

# TRACK STANDARDS FOR INSPECTORS

# Standards for the Inspection and Licensing of Road Race Tracks

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# 1. INTRODUCTION

These Track Standards (the Standards) have been developed by Motorcycling Australia (MA) to assist MA approved Track Inspectors conduct an inspection assessment of motorcycle tracks.

As the governing body for the sport in Australia, MA is committed to promoting safe motor sport through various education and training initiatives and through the publication of other guideline materials, including The Manual of Motorcycle Sport.

The safe operation and management of tracks and events remains the responsibility of Track Operators and Event Promoters.

#### 1.1. Motorcycling Australia Insurance Limited (MAIL)

Motor sport is a dangerous activity. Access to affordable and appropriate insurance has been a major issue for MA and many other sporting organisations. MA recognises that without the MAIL scheme many affiliated clubs, participants and Promoters would find it difficult to obtain insurance. To ensure the sport has a viable future, MA has operated the MAIL scheme since 2003.

The MAIL scheme covers personal accident insurance for participants, officials and others. The scheme also provides public liability insurance for Track Operators during events operating under a Permit issued by MA or a Relevant Controlling Body (RCB), at a track that has been inspected and licensed by MA or an RCB, in accordance with these Standards.

To access coverage under the MAIL scheme:

- A track must be inspected by an MA-Licensed Track Inspector in accordance with these Standards
- The Track Inspector must produce a Track Report
- The Track Operator must be approved by MA or the RCB
- An event must be conducted pursuant to a Permit issued by MA or the RCB
- In respect of personal accident insurance for participants, the participants must hold a current MA Competition or Recreation Licence.

#### 1.2. Application and Scope of the Standards

The Standards must be applied in their entirety for a newly constructed track. In the case of existing tracks, where there is identified non-compliance with the Standards, a Targeted Risk Assessment (TRA) must be performed by the Track Inspector. Where rectification work is required, MA or the RCB will consult with the Track Operator to develop a scheduled Works Program for the Track Operator to complete.

These Standards are not mandatory, however MA or the RCB may refuse to issue a Track Licence for a track where non-compliance with the Standards is identified.

A Track Inspector may use reference materials in assessing matters of non-compliance, within the framework of a TRA, such as the Manual of Motorcycle Sport or documents produced by the Federation Internationale de Motocyclisme (FIM).

For the purposes of obtaining a Track Licence to conduct an international event, additional measures may be required to comply with FIM standards. The FIM publishes information to assist Track Operators to develop their tracks for international competition.

#### 1.3. **The Role of a Track Inspector**

Track Inspectors assess tracks for the purpose of providing a Track Report to MA to facilitate the provision of insurance under the MAIL scheme, as detailed above. Track Inspectors play a valuable role in motorcycle sport in Australia by assisting MA-affiliated clubs and participants to access the MAIL scheme.



Track Inspectors do not provide advice to Track Operators or Promoters in regard to legal or regulatory compliance.

#### 1.4. Support Facilities at Tracks

It is the responsibility of Track Operators to ensure compliance with all local, state and territory or federal laws, regulations and codes, regarding the safe design, construction, management and operation of the track and all support facilities.

# 1.5. **Disclaimer**

The Standards are for use only by MA-approved Track Inspectors and other persons expressly authorised by MA to conduct track inspections for insurance purposes. However, these Standards can be made available to people intending to construct a motorcycle venue. MA and its subsidiaries or related entities do not accept responsibility for the unauthorised use of information contained in these Standards.

MA and/or the RCB will decide whether or not to issue a Track Licence after considering the information in the Track Inspection Report and any other relevant factors. The decision to issue a Track Licence is at the complete discretion of MA and/or the RCB.

A Track Inspection Report and any related documents or information, whether written or oral, produced by or exchanged between MA (or the RCB) and/or a Track Inspector and/or a Track Operator, for the purpose of obtaining a Track Licence, must not be published, distributed or disseminated to unauthorised persons or third parties. Such documents or information must not be provided to any local, state, territory or federal legal or regulatory agency, authority or department unless required by law.

A Track Licence issued by MA and/or the RCB is only valid for the purpose of accessing insurance coverage under the MAIL scheme, where the event conducted at the relevant track is authorised under a Permit issued by MA or the RCB or where a specific authority has been obtained from MA. For detailed information regarding the issuing of Permits and for full details of the MAIL scheme, contact MA or the RCB.

Any information exchanged between MA (including its subsidiaries, affiliates or agents) or the RCB (including its subsidiaries, affiliates or agents) and a Promoter or Track Operator, arising out of or in connection with a Track Inspection or these Standards and/or in relation to the management of risk in motorcycle sport, is for the purpose of facilitating the Track Licence process to assess insurance coverage under the MAIL scheme and must not be relied upon for any other purpose, or construed as advice with regards to legal or regulatory compliance.

It is the responsibility of the Track Operator and/or Promoter to ensure that the track and support facilities comply with any planning, building, environmental, occupational health and safety, public safety or other local, state or territory laws, regulations or codes.

MA does not conduct a business or undertaking to ensure that participants in events or other people attending such events held at tracks licensed by MA are not put at risk. The purpose of these Standards and the licensing process is to facilitate the provision of insurance for affiliated clubs, participants, officials Track Operators, Promoters and others under the MAIL scheme and thereby ensure the continued viability of the sport.



# 2. **DEFINITIONS**

# 2.1. Definitions for Track Standards

2.1.1.	Audit	A check of the works undertaken at a track against a scheduled Works Program that results from a track inspection and/or Track Inspection Report.		
2.1.2.	ARI	Average Recurrence Interval.		
2.1.3.	Arrestor Bed	See "Gravel Trap".		
2.1.4.	CAMS	Confederation of Australian Motor Sport.		
2.1.5.	Closed Track	The whole or part of a track only accessible to competition machines.		
2.1.6.	Competition Area	The area at a motorsport track or venue to which spectators or the general public are not admitted, where vehicles can move at unrestricted speed and including track entry and exit roads.		
2.1.7.	Conveyor Belt Facing	A strip of conveyor belt attached to the front of at least a row of tyre bundles or other appropriate backing.		
2.1.8.	Course	Generally understood to be a track that need not start and end at the same point.		
2.1.9.	Curve	A change in direction through an angle greater than 15 degrees with a radius of less than three hundred (300) metres.		
2.1.10.	Event Organiser	The holder of an event or competition Permit issued by MA or the RCB. Also, known as Promoter(s).		
2.1.11.	FIA	Federation Internationale Automobile – the international automobile federation.		
2.1.12.	FIM	Federation Internationale de Motocyclisme – the international motorcycle federation.		
2.1.13.	Fire Precaution	Adequate precautions must be taken to eliminate the risk of fire in the pits, closed parks, paddock, refuelling area and all other risk areas.		
2.1.14.	GPS	Global Positioning System. The GPS co-ordinates (both latitude and longitude) of the track. The co-ordinates must be provided in MGA or WGS84 format and must note the GPS coordinates of the track for emergency evacuation		
2.1.15.	Gravel Trap	That portion of a run-off area of a road racing track (or course) which incorporates a specified type of gravel, designed specifically to slow the progress of a competition vehicle if/when entering the gravel trap.		
2.1.16.	Hazard	A hazard or object adjacent to the track (trees, sign, culvert, post etc.). A hazard is something a rider will run into.		
2.1.17.	International Event	A motorcycle event which may be conducted according to international rules and track standards as determined by the FIM and involving competition from more than one Nation.		



2.1.18.	Lighting	i)	Lighting must be of a standard that provides clear and even visibility on all racing surfaces, free of shaded areas and be of 200 lux minimum intensity on all parts of the racing track.			
		ii)	Particular attention must be paid to the illumination of ramps.			
		iii)	Lighting equipment must be carefully placed so that riding directly towards a se of lights does not hinder a competitor's view			
		iv)	Lighting is to be measured at the track surface with a lux metre or oth measuring device			
		v)	Lights must be inspected at le	east one business day prior to the night meeting.		
2.1.19.	Lines of Protection	i)	First line of protection (1LoP)	The barrier closest to the track which acts to prevent motorcycles and riders from colliding with spectators and officials or prevents them from crossing other parts of the track.		
		ii)	Second line of protection (2Lop)	A fence or barrier required to prevent the public entering the racing arena.		
		Not	<u>e</u> : For some tracks, the lay of t	the land may suffice as a first line of protection.		
2.1.20.	MA	Mot	torcycling Australia Limited			
2.1.21.	MA Track Inspector	An rep	official approved by MA, ass ort findings as appropriate in a	igned to undertake inspections of tracks and to MA Track Inspection Report.		
2.1.22.	MAIL	Mot	torcycling Australia Insurance	Limited		
2.1.23.	Major Alteration	An rece	alteration to the construction, design or configuration of a track, since the most ent Track Inspection and Report.			
2.1.24.	Marshal Point	An offic	area reserved for the exclusive use of authorised personnel, usually event cials.			
2.1.25.	Мау	Indi	cates a recommendation only.			
2.1.26.	MoMs	Ma	nual of Motorcycle Sport.			
2.1.27.	Must	Am	nandatory requirement under th	nese Standards.		
		lf a an Insi	requirement or action which must be implemented has not been implemented appropriate notation must be made on the Track Licence and/or Track pection Report.			
2.1.28.	Neutral Zone	i)	An area between the first and between spectators and mac	l second lines of protection that provides a buffer hines on the track.		
		ii)	An area extending from the e or objects which are likely to	dge of the track which must be clear of obstacles cause riders to fall from their motorcycles.		
2.1.29.	Paddock Area / Competition Support Area	Are veh	ea(s) established for use by competitors and their competition and support nicles.			
2.1.30.	Parc Ferme	An acc	area where machines are impounded and access may be restricted in cordance with the regulations for the event.			



