opening. Refer Diagram 2	Organiser	Course Checker and Stewards	



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Point 10a, 10b, 10c track 1 – 1.38km Track surface narrows, competitors will cut the corners here dragging gravel into the braking zones for following corners.	B	3	High	10a, 10b Single Caution Boards to be placed in gravel at the start on both sides of the tarmac where the road narrows for the relevant direction of stage travel. Time Penalties if struck. Water Barriers (don't need to be filled) placed on the apex of the corners through this section to prevent corner cutting for both directions Refer diagram 10	Organiser	Course Checker and Stewards	
Point 11 Track 1 – 1.50km Stakes defining track area	D	1	Low	There are stakes along each edge of the competition area, as long as these remain timber the is no issue.	Organiser	Course Checker and Stewards	
Point 12 Track 1 – 2.16km Flying Finish. Aligning braking area to avoid concrete walls	C	3	Medium	3 options for Flying Finish. 1. Part way through corner to allow enough braking room. 2. can be on junction between straight and corner, however, braking area MUST be heading East on northern side of straight for 100m, then a hairpin to the Southern side and down to the exit gate at the end of the straight. 3. Can be 30m past hairpin heading West. Refer Diagram 3	Organiser	Course Checker and Stewards	



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Point 10a, 10b, 10c track 2 – Track surface narrows, competitors will cut the corners here dragging gravel into the braking zones for following corners.	B	3	High	10a, 10b Single Caution Boards to be placed in gravel at the start on both sides of the tarmac where the road narrows for the relevant direction of stage travel. Time Penalties if struck. Water Barriers (don't need to be filled) placed on the apex of the corners through this section to prevent corner cutting for both directions. Refer diagram 10	Organiser	Course Checker and Stewards	
Point 13 Track 2 – 0.90km Scrutiny Shed.	B	3	High	Linked Water filled barriers at 45degree to the road from the concrete driveway to the North side of the footpath, half a barrier to the West of the shed. Then along the edge of the path to half a barrier East of the shed. Then 45degrees to the South East for 1 barrier. All Barriers must be connected Refer Diagram 4	Organiser	Course Checker and Stewards	
Point 14 Reverse of crossover, edge of gate. Also Service vehicle bunker	C	2	Medium	Fencing needs to be realigned to match the steel gate at its most open position Also needs barriers across track preventing a "straight on" and creating the other side of the service vehicle bunker mentioned in point 3 Refer Diagram 4	Organiser	Course Checker and Stewards	
Point 15 Reverse Drag Strip Start Area Concrete, high speed approach.	C	3	High	Arrow head of three tyre columns following paint with half filled (or more) water barriers both sides protecting leading edge of concrete area. Also gaps down length of concrete, barriers or tyre columns to protect leading edges. Refer Diagrams 1, 5 and 9	Organiser	Course Checker and Stewards	



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Area from Point 15 to Point 8 Drag Strip start area if WET	B	2	High	<p>IF WET, Track 2 may be considered if a 4 Row chicane is used to slow the competitors before they enter the Drag start area. The braking area for the hairpin is on the Very High Traction surface of the drag strip. This is very slippery in wet conditions and there is no runoff should a competitor have an issue.</p> <p>Also placement of !! Double caution boards at the chicane entrance and braking distance warning boards 150 / 100 / 50m before the chicane.</p> <p>Refer Diagrams 1, 5 and 9</p> <p>The drivers briefing must reference this area and emphasise drivers take care approaching this area in wet conditions</p>	Organiser	Course Checker and Stewards	