2.1.31.	Signalling Area	An area for signalling, which is visible to all riders, may be provided and clearly marked at a suitable place adjacent to the track.		
		<ul> <li>A Signalling area must have a barrier to protect signallers from oncoming machines and to keep signallers off the track.</li> </ul>		
		iii) A Signalling area must not be placed at the outside of a corner or an outside exit of a corner.		
2.1.32.	Promoter	The holder of an event or competition Permit issued by MA or the RCB. Also known as Event Organiser(s).		
2.1.33.	Race Line or Trajectory	The ideal trajectory which is followed by the competitors under competition conditions, which may not correspond to the geometric shape of the track.		
2.1.34.	Racing Arena	An area including the racing track proper and extending at a minimum to where the 'second line of protection'' would need to be placed (infield and outfield) behind run- off areas of dimensions calculated for "new tracks" as defined within these Standards		
2.1.35.	RCB	Relevant Controlling Body. This is the body, either MA or an affiliated State or Territory body, with jurisdiction to issue a Permit for an event or competition or to issue a Track Licence.		
2.1.36.	Run-Off Area	The area on the outside of curves extending from the track to the first line of protection (or barrier).		
2.1.37.	Safety Fence	Also known as "the first line of protection" - the barrier closest to the track which acts to prevent motorcycles and riders from colliding with spectators and officials or prevents them from crossing other parts of the track.		
2.1.38.	Spectator Fence	ulso known as "the second line of protection" - A fence or barrier required to prevent the public entering the racing arena.		
2.1.39.	Speed Graph	A table or diagram indicating the maximum speeds attainable in the straights and curves of the track calculated in accordance with the data provided in section 15.8 figures 5, 6 and 7.		
2.1.40.	Track	A broad term applied to all tracks used for motorcycle sport, capable of being licenced under these Track Standards.		
		A track includes closed tracks and can be paved or unpaved or sealed or unsealed.		
		A track can:		
		<ul> <li>Begin and end at the same point; or</li> <li>Begin and end at different points; and</li> <li>Be either temporary, permanent or semi-permanent.</li> </ul>		
2.1.41.	Track Density	Maximum number of machines permitted to start the event.		
2.1.42.	TRA	Targeted Risk Assessment		
2.1.43.	Track Inspection	A formal, structured assessment process, undertaken in respect of a prospective or current motorcycle sport track, for the purpose of issuing or renewing a Track Licence and facilitating the provision of insurance under the MAIL scheme.		
2.1.44.	Track Inspection Report	A report generated by a MA approved Track Inspector following a Track Inspection.		
2.1.45.	Track Operator	The principal person or body controlling the day-to-day operation of a motor sport track or venue and can include the owner of track.		



- 2.1.46. Triennial Inspection
   A compulsory major inspection of all Tracks, undertaken by an approved MA Track Inspector with other stakeholders, conducted at 3 year intervals. The Triennial Inspection will list a works program. In intervening years, a minor inspection will take place to ensure the track is in the same or similar condition as the Triennial Inspection and the agreed works program is being adhered to.
   2.1.47. Verge
   The area immediately between the track and the first line of Protection (Road Racing Tracks)
- 2.1.48. Works Program A scheduled and budgeted program of works, negotiated by the RCB and the Track Operator detailing any rectification works necessary to comply with these Standards and/or a licensing requirement prescribed by MA and/or the RCB.



# 3. TRACK INSPECTIONS

# 3.1. RCB to Inspect Tracks

- 3.1.1. Tracks Inspected are arranged by the RCB depending on the type of track and configuration.
- 3.1.2. MA is the RCB and will arrange for the inspection of the following tracks:
  - a) Road Race Circuits (National / Open status)
  - b) Tracks holding National Championship Events
- 3.1.3. The various State and Territory bodies are the RCB's and will arrange for the inspection of following tracks:
  - a) Restricted Road Race Circuits
  - b) Motocross
  - c) Stadium Motocross
  - d) Supercross
  - e) Speedway
  - f) Track
  - g) Dirt track
  - h) Supermoto
  - i) Minikhana
  - j) Temporary Courses (including Enduro & Trials)
  - k) FMX

# 3.2. Track Inspectors

- 3.2.1. The Track Inspector must be approved by MA and meet any requirements as prescribed by MA or the RCB from time to time.
- 3.2.2. Track Inspectors assess tracks for the purpose of providing a Track Report to the RCB.
- 3.2.3. Track Inspectors do not provide advice to Track Operators or Promoters in regard to legal or regulatory compliance.
- 3.2.4. Track Inspectors must complete and submit a Track Inspection Report to the RCB. The requirements for a Track Inspection are detailed below at 3.3.

# 3.3. Inspections

- 3.3.1. During the inspection, the Track Inspector <u>must</u> be accompanied by a representative of the Track Operator.
- 3.3.2. All tracks, excluding temporary tracks, must be inspected annually in accordance with these Standards.
- 3.3.3. A triennial inspection or "major inspection" may identify in a scheduled Works Program, any upgrades or rectification works required that must be completed by the Track Operator to maintain a Track Licence.
- 3.3.4. The Works Program may provide a schedule for the works to be completed over no more than a three (3) year period.
- 3.3.5. The scheduled works as detailed in the Works Program must be recorded as conditions of the Track Licence.
- 3.3.6. Annual inspections that take place between triennial inspections will ensure that the Works Program is being completed in accordance with the schedule.



- 3.3.7. For National Championship and National events, the RCB must arrange a track inspection or re-inspection two (2) months prior to the event. This can be completed in conjunction with the annual inspection.
- 3.3.8. For other events, the RCB must arrange the inspection or re-inspection no less than fourteen (14) days prior to the event to ensure enough time is available for recommended modifications. This can be completed in conjunction with the annual inspection.
- 3.3.9. For temporary venues, the inspection timeframes must be arranged with the RCB.
- 3.3.10. It is the responsibility of the Track Operator to ensure that the inspection occurs within sufficient time to make final alterations to achieve compliance prior to an event.

#### 3.4. Plans

- 3.4.1. Plans must show all tracks and support facilities.
- 3.4.2. An accurate plan to an appropriate scale (1:1000) of the track, paddock area, amenities, support facilities and installations for the public, with all relevant dimensions indicated, must be made available to the Track Inspector by the Track Operator prior to the Track Inspection.
- 3.4.3. If the track venue has more than one track, a Plan of all the tracks at the venue showing their relevant position to each other, must also be provided to the Track Inspector prior to the Track Inspection.
- 3.4.4. Plan must be included in Track Inspection Report and attached to Track Licence.
- 3.4.5. The Plan must clearly indicate:
  - a) The location and number of track marshals points necessary for competition, practice or a ride day to take place. The numbers may vary for competition or non-competition practice and ride days.
  - b) First aid units, ambulances, race offices, emergency areas and any other facilities.
  - c) The location of medical facilities and the parking position of first aid or ambulance vehicles if they are required.
- 3.4.6. The length of the track must be recorded in the Plan.
- 3.4.7. The track must be measured along the centre line of the track (or the defined measurement point), using a measuring wheel or another suitable device.
- 3.4.8. Each obstacle on the track must be numbered on the Plan. With a description and approximate height, width and length of each obstacle must also be recorded on the Plan.
- 3.4.9. A copy of the Plan should remain at the track.
- 3.4.10. Where a re-inspection is necessary, an updated Plan recording any new sections of the track, must be provided to the Track Inspector by the Track Operator. A copy of the updated Plan should also remain at the track. An updated Plan must be included in an updated Track Inspection Report and forwarded to the RCB.

#### 3.5. Application for Track Inspection

3.5.1. A Track Operator, Promoter, MA or RCB affiliated club or responsible delegate can apply for a Track Inspection through the RCB.

#### 3.6. Track Inspection Report

- 3.6.1. In addition to anything required under this Track Standards Module, a Track Inspection Report should include the documents, information and/or details of items listed below:
  - a) Track Venue Plan An accurate plan to an appropriate scale (1:1000)
  - b) GPS Co-ordinates for the track
  - c) Emergency procedures



- d) Signage warning notices and notices to the public
- e) Paddock and Track Area
- f) Marshalling considerations Clearly defined line of sight etc.
- g) Machine examination or Scrutineering Area
- h) Public address system (pits / spectators)
- i) Timing facilities location
- j) Medical Centre / first aid room facilities
- k) Emergency equipment including fire prevention
- I) Emergency access to track and infield
- m) Special considerations and/or restrictions
- 3.6.2. It is the track operator's responsibility to provide the above documents and or information necessary for the track inspector to complete a report.



# 4. LICENSING PROCEDURES

#### 4.1. Track Standards Modules

- 4.1.1. The purpose of the Track Standards Modules (the Modules) is to assist Track Inspectors to inspect and write reports as part of the licencing procedures.
- 4.1.2. Track Standards Modules are provided for Road Racing tracks.
- 4.1.3. In some states or territories of Australia, various government authorities may also be involved in the inspection or licensing of tracks. Track Operators should ensure that they are familiar with any local, state or territory laws, regulations, codes or procedures that may apply.
- 4.1.4. These Standards apply to and accommodate any form of motorcycle without discrimination as listed in the Manual of Motorcycle Sport.

#### 4.2. Application for Track Licence

4.2.1. A Track Operator, Promoter, MA or RCB affiliated club or responsible delegate can apply for a Track Licence through the RCB.

#### 4.3. **GPS co-ordinates**

4.3.1. The Application for a Track Licence must include the G.P.S. co-ordinates (both latitude and longitude) of the track. The co-ordinates must be provided in MGA or WGS84 format and must be the GPS coordinates at the track for emergency evacuation. These coordinates will be listed on the Track Licence.

#### 4.4. **Other Documentation Required**

4.4.1. The documentation required for an Application for a Track Licence will depend on the track configuration or discipline. The specific requirements for an Application and Licence are set out under the heading for each Module.

#### 4.5. **Modifications to Tracks**

4.5.1. The RCB must be notified of any alterations or modifications to a track prior to the commencement of works. Failure to notify the RCB may render any Track Licence void and may result in the refusal of a future licence.

#### 4.6. Works Program

4.6.1. Where a track inspection identifies that a track requires maintenance, an upgrade or development, the RCB and the Track Operator will develop and document a budgeted and scheduled "Works Program" to bring the track into compliance with the Track Standards to ensure that the track can maintain a Track Licence.

# 4.7. Track Licence

4.7.1. The Track Licence must state any specific licensing conditions which may be applicable to that track, such as works to be completed under a scheduled Works Program.



# 5. OPERATIONAL MINIMUM STANDARDS

#### 5.1. Track and Support Facilities

5.1.1. It is the responsibility of Track Operators to ensure that tracks have adequate support facilities, including but not limited to, toilet facilities, access to drinking water and facilities to accommodate first aid requirements.

# 5.2. Emergency Procedures

- 5.2.1. It is the responsibility of Track Operators and/or Promoters to have appropriate emergency procedures in place.
- 5.2.2. A written Emergency Management Plan (EMP) must be made available to the Track Inspector during the Track Inspection.
- 5.2.3. It is not the responsibility of the Track Inspector to review the EMP. The Inspector's role is to ensure that the Track Operator has a written EMP that can be displayed at the track during events.

# 5.3. Safety

5.3.1. Safety during a meeting (for participants, spectators and officials) must be a priority for both the track operator and the promoter.

# 5.4. First Aid

5.4.1. Medical and First Aid facilities required for a meeting are laid down in the Medical Standards outlined in the Manual of Motorcycle Sport.

#### 5.5. Fire Precautions

5.5.1. The track inspector must make an assessment that adequate precautions are taken to eliminate the risk of fire in the pits, closed parks, paddock, refuelling area and all other risk areas.



# 5.6. **Provision of Fuel**

5.6.1. Fuel may only be provided from a point a minimum of 7 metres from any other vehicle. The area must be secured, and the supplier must display "no smoking" and "no naked light" signs. In addition, the supplier must comply with appropriate local regulations.

# 5.7. Environment

5.7.1. The rules and recommendations relative to the measures to be taken in order to protect the environment during an event are stipulated in the Environmental Policy on the MA Website.



#### 5.8. Paddock Area & Track Access

- 5.8.1. The Track Inspector must ensure that all tracks have a Paddock area for participants' vehicles and motorcycles. This should be separate to the parking area or viewing area for non-participants.
- 5.8.2. The riders' paddock/Parc Ferme area should be reasonably flat with direct access to the track starting/collecting area, which must be clearly marked and securely fenced.
- 5.8.3. Where the paddock is immediately adjacent to the course, the whole length adjoining the course shall be fenced in an appropriate manner similar to that used to separate spectator enclosures.
- 5.8.4. Track Inspectors must ensure that the track has appropriate provisions for a clearly marked collecting area for riders to wait before joining the track.
- 5.8.5. Where a track has more than one circuit, a separate collecting area must be available for each circuit.
- 5.8.6. Where a track has more than one circuit, there is no requirement under the track Standards for any additional paddock's or refuelling points.
- 5.8.7. The track must also identify an emergency access route allowing emergency vehicle access to all parts of the circuit.

#### 5.9. Legal and Regulatory Compliance

5.9.1. It is the responsibility of the Track Operator and/or the Promoter to ensure compliance with any local, state and territory or federal laws, regulations or codes regarding the safe management and operation of the track and all support facilities.

#### 5.10. Notices to the Public

- 5.10.1. All tracks are required to have signage as detailed under the heading "Notices to the public" below. These Notices are mandatory.
- 5.10.2. All Notices should be permanently affixed. Where Notices are not permanently fixed, Track Inspectors must ensure that the Notices are available and stored at the track by the Track Operator or Promoter.
- 5.10.3. Events on public roads must have the warnings placed at the main event control / Parc Ferme.
- 5.10.4. A separate and well signed spectator area must be provided for spectators. This must be clearly signed with appropriate barriers between the area and the track (lines of protection). Consideration must be given to access for disabled persons.
- 5.10.5. Signs must be appropriately displayed and consideration must be made for those who have literacy and reading difficulties. Infographic signs are permitted.
- 5.10.6. Warning to the public that motor sport is dangerous:
  - a) (550 mm x 450 mm minimum) Warning notices as detailed must be displayed at every entrance to the course, including the entrance to car parks and paddock.
  - b) These notices must be prominently displayed and where they can be easily read by the public before any admission charge is paid, or where no admission charge is made, before entry is gained into the venue
  - c) Where it is not possible to define the limits of the site and to control admission of the public warning notices must be displayed in the main event control Parc Ferme and also in the car parks.
  - d) The following standard notice warning the public that motorcycle competition occurs at the venue.



# WARNING TO THE PUBLIC

Motor racing is DANGEROUS, and spectators attending this track do so entirely at their own risk. It is a condition of admission that all persons having a connection with the promotion, and/or organisation, and/or conduct of the meeting, including the owners of the land and the riders and owners of vehicles and passengers in the vehicles, are absolved from all liability arising out of the accidents causing damage or personal injury to spectators or ticket holders, except where due care and skill has not been exercised.

- 5.10.7. Prohibited Area Notice
  - a) (550 mm x 450 mm) Areas where the public are not permitted, the area must be clearly defined by displaying "Prohibited Area" notices. These notices must also be displayed in any prohibited areas facing the public. Warning Notice (5.10.6) must also be erected in these areas but they must be used in addition and not in place of Prohibited Area Notice (5.10.7).

# **PROHIBITED AREA**

# The Public is not permitted in this area

- b) No other form of notice other than what is listed above for warning the public generally or for prohibiting access to certain areas shall be displayed.
- 5.10.8. Warning notice: Alcoholic beverages:
  - a) (550mm x 450mm) A sign must be prominently displayed in pit areas warning that the carrying or consumption of alcoholic beverages by all personnel in the area is prohibited.

WARNING	
The carrying or consumption of alcoholic beverages in the pit area is prohibited.	
By Order,	
Motorcycling Australia Ltd	

- 5.10.9. Notice sign:
  - a) (550mm x 450mm) At the entrances to any venue a promoter must prominently display the following sign:

NOTICE
No Animals Allowed.
Guide Dogs Excepted
By Order,
Motorcycling Australia Ltd

#### 5.10.10. Pit area:

a) (550mm x 450mm) Pit areas must be clearly defined. A promoter must prominently display the following sign at the entrance to the pit area. In all pit areas the following signs are required:

The riding of motorcycles in the pit area is only allowed in marked access lanes.

By Order,

Motorcycling Australia Ltd



# No Smoking in Pit Area

By Order,

Motorcycling Australia Ltd



No Open Footwear or Open Toed Shoes to be worn in Pit Area (Feet must be fully covered) By Order,

Motorcycling Australia Ltd

- 5.10.11. Vehicle directional flow signs must be used where appropriate.
- 5.10.12. Emergency route signage must be present at the venue.
- 5.10.13. Track and Paddock exit and entrance points must be clearly signed.
- 5.10.14. All venues must have a sign displaying a full site plan, with toilets, track exit and entry points, spectator areas, refuelling points, and emergency ambulance points clearly marked.
- 5.10.15. Track Operators should also consider additional signage including:
  - a) No spectators beyond this point
  - b) Hazardous chemicals (fuel etc)
  - c) No entry
  - d) Re-fuelling point
  - e) Fire extinguishers point
  - f) First aid point
  - g) No smoking / No naked light
  - h) Uneven surface in spectator areas

#### 5.11. Rider Information Signs

- 5.11.1. All tracks must have a permanent track map sign displayed in the Paddock area.
- 5.11.2. This must display the track plan, with emergency access routes, location of First Aid posts, toilets and fire extinguisher points. The sign must have a clear track map showing marshal points and track access and exit points.

# 5.12. Landline / Mobile Telephones

- 5.12.1. There must be at least one working telephone connection at the facility/venue at all times. If there is no landline connection, then a nominated individual must have a fully charged mobile telephone with them, preferably with a vehicle charger and/or spare battery and/or power pack. All officials must be aware of the name and location of the nominated individual at all times.
- 5.12.2. Where a facility is sited outside of the range of mobile telephone network coverage, the operator must make other arrangements via radio links or satellite phone.



5.12.3. All appropriate officials/marshal posts must ensure they have radio, satellite phone or mobile phone contact with each other.

#### 5.13. Ages of riders on track

- 5.13.1. Riders under the age of 7 must not ride motorcycles on Senior Facilities or Venues.
- 5.13.2. Age definitions
  - a) Mini licences (non-competition) are available for children ages 4 9 years of age classed as Junior
  - b) 7 15 years of age classed as Junior
  - c) 16 years of age and older classed as an adult
- 5.13.3. Junior riders must not share the track with Adult riders.

#### 5.14. Mixing Vehicles / Groups on Track (other than cross country events)

- 5.14.1. Under no circumstances must ATVs or Sidecar machines and Solo motorcycles ride on the same track at the same time. Where ATV and Solo motorcycles are at the same venue at the same time, separate tracks or separate sessions must be used for each. ATVs and sidecars are permitted to share a track.
- 5.14.2. The mixing of junior groups other than as specified in the General Competition Rules constitutes as a breach of the rules.
- 5.14.3. The mixing of ATV's or sidecars with solo motorcycles constitutes as a breach of the rules.

#### 5.15. **Duration and Level of sessions**

- 5.15.1. The duration of each session must be decided by the Senior Officials on the day, according to type and size of vehicles, ages of participants, their skill level and other salient factors such as weather conditions.
- 5.15.2. Clear signage must be displayed at the track access point indicating the duration of the session and the level of session currently on track eg. A, B, or C. All officials must be made aware of the length of time and the level of the sessions.

#### 5.16. Marshalling

- 5.16.1. All marshals must be provided with adequate training/instruction in their duties and responsibilities.
- 5.16.2. This training must, as an absolute minimum, take the form of a briefing and explanation of flags, meanings and uses, communication and safety protocols and operational procedures for the day's activities, including session timings.
- 5.16.3. A record of training must be held by the Promoter / Track Operator / manager for inspection or review.
- 5.16.4. The level of Marshalling at any Venue will depend largely on the track layout and topography. However, all tracks must provide at least two (2) marshals for each track in use for recreational activity and where possible at least two (2) marshals per point for National Championship events.
- 5.16.5. All marshals must be able to see the entire track surface between their Marshal Point and the next manned Marshal Point in both directions. In other words, there must be no blind spots.
- 5.16.6. This is a minimum level and operators must be encouraged to use more than the minimum when the track usage is higher. Travelling marshals provide a good additional means of providing rapid assistance to riders in difficulty. However, the travelling marshal must not be counted as one of the marshals with visual contact with one another.
- 5.16.7. Marshals must be able to access all areas of the given track without delay in order to assist a participant should the need arise. However, if a marshal deems it necessary to leave his post rendering his post unoccupied, to assist a fallen/stricken rider the session must be first halted via Red Flag signals around the course.
- 5.16.8. The positioning of marshals must be thought out carefully in order to:



- a) Maximise the visibility of the track area
- b) Be sited at positions of the track most prone to difficult manoeuvres, such as bends.
- c) Avoid positioning where a participant may loose control of their machine and either the machine or participant could breach the marshalling point. This would clearly create an elevated risk to both participant and marshal.
- 5.16.9. Marshals must be provided with appropriate equipment and clothing by the Track operator or Event Promoter to enable them to perform their duties properly. This may include:
  - a) A full set of flags with appropriate training to use them (discipline specific)
  - b) Radio / mobile phone if appropriate
  - c) Hi- Visibility vest
  - d) Ear protection
  - e) Sunscreen
  - f) Leather gloves
  - g) Waterproofs (if appropriate)
- 5.16.10. Consideration must also be given to the food, water and toilet requirement of the marshals.
- 5.16.11. All marshals must be equipped with the following signal flags prior to any activity taking place (the minimum being):
  - a) Red
  - b) Yellow
  - c) Green
  - d) Blue

#### 5.17. Track Control – Light Systems

- 5.17.1. At venues where the track operator or promoter wishes to incorporate a light signal system for track control, the following should be applied;
  - a) Light properties:
    - i) Each light should have the capacity to flash alternately at 3-4Hz;
    - ii) The type of light used should give instantaneous light, with little or no rise time;
    - iii) Each light should be able to give at least 70° visual range;
    - iv) 360° lights must not be used;
    - v) For maximum colour contrast each light should be mounted on a matt black background;
    - vi) Lights should be fitted with a repeater which shall inform the following flag post of their activation;
    - vii) The lights used should have sufficient colour saturation to ensure they cannot be mistaken for another colour under all ambient light conditions.
  - b) Light position:
    - i) Each light should be positioned no more than a 30° angle from the main line of sight, on the racing line;
    - ii) Each light should always be angled in order that the maximum viewing surface is visible for the longest period of time;
    - iii) Each light should be equipped with some form of anti-glare to avoid low sun angles causing difficulties.
  - c) Light operation:



- i) Each red light should only be operated from race control;
- ii) Yellow lights may be operated by allocated flag marshals or from race control;
- iii) Each control box should be designed so as to avoid the possibility of accidental operation and should incorporate repeater lights;
- iv) An emergency power supply should always be available.
- d) Starting lights:
  - i) When lights are installed for the starting of a race, the following meanings should be respected.
  - Red lights illuminated: Remain stationary and prepare to start racing.
  - Red lights extinguished: Start racing.

#### 5.18. Parking

- 5.18.1. Vehicles are not permitted to park within the vicinity of track spectator fences. If space does not allow for a separate parking area a minimum gap of 8m must be left between the spectator fence and any vehicle. A limit line must be indicated by the use of rope or tape.
- 5.18.2. Vehicles must not park on the outside of berms or corners. These area's must be clearly marked with "no parking" signs. Access to these area's is to be restricted to official vehicles in transit only.
- 5.18.3. Consideration should be given to helicopter landing areas being positioned away from parking locations to reduce risk of vehicles being damaged.
- 5.18.4. A park at your own risk sign should be considered by track operators.

Modules 6 to 15 are contained in the "Track Standards Excluding Road Race" Document.



# 16. TRACK STANDARDS – ROAD RACE MODULE

#### 16.1. Scope and Application

- 16.1.1. This module outlines the track conditions which must be evident during a Track Inspection and recorded in a Track Inspection Report, before the RCB can issue a Track Licence.
- 16.1.2. Where a track does not comply with the module, a Targeted Risk Assessment (TRA) must be completed and submitted to the RCB, in accordance with the procedures in "Appendix H".
- 16.1.3. This module must be applied in its entirety to new tracks. For areas of non- compliance at an existing track, a Track Inspector must undertake a TRA. The TRA may result in a scheduled Works Program. Any voluntary modifications or upgrading to a track by the Track Operator must comply with this module and be notified to the RCB in accordance with these Standards.
- 16.1.4. This module applies to permanent, semi-permanent or temporary tracks.

#### 16.2. Procedure for Upgrading of Existing Tracks

- 16.2.1. Provide survey plan:
  - a) Provide an accurate feature and level survey plan of the track and surrounds certified by a Licensed Land Surveyor. Due to the large area involved at most tracks and the number of features within that area, MA considers that aerial surveying will provide the required detail at the most economical rate. The survey must be on MGA or WGS84 coordinates and must note the GPS coordinates of the track for emergency evacuation. Refer to section 3.4 Plans.
- 16.2.2. Documentation:
  - a) For road race tracks, an Application for a Track Licence must include sufficient documentation as evidence compliance with this module and the Standards. The Application must include an accurate plan of the track, based upon a land and or engineering survey by a licensed land surveyor, presented in CAD and PDF format to show the racetrack proper (i.e. circuit diagram or track map) including:
    - i) The location and extent of pit entry / exit roads
    - ii) An accurate representation of the grid markings
    - iii) The location and extent / size of all marshal points
    - iv) The location of first aid rooms/units
    - v) The location of Ambulance parking site and entrance to racing arena
    - vi) The GPS co-ordinates (both latitude and longitude) of the track. The co-ordinates must be provided in MGA or WGS84 format and must note the GPS coordinates of the track for emergency evacuation.
    - vii) Any other features within the racing arena as defined in this module.
    - viii) Any other relevant information requested by the RCB or the Track Inspector.
- 16.2.3. Submit documentation:
  - a) Documents, drawings and supporting calculations are to be submitted to MA indicating proposed alterations (if any) to track to achieve compliance with the Standards. The documentation must include an overall accurate plan to an appropriate scale (1:1000) of the track and plan(s) to 1:500 scale (if possible) of everything within the "racing arena".
  - b) The track operator must provide a "Speed Graph" including a diagram of speeds which shows an overlay of the run-off distances on every corner.



- 16.2.4. Obtain approval of documentation:
  - a) MA will check the documentation and advise of approval or otherwise. If documentation is not approved, MA will provide a written response indicating items requiring attention to facilitate approval.
- 16.2.5. Construction:
  - a) Works must not commence until receipt of approved documents from MA.
- 16.2.6. Inspections:
  - a) All tracks must have approved drawings before an inspection for the purposes of licensing is requested from MA.
  - b) All documentation (as detailed in Section 6.2.2) must first be submitted to MA for approval and once approved in writing, must be followed by a track inspection to ensure compliance with the approved drawings.
  - c) Track Operators must renew their licenses annually, and those venues having approved drawings and no changes to the track from the previous year may request inspections for the purposes of re-licensing.
  - d) Where alterations have been carried out to a track, amended drawings and documentation must be submitted to the RCB for written approval before an inspection may be requested for the purposes of licensing.
  - e) Applications for inspections without prior approved drawing and documentation may be requested, however, no license can be issued following this type of inspection until the drawings and documentation have been approved and a further inspection is held after that time to verify compliance with the drawings and documentation.
  - f) Alterations to tracks shall not commence until drawings and documentation indicating those alterations are approved by the RCB. Failure to comply with this provision will result in suspension of a track license until such time as documentation for the alterations is approved and the works are inspected and approved.
  - g) At least one inspection will be required each year for a venue to be licensed (all venues). Road race circuits will have a triennial (major) inspection and a minor inspection annually. This may be undertaken in conjunction with an event.
  - h) MA may require several inspections for new tracks, including one at the completion of construction to ensure compliance with these Standards.
  - i) Applications for an inspection must be sent to MA and such inspections will be arranged by MA. There is a fee for each inspection contact MA for current fee information.
- 16.2.7. Venue licence:
  - a) If the Inspection verifies that construction has been carried out in accordance with the approved drawings, (including approved alterations to same if applicable) MA will issue a Track Licence. Alternatively, for the purpose of renewing a licence and the track has not been altered from the plans submitted, the track will be inspected to ensure the track is in an acceptable condition for the purpose of conducting motorcycle racing.

# 16.3. Inspections (Annual)

- 16.3.1. For a road race track to be licensed by MA, drawings and documentation, as detailed in 6.2 must first be submitted to MA for approval and once approved in writing, must be followed by a track inspection to ensure compliance with the approved drawings.
- 16.3.2. All tracks must have approved drawings before an inspection for the purposes of licensing is requested from MA.
- 16.3.3. Track Operators must renew their licenses annually, and those tracks having approved drawings and no changes to the track from the previous year, may request inspections for the purposes of renewing their licence.
- 16.3.4. Where alterations have been carried out to a track, amended drawings and documentation must be submitted to MA for written approval before an inspection is requested.



- 16.3.5. Applications for inspections without prior approved drawings and documentation may be requested, however, no license can be issued following this type of inspection until the drawings and documentation have been approved and a further inspection is held after that time to verify compliance with the drawings and documentation.
- 16.3.6. Alterations to tracks shall not commence until drawings and documentation indicating those alterations are approved by MA. Failure to comply with this provision will result in suspension of a track licence until such time that the alterations are approved and inspected.
- 16.3.7. For the purpose of these Standards, the term track includes closed tracks, either permanent, semi-permanent or temporary.
- 16.3.8. Variations from these Standards must be subject to a TRA, receive written approval from MA and be noted on or attached to the Track Licence
- 16.3.9. Race tracks that have dual or multiple configurations must be inspected individually and a report and supporting documentation submitted for all configurations.

# 16.4. Speed Graph

- 16.4.1. A Speed Graph for the fastest category for which the track will be licensed must be produced for tracks to estimate average speed and lap times to allow initial track classification and design of run-off areas.
- 16.4.2. The speed graph should be based on data collected from on-board logging and adjusted to reflect the lap record for the fastest category of racing intended to be conducted at the circuit.
- 16.4.3. If it is not possible to conduct data logging (for example, in the design of a new circuit), the speed graph should be developed using an appropriate simulation model based on current performance data for the fastest category of racing intended to be conducted at the circuit.
- 16.4.4. An example of a speed graph is given in Appendix E of this module.

#### 16.5. Run off Diagram

- 16.5.1. A run-off diagram must be produced with graphical representation of the run-off distance, as determined using the speed graph in conjunction with Appendix E of this module.
- 16.5.2. Ten (10) degree tangentials must be indicated at each corner, as illustrated in Appendix F and G of this module.
- 16.5.3. The track edges, the 1st and 2nd line of protection and all obstacles within the racing arena must be clearly indicated on the Run-off drawing.

#### 16.6. Track Surface

- 16.6.1. The track surface should be homogeneous (consistent slip resistance) over the width of the track. The slip resistance should be maintained with minimal variation over the length of the track. Where variation in the slip resistance occurs along the length of the track, it is important that there is no abrupt change and that no change occurs on or near the ideal racing line within curves, or within 50 metres of the exit from a curve, braking zones or at important changes in longitudinal profile. Resurfacing must not be carried out less than thirty (30) days before an event.
- 16.6.2. Track operators must undertake slip resistance measurements on the race line of the surface 6 years after the first surfacing and every 3 years thereafter. At least five sections equally around the circuit must be tested.
- 16.6.3. The slip resistance report must be provided to MA.



- 16.6.4. It is recommended that the Slip Resistance Test Provider utilise UK Standard (EN13036-4:2003) (or similar) to undertake this test. Surfaces resulting in pendulum test values of 45-50 or lower will require repair. Please note, it is important that variation across the width of the track and longitudinal direction should be kept within a reasonable range. The Slip Resistance Test Provider will report these ranges in accordance with testing standards.
- 16.6.5. A list of Testing Agents can be obtained from the National Association of Testing Authorities, Australia (NATA) website: http://www.nata.com.au
- 16.6.6. Track Plane: Tracks must be maintained so that the surface should not differ more than four (4) mm either from a three (3) metre straight edge laid parallel to the centre line of the track or at right angles to the centre line, except on crowned sections.

#### 16.7. Straights

- 16.7.1. Straights are not constrained in length (apart from the starting straight) but must comply with requirements relating to width (see 6.9) and gradient (see paragraph 6.10).
- 16.7.2. Where a section of the track deviates but the change in direction is through an angle of less than 15 degrees with a radius of greater than three hundred (300) metres, that section is considered to be a continuation of the straight.
- 16.7.3. The starting straight for all new tracks must be at least 250 metres in total length and the minimum distance from the start line to the first curve is 100 metres.

#### 16.8. **Curves**

16.8.1. In addition to complying with width requirements, curves which can be taken at a speed in excess of 125 kph should have an increasing or constant radius.

#### 16.9. Width

- 16.9.1. The width of the track at any place on the track is dependent on the maximum speed which can be reached at that place.
- 16.9.2. The minimum widths as detailed in Table 1 must be provided:
- 16.9.3. Table 1

Speed (kph)	< 180	180 - 200	200 – 250	250 – 300	> 300
Width (m)	8	9	10	11	12

- 16.9.4. The maximum width of a track must be fifteen (15) metres. Wider tracks must be demarcated down to fifteen (15) metres by an anti-skid painted line, or by another device, which does not present a safety hazard.
- 16.9.5. The minimum width of a track at the starting line must be twelve (12) metres. The width must remain constant for at least 100 metres after the starting line.
- 16.9.6. If the track becomes narrower, the change in width must be gradual by a proportion of one (1) metre per 100 metres.
- 16.9.7. If the track becomes wider, the change in width must be gradual and must not exceed a proportion of one (1) metre per twenty (20) metres.

#### 16.10. Longitudinal Gradient

- 16.10.1. The maximum longitudinal gradients must be as follows:
  - a) Uphill 20%
  - b) Downhill 10%



- 16.10.2. Any change in grade of greater than 1% must be joined by a parabolic vertical curve designed in accordance with standard Highway Authority principles.
- 16.10.3. Any change of grade must also take into account the visible stopping distance, see 6.13 on Visibility.
- 16.10.4. The longitudinal gradient of the starting grid must not exceed 2% uphill.

#### 16.11. Crossfall on Straight

- 16.11.1. A track must have sufficient crossfall on a straight to ensure drainage of surface water.
- 16.11.2. Crossfall may be either one-way or cambered.
- 16.11.3. The minimum crossfall must be 1.5% and the maximum crossfall 3.0%.

# 16.12. Super-elevation (banking) in Curves

- 16.12.1. The super-elevation (banking) in a curve (the outside of the track is banked in comparison with the inside) must not exceed 10%. An exception to this may be made for permanent high-speed tracks.
- 16.12.2. Adverse camber is not generally accepted unless special circumstances prevail and in which case the entry speed to the curve must not exceed 125 kph.

# 16.13. Visibility (Sight distance required)

- 16.13.1. There should be no sight obstruction which would prevent a rider, at an eye height of one (1) metre, from maintaining a clear view of the track in front of him/her for a distance given as S = V (V+40)/200, where S = Sight distance in metres and V = speed in kph at that section of the track.
- 16.13.2. Should this condition not be possible, provision must be made for a signalling system, using either flags or lights to effectively warn approaching competitors of a hazard within the unsighted track length.

#### 16.14. Track Edges

- 16.14.1. Both edges of the track must be clearly marked by a continuous line of white anti-skid paint having a width of between 100mm and 200mm for the full length of the track.
- 16.14.2. The track must be bordered on both sides along its length by compacted verges.
- 16.14.3. Where the track surface extends to the first line of protection (for example, adjacent to the pit wall), the delineation between the track proper and the verge area must be clearly distinguishable and separated by a white line of anti-skid paint having a width of between 100mm and 200mm.

#### 16.15. **Kerbs**

- 16.15.1. Concrete kerbs are recommended on the inside of the curves.
- 16.15.2. Concrete kerbs may be installed on the outside of curves.
- 16.15.3. Kerbs may be of the following types:
  - a) Flat concrete kerb, flush with track edge
  - b) Mountable kerb, similar to the CAMS "old style kerb", but with a maximum height above the track edge of 60mm. These kerbs are not to be placed on the outside of corners
  - c) "Vallelunga" type kerb with a maximum height above the track edge of 80mm as required for tracks requiring FIM and/or FIA homologation. For details of this kerb type, refer to Figure 2 herein
  - d) "Melbourne" kerbs
  - e) FIM Kerb

16.15.4. See Appendices



# 16.16. Verge

- 16.16.1. The minimum width of a verge is five (5) metres. Exceptions to this can be accepted on straights only and where the available space is limited. If this is the case, the minimum width of a verge can be lowered to three (3) metres with the exception where there is a pit wall. In this case, the verge must be at least one (1) metre measured between the edge of the track and the first line of protection.
- 16.16.2. The track must continue without a step into the verge area.
- 16.16.3. Verges must have a flat surface of compacted material.
- 16.16.4. Verges must be kept free of any debris.
- 16.16.5. The surface of a verge must be flush with the edge of the track or the top of the trackside kerb.
- 16.16.6. Any obstructions within the verge which are not essential to the proper functioning of the race track must be considered. i.e. any object not performing a function should not be permitted in the vicinity of the track. Any essential obstructions must be protected as per 6.23 of these standards.

#### 16.17. Run off Area

- 16.17.1. For all new tracks the recommended minimum run-off dimensions must be in accordance with the requirements set out in Appendix E of this module. Existing tracks that may not meet the recommended run off requirements set out in Appendix H will require a TRA to be completed and additional safety treatments or protective devises to be put in place. These run-off dimensions must be clearly indicated in the run-off diagram and must be based on the speed at each location as indicated on the speed graph. The join between the run off area and the track verge must be flush (without any slope). If the run-off area is on sloping ground, the gradient must not be greater than 25% uphill or 3% downhill.
- 16.17.2. Where both the recommended minimum run-off dimensions D1 and D2 cannot be achieved, an arrestor bed of sand or gravel as defined in Section 6.18 may be installed, however additional safety treatments or protective devises may also be required.
- 16.17.3. Where the minimum run-off dimension defined in Appendix G of this module cannot be achieved, MA may allow Additional Protective Devices, as per Sections 6.23 of this module, to be placed in front of the 1st line of protection, provided that the speed at which a fallen rider is likely to strike the Additional protective Device is such that the risk of injury to the fallen rider is deemed to be minor or insignificant (as defined by Level 1 and 2 in Table 2 of Appendix H of these Standards).

**Note:** The onus to show that the incorporation of an Additional Protective Device will provide adequate protection to riders falling on the track lies with the circuit operator or promoter, and that must be supplied to MA.

- 16.17.4. Provision of Additional Protective Devices when installed as per Section 6.17 in the vicinity of "Run off Areas" shall be as follows:
  - a) If full run-off dimensions equal or exceed the requirements of Section 6.7 Types A-E
  - b) If an arrestor is required and the actual distances D1 and / or D2 are greater than the required 50% Types A-E
  - c) If an arrestor is required and the actual distances D1 and/or D2 are equal to the required 50% Types A-D.

#### 16.18. Arrestor Beds (i.e. Gravel traps):

- 16.18.1. The run-off area may be reduced by incorporating a gravel bed within the run-off area. The run-off length then required will be defined by Appendix G of this module.
- 16.18.2. Gravel traps must have the following properties:
  - a) Must be constructed using round grains of gravel between 5 and 15mm in diameter.
  - b) The depth of the gravel layer must be at least 200mm.



- c) Alternative materials, such as sand, may be approved by MA, subject to inspection and written approval by the RCB.
- d) A verge of a minimum of two (2) metres in width must be provided between the edge of the track and the gravel trap.
- e) A path of at least three (3) metres must be provided between the gravel trap and the stopping devices (first line of protection), for emergency vehicles to circulate.
- f) Must not consist of a bed width of less than four (4) metres.
- g) The gravel trap surface must be at same level as verge. If it is not possible to sink the bed, a lead-in slope of not greater than 8% uphill must be provided.
- h) The surface of the gravel trap must present an even finely raked appearance. Large furrows within the gravel trap area are not permissible.
- i) Care must be taken by track operators to prevent growth of vegetation in the gravel trap that would cause undesirable binding.
- j) Gravel traps may be required to be scarified (loosened) before each event, dependent upon an inspection by the Steward of the event and/or an MA Venue Inspector.
- k) Gravel traps must be maintained in good condition, not be compacted by vehicle traffic nor contain vegetation that would render them ineffective in which case the gravel trap must be scarified before an event.
- I) "Additional protective devices" in accordance with Section 15.4 may be required behind the gravel trap and in front of the barrier (first line of protection).

#### 16.19. Track Drainage

- 16.19.1. Surface Water: The surface of the track must be designed such that water does not pond on the track surface during or after rainfall.
- 16.19.2. Stormwater drainage serving the track, verges and Pit areas must be designed for a minimum of a 5-year ARI storm for the track location in accordance with the principles and rainfall figures contained in the current "Australian Rainfall and Runoff" publication.
- 16.19.3. Stormwater drainage for all other areas of the track must be at the track owner's discretion, or to the requirements of the local Authority having jurisdiction, whichever is the most stringent.
- 16.19.4. If the installation of an open drain between the track edge and the first line of protection is absolutely necessary, it must be built in such a way that there is no bump to the surface of the verge or run-off area. The drain may be covered by a metal grate or perforated plate cover, (with a maximum aperture size of 15mm), the top of which must be finished flush with the surrounding surface. The cover must be capable of withstanding a wheel load of 20 kN anywhere on the cover and must be fixed in such a way that the cover cannot be dislodged. An absorption well or trench may also be used in this situation, however the porous fill/rubble used in these devices must not present a danger to riders.
- 16.19.5. "Side-entry" drainage pits are not permitted at any point on the track edge, or within any area within the first line of protection.
- 16.19.6. Metal grate topped pits are not permitted at any point on the track edge, within the verge or within sand traps, but may be permitted between the verge and first line of protection if they comply with the requirements lin section 6.18 herein.

#### 16.20. Protective Devices

16.20.1. The aim of protective devices is to offer protection during a competition to spectators, riders, race officials and other service personnel.



- 16.20.2. When deciding what measures will be used for the protection of riders, race officials, service personnel and spectators during competitions, the characteristics of the course should be taken into consideration. These include track layout and profile, topography, racing trajectories, adjacent areas, buildings and constructions, as well as the speed reached at any point of the track.
- 16.20.3. There will be a first line of protection at the edge of the verges and run-off areas around the complete circuit layout.
- 16.20.4. It is necessary or preferable to contain an accident in relative proximity to the trackside by absorbing the motorcycle's energy and/or providing conditions for the rider to regain control. In order to achieve this, various deceleration systems and energy-dissipating and stopping barriers may be installed to constitute a first line of protection. In other circumstances it may be appropriate to provide sufficient obstacle and spectator-free spaces for the energy of a bike leaving the track out of control to be completely dissipated without impact at a barrier.
- 16.20.5. As a rule, two lines of protection must be installed:
  - a) The first line: made of guardrails, concrete walls or other devices (either protected or not) in accordance with paragraph 6.21 and 6.22.
  - b) The second line: made of chain wire mesh of a minimum height of 1.2m or other equivalent approved by the RCB.

#### 16.21. First Line of Protection

- 16.21.1. The first line of protection must be positioned on the outside extremity of the verge, on the outside extremity of run-off areas or on the inside extremity of the line of sight in a curve.
- 16.21.2. The first line of protection is not required in areas not accessible to the general public, except where protection of other sections of track is required.
- 16.21.3. Any exposed end of a first line of protection which presents to oncoming riders must be protected by "additional protective devices" as indicated in Section 6.20.
- 16.21.4. The first line of protection along a straight or continuing along the alignment of a straight into/adjacent to the straight-ahead run-off zone shall be constructed such that the angle of the alignment of the first line of protection to the alignment of the track edge is no greater than 5 degrees.
- 16.21.5. If the first line of protection or additional protective device protecting a trackside obstacle or preventing rider/machine excursion onto another section of the track is not part of a continuous barrier bounding the circuit, it shall be constructed so as to limit the likely angle of impact of a fallen rider to 30 degrees or less.

#### 16.22. Second Line of Protection

- 16.22.1. The second line is principally required to hold back the public it must be at least 1.2 m high and it must be positioned a minimum of three (3) metres behind the first line, except where State Legislation dictates a greater distance.
- 16.22.2. Guardrails:
  - a) Along all straights and on the inside of curves, guardrails can be positioned on the first line of protection without the need for any additional protection as specified in Section 6.23.
  - b) On the outside of curves, it may be required that guardrails be protected in accordance with the requirements of Section 6.23 herein (dependent upon run off dimensions provided).
  - c) The geometric properties of the guardrail used must be:
    - i) Minimum height of guardrail is 1m
    - ii) The maximum free space between the lower edge of the guardrail and the ground must be no more than twenty (20) mm.



- iii) The maximum free space between any two guardrails must be twenty (20) mm.
- iv) The upper edge of the guardrail or supporting posts must be rounded off. The top of the protection to the guardrail and supporting posts must be higher than the top of the guardrails and supporting posts.
- d) Where "C" section steel supporting posts are used the "legs" must face away from the direction of travel or adequate capping provided.
- e) Must be provided with "additional protective devices" unless the run-off distance and/or verge width provided is in excess of that required by these Standards.



16.22.3. Concrete walls:

- a) May be used to constitute the required "first line of protection".
- b) Must be a minimum height of 1 metre above ground level. This is not to be achieved by removing dirt from earth run off areas.
- c) Must present a smooth vertical and continuous surface.
- d) Must be provided with "additional protective devices" unless the run-off distance and/or verge width provided is in excess of that required by these Standards.
- 16.22.4. Compacted earth / tyre barriers
  - a) May be used to constitute the required "first line of protection".
  - b) Must be a minimum height of 1.2 metres above ground level.
  - c) Truck tyres:
    - i) Where this barrier is further from the track edge than the distance required for run-off and or verge width by these Standards, earth filled truck tyres of the same size may be used and are to be treated in a manner similar to concrete walls (See 16.23).
    - ii) In the straight they must be faced with conveyor belt to avoid pocketing to create a continuous surface to promote sliding rather than pocketing.
  - d) Tyre walls (permanent or temporary):



- i) Earth-backed tyre barriers must comprise of an earth bank of a minimum 1.2m in height and stabilised with earth filled tyres to the same height running parallel to the earth bank.
- ii) Freestanding Tyre Wall Some designs of tyre wall may be utilised as barriers in some exceptional circumstances. When tyres are used as 1LoP, the minimum specification is a 3 row tyre wall, comprising of sections of 3 dimensionally linked (each tyre is mechanically linked to the next tyre vertically, and horizontally [width and depth wise]) vertical tyre stacks at least 1.2m in height and at least 10 stacks (approx. 6.5m) in length per section. Where more than one section (6.5m in length) is employed, each 6.5m section should be linked to each adjacent section. This will provide a mass of approximately 1750 kg for each 6.5 m of tyre wall.
- iii) Under no circumstances will tyre walls to this specification be permitted where protection of public or officials is required.



Image: Freestanding Tyre Wall



Image: Transition of concrete barrier into earth backed tyre wall. Note chaining of tyre wall stacks to each other and also linking the buffer system back to barrier.

#### 16.23. Additional Protective Devices

- 16.23.1. Additional protective devices must be placed against any rigid obstacle (no free space) which is not protected by a first line of protection.
- 16.23.2. Five (5) types of additional protective devices graded "Type A" through to "Type E" are described herein for use in various duties protecting obstacles within the racing arena.
- 16.23.3. All additional protective devices used must be installed in accordance with the manufacturer's recommendations. They must be tethered to adjacent structures at the top and bottom of the sections and they must result in a risk of injury to a fallen rider that is deemed to be minor or insignificant (as defined by Level 1 and 2 in Table 2 of Appendix H of these Standards).
- 16.23.4. For car tyre barriers (Types D & E), the following must apply:



- a) Car tyres of the same diameter must be attached to form a homogeneous barrier, of maximum three (3) rows deep (one (1) will suffice in most situations) and at least 1.2 metres high, placed in front of and fixed to a permanent rigid barrier.
- b) Tyre barriers must be restrained in such a manner as to preclude tyres causing nuisance to other riders if struck by a rider or motorcycle but must be restrained in such a way as to enable the tyres to deform and shift.
- 16.23.5. It is the track owner's responsibility in consultation with the owner of the relative protective device to ensure they are in a condition to provide the shock absorbing quality for which they are intended.
- 16.23.6. Type A Additional Protective Devices (FIM Approved):
  - a) Air Active Protective Devices:
    - i) Air Protek Racing Safety Wall Type A
    - ii) Alpina Air-Module AA
  - b) Air Protective Devices:
    - i) Alpina Air-Module
    - ii) Airfence Type IS and Airfence IIS
    - iii) Liski Air Safety Mattress
    - iv) SPM AirPADS
    - v) Trackcare Inflatable Barrier
  - c) Foam Protective Devices:
    - i) Alpina Super Defender and Alpina Super Defender 2
    - ii) Airfence Bike and Airfence Bike Evo
    - iii) Bridgestone Module 1000 and Bridgestone Module 1300
    - iv) Liski Safety 1
    - v) Recticel Safeguard barrier 1and Recticel Safeguard RR
    - vi) SPM Energy Absorber Type A
    - vii) Trackcare Hi-Lite
    - viii) PKS Modele 1
- 16.23.7. Type B Additional Protective Devices (FIM Approved):
  - a) Airfence Type I and Airfence Bike B
  - b) Alpina Defender Barrier
  - c) Bridgestone Urethane Barrier
  - d) Liski Safety 3
  - e) Recticel Safeguard barrier 2
  - f) SPM Energy Absorber Type B1
- 16.23.8. Type C Additional Protective Devices (FIM Approved):
  - a) Air Protek Racing Safety Wall
  - b) Straw bales (preferably wrapped in a fire-resistant bag)
  - c) Filling Italiano Protection System (ONDA 27/33 20/26),



- d) Alpina Synthetic bales and "Big bales"
- e) Liski Safety 4
- f) PKS Modele 5
- g) Recticel Safeguard barrier 3 and Safeguard barrier 4
- h) SPM Energy Absorber Type C2
- i) Trackcare barrier
- j) Horizontal tyre barrier built and installed according to FIM Specifications and assembly instructions for tyre barriers.
- k) Vertical tyre barrier built and installed according to FIM Specifications and assembly instructions for tyre barriers.
- I) Refer to page 63 Appendix I for tyre barrier assembly instructions
- 16.23.9. Type D Additional Protective Devices:
  - a) Car tyre barrier covered with conveyor belt
- 16.23.10. Type E Additional Protective Devices:
  - a) Car tyre barriers

#### 16.24. Distance Signs (Braking Markers)

- 16.24.1. Sign Positioning: The approach distance before a curve must be indicated by signs which are to be positioned at one hundred (100) metre intervals starting from the beginning of the geometrical (circular) curve and extending back prior to the start of deceleration.
- 16.24.2. Visibility: Distance signs must be entirely visible from all points on the track at a distance of one hundred (100) metres for approaching riders.
- 16.24.3. Colours: Black or dark blue figures on a white background.
- 16.24.4. Sign Dimensions: Recommended (and maximum) dimensions for distance signs must be 550mm wide x 1.5m high for "vertical" type signs and 1.3m wide x 640mm high for "horizontal" type signs.
- 16.24.5. Sign Content: The only wording on the sign must be the figure indicating the distance from the corner to the sign. No advertising or other markings are permissible on the sign.
- 16.24.6. Figures: Minimum dimensions for the figures on distance signs must be 300mm wide x 400mm high.
- 16.24.7. Material: when distance signs are placed between the track and the first line of protection, the sign and its supports must be constructed from non-flammable polystyrene or other similar light material. For installations behind the first line of protection, the distance sign may be of Masonite, metal or other suitable material and the supports in wood or metal.
- 16.24.8. Installation of Distance Signs: For signs on the track side of the first line of protection, the signs must be installed by burying the base of the sign/support at least 500mm into the ground with the centre of the sign being around one (1) metre above ground, dependant also upon visibility requirements as noted above, No signs shall be erected within three (3) metres of the track edge.
- 16.24.9. Night Racing: For races taking place at night, signs in reflective material must be installed.

#### 16.25. Non-Permanent Advertising Signage

16.25.1. Vertical signs of lightweight construction may be erected inside the first line of protection on the inside of curves to within two (2) metres of the track edge provided that no obstruction to rider or marshal's line of sight occurs.



- 16.25.2. Only signs constructed from polyurethane or similar lightweight material and weighing less than five (5) kilograms (including supports) may be erected in run-off areas or within the first line of protection but may not be erected within three (3) metres of the track edge in the runoff area.
- 16.25.3. Signs will be limited to a maximum height of 1.5 metres.
- 16.25.4. Supports for such signs must be made of semi rigid material such as polyethylene pipe.

# 16.26. Start Lights

- 16.26.1. Start Lights must be installed at venues which host MA permitted events. Start lights are strongly recommended for all other tracks and should follow the FIM specifications.
- 16.26.2. Start Lights Specification: (As per FIM).
- 16.26.3. The start lights installation must consist of at least one red light.

# 16.27. Starters Box (as of 1 January 2019)

16.27.1. A starters box / platform has to be in proximity of the starting lights. A structure at least 2m higher than the signalling platform, surrounded by a handrail, must be installed. This structure must be built so that the Starter can easily see the complete Starting Grid. The control of the starting lights must be made from here. Access to this platform is strictly reserved for the Starter and, possibly, their deputy.

# 16.28. Starting Grid Format - Solo

- 16.28.1. The starting grid format for solo machines will be as follows:
  - a) The fastest qualifying machine will occupy pole position which will be in the front row on the opposite side of the track from the direction of the first corner.
  - b) The remaining machines will be arranged on the grid in descending order of qualifying times according to the following pattern.
  - c) All machines must start within their nominated grid position parallel to track direction.





# 16.29. Starting Grid Format - Sidecars

16.29.1. The starting grid format for sidecars will be as follows:

Solo and Sidecar: White box

a) The fastest qualifying machine will occupy pole position which will be in the front row on the opposite side of the track from the direction of the first corner.

≫ <sub>8cm</sub> ≪

- b) The remaining machines will be arranged on the grid in descending order of qualifying times according to the following pattern.
- c) All machines must start within their nominated grid position parallel to track direction.



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#### 16.30. Starting Grid Format – Endurance

16.30.1. The positions on the starting grid must be indicated on the track with an approved paint as follows:







# 16.31. Starting Grid Format – World Championship Events

16.31.1. Where a circuit is approved for World Championship Events, the Grid shall comply with FIM homologation requirements.

# 16.32. Finishing

16.32.1. A 'Finish' will be marked at the appropriate place. The finish line will cross the full width of the track and be of a minimum width of 100mm.

#### 16.33. Track Density

- 16.33.1. Prior to or at the time of a track inspection, Track Operators must provide the Track Inspector with a list of current fastest track times of solos and sidecars for the calculation of track density. This calculation will determine the maximum number of riders permitted to start the event.
- 16.33.2. The final number of machines allowed for the race will be indicated in the track licence.
- 16.33.3. Once the maximum number of riders has been determined it is allowable to have a 20% additional number of riders on track for practice and qualifying only in each class of racing.
- 16.33.4. The maximum number of sidecars that are allowed in a group start will be 60% of the solo bikes.
- 16.33.5. The maximum number of junior riders that are allowed in a group start is 75% of the senior solo bikes.

#### 16.34. Flag Marshalling Points

- 16.34.1. The positioning of static marshals must be carefully considered in order to:
  - a) Maximise the visibility of the track area.
  - b) Provide an adequate, stabilised area for the officials that provides shelter from adverse weather conditions.
  - c) Provide adequate protection from competing motorcycles and flying parts.
- 16.34.2. No section of the track should escape observation
- 16.34.3. Marshal points should be located behind the first line of protection
- 16.34.4. Each post should be able to communicate by sight with the preceding and the following one



- 16.34.5. The distance between consecutive posts should not be excessive
- 16.34.6. Each post must be able to communicate verbally with race control
- 16.34.7. Each post should be marked with a sign-board bearing a number of the post
- 16.34.8. Avoid positioning where a participant may lose control of their machine and either their machine or participant continues on to the marshalling point. This would clearly create an elevated risk to both participant and marshal



# APPENDIX A: Mountable Kerb "Cams Old Style Kerb"









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# **APPENDIX B: Vallelunga**





# **APPENDIX C: Melbourne Kerb**





# **APPENDIX D: FIM Kerbs and Paint Colours**



The 12 m triangle kerb at the beginning of the kerb and at the end of it must painted in white color.



FIM Positive kerb (only on internal turns)





# FIM Double Kerb



# Kerb Paint Colours for FIM Events

The FIM requires the edges of the track, to be painted in green for the following FIM events, MotoGP and SBK World Championships.

The edges must be painted with a uniform green color.

See examples A





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Where FIM double kerb is used, the 2nd section of the FIM kerb will be painted in green and white, starting with a white triangle on the side of the darkest part (leading face) of the standard kerb.

# See attached examples B



The green sections of kerb, with or without the white triangle will be considered as a non-authorised part of the track.

Riders exceeding the track limits and using this green part may be penalised etc ...

The green color reference of this paint is: Green RAL 6029.

This color will be compulsory in 2018 for all circuits where a FIM MotoGP or SBK World Championship round will take place".



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# **APPENDIX E: Speed Graph**



# APPENDIX F: Calculation of the Run-Off Area of the Outside of a Corner



# APPENDIX G: Run Off Diagram

Race line

Tangential on-track excursion : blue lines (measured on circuit).

Speeds at each location taken from speed diagram

Off-track run-off . requirement : red lines (taken from Table 1 or 2)

Minimum barrier alignment



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#### 1. PURPOSE

This procedure details the processes for carrying out a Targeted Risk Assessment (TRA), when a track does not entirely conform to Motorcycling Australia Track Standards.

# 2. SCOPE

In circumstances where a track does not entirely conform, a risk assessment utilising the process set out in "the risk management process" is undertaken. Inspectors will conduct a Targeted Risk Assessment (TRA) on the hazard to assess if the particular risk is acceptable or whether mitigating action is required.

The subject area of the circuit can be accepted for licensing purposes provided the matter is documented in the inspection report and the methodology of the risk assessment also documented.

In areas which do not comply (documented on the TRA), the track inspector through the RCB will consult with the track operator to develop a process to achieve compliance with the current Standards.

For an existing track where compliance is impossible due to specific circumstances i.e. geographical, prohibitive cost etc. a targeted risk assessment must be undertaken and documented. This assessment will determine whether the area of non-compliance presents an acceptable risk and consequently whether the track can be licenced.

If the assessment determines the risk is unacceptable (i.e. Extreme or High Risk on the TRA form) the track cannot be licenced until the hazard is rectified and the track complies with the Standards

An "extreme" risk rating is a serious Risk Management issue and may result in a serious risk to the safety of participants, officials or spectators and third parties.

If any part of a track is modified subsequent to the original licensing of the venue the modified section should fully comply with the Standards.

RCB's inspectors may prescribe a staged process for modifying a track, to be agreed by the track operator which will establish the process to achieve conformity at an acceptable lesser standard, subject to the risk assessment process being applied, in consultation with the RCB.

This process can also be used if any unexpected situation arises.

In areas of non-compliance with the Standards, the Track Inspector will consult with the Track Operator (through the RCB) to develop a process to achieve the following:

The first priority is to achieve compliance with the Standards.

This may be in the form of an agreed Works Program over a prescribed period of time.

For an existing track where compliance is *impossible* due to specific circumstances (i.e. geographical, prohibitive cost etc.), a TRA will determine whether the area of non-compliance presents an acceptable risk and consequently whether the track can be licensed.

#### 3. PROCEDURE

#### 3.1. Inspecting a Venue

The inspection is a fact-finding mission to find potential hazards and can take different forms from taking notes of the area, interacting with club representatives, sometimes observing on track activity, taking photos, and taking measurements.

When inspecting venues, RCB approved checklists are a valuable way of capturing necessary information, however they should ensure that:

- Important items are not overlooked
- Consistency is achieved if the required activity is being undertaken by several different inspectors and there is a
  formal record of efforts made.



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During an inspection, an important factor to take into account is the effectiveness of any control measures already provided from a previous inspection. It is necessary to consider the possibility of current control measures not being used due to issues such as:

- Cost of implementing control (i.e. cost of new spectator fence)
- Failure to replace controls following maintenance or repair work
- Difficulty of using or working with controls and
- Complexity of controls.

#### 3.2. Risk Management Process

Risk Management is a five-step process:

- Step 1 Establish the context
- Step 2 Identify the risks
- Step 3 Analyse the risks
- Step 4 Evaluate the risks
- Step 5 Treat the risks

Throughout each step it is essential that there is consultation and communication with everyone in your organisation's functions, activities and events (refer to diagram).

#### RISK MANAGEMENT PROCESS





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#### 3.3. Step 1 – Establish the Context

Before risk can be clearly understood and dealt with, it is important to understand the context in which it exists. You should define the relationship between your club and the environment that it operates in so that the boundaries for dealing with risk are clear.

Establish the content by considering:

- The strategic context the environment within which the organisation operates
- The organisational context the objectives, core activities and operations of the club.

#### 3.4. Step 2 – Identify the Risks

The purpose of this step is to identify what could go wrong (likelihood) and what is the consequence (loss or damage) of it occurring.

Key questions to ask include:

- What can happen? List risks, incidents or accidents that might happen by systematically working through each
  competition, activity or stage of your event to identify what might happen at each stage.
- How and why it can happen? List the possible causes and scenarios or description of the risk, incident or accident.
- What is the likelihood of them happening?
- What will be the consequences if they do happen?

Risks can be physical, financial, ethical or legal.

Physical risks are those involving personal injuries, environmental and weather conditions and the physical assets of the organisation such as property, buildings, equipment, vehicles, stock and grounds.

Financial risks are those that involve the assets of the organisation and include theft, fraud, loans, license fees, attendances, membership fees, insurance costs, lease payments, pay-out of damages claims or penalties and fines by the government.

Ethical risks involve actual or potential harm to the reputation or beliefs of your club, while legal risks consist of responsibilities imposed on providers, participants and consumers