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<p>Point 2a, 2b Track 2</p> <p>Speed down back straight</p> <p>Average speed of entire stage – Fastest car at first event averaged 89.8kph on the Stage 1 data we have acquired and they will only get faster over time. Addition of a second lane change in this area will help to reduce this</p>	A	2	High	<p>As back straight is 200m long with positive camber,</p> <p>Point 2a) A single point lane change, enter Left exit Right placed half way down the straight.</p> <p>Point 2b) A second lane change device, this time entering right and exiting left placed part way around the high speed LH bowl turn to the west of the initial lane change device.</p> <p>Suggested spacing of the rows in each lane change is 12-15m</p> <p>This measure is designed to reduce the overall average speed and may be increased (multiplied) should it be required after review of competition data. Refer Diagram 6 and 11</p>	Organiser	Course Checker and Stewards	
<p>Point 16</p> <p>Reverse entry into Pit Straight, gate post</p>	C	3	High	<p>3 column lashed tyre bundle around the gate post</p>	Organiser	Course Checker and Stewards	



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Point 17 Pit Entry Eastern Wall of Bowl, gate post	C	3	High	<p>Although speed and angle of approach is reduced through the hammerhead, the steel gate post still needs to be covered with either a Barrier or Lashed tyre bundle. The Barrier should be placed to protect the post but not protrude into the opening of the pit entrance (pit exit for Track 1) Refer Diagram 1.</p> <p>Stage start timing is similarly determined by the track setup in this area, if 3 Rows of protection are in place (refer point 1 and diagram 1) timed start interval is ok.</p> <p>If only 1 row of barriers are in position C, following car cannot start the stage until the previous car has cleared the lane change in the back straight of the bowl (refer point 2).</p>	Organiser	Course Checker and Stewards	
Point 18 Pit area, braking area for track 2	C	3	High	<p>Area against boundary fence needs to be cordoned off for braking zone and the grassed area to the South kept clear for runoff.</p>	Organiser	Course Checker and Stewards	



Likelihood		Consequence	Personal Injury	Administrative
A - Almost certain	Action will probably occur numerous times or in many circumstances	4 – Major Consequence	Death, permanent or extensive injury requiring hospitalisation to one or more people.	Significant hardship to Organisation
B - Likely	Action may occur occasionally or in some circumstances	3 – Moderate Consequence	Serious injury requiring hospitalisation; broken limbs or stand down for duration of event	Significant rejigging of organisational plans required
C - Possible	Action may occur in exceptional circumstances and has been known to occur elsewhere	2 – Minor Consequence	Medical attention on-site or ongoing attention to injury may be required	Minor rearrangement of plans required to address the situation
D - Unlikely	Whilst theoretically possible is not known to have occurred	1 – Insignificant Consequence	Minor first aid, if at all. No ongoing medical attention	Localised assessment of affected issue to be considered

POINTS TO REMEMBER:

What can cause injury or death?
<ul style="list-style-type: none"> ▪ slips/trips ▪ Collapse of structures ▪ Dangerous or flammable Materials ▪ Electrical cables ▪ Heavy equipment ▪ Public access / egress / behaviour ▪ Weather (e.g. Rain / Hail / Wind / Thunderstorms) ▪ Projectiles

Four Risk Treatments
<ul style="list-style-type: none"> ▪ Avoid: Don't do the activity ▪ Treat: Reduce by use of controls ▪ Accept: If low or if consequences can be tolerated. ▪ Transfer: (Caution – not possible to transfer duty of care.)

Levels of Control Methods
<ul style="list-style-type: none"> ▪ Avoid ← Try to start here ▪ Substitute ▪ Isolate ▪ Reduce by physical controls ▪ Reduce by admin warning and rules ▪ Use Personal Protection Equipment ← Last resort

WHO DID YOU TALK TO IN ASSESSING AND IDENTIFYING THIS RISK?

Date	Name	Position	Signature
8 th September 2016 Drove Layouts	Andrew Challen	CAMS Course Checker	
8 th September 2016 Drove Layouts	Howard Ryan	CAMS Course Checker	

Completed by: Andrew Challen	Signed:	Date: 20 th September 2016
Updated by: Howard Ryan	Signed:	Date: 22 nd November 2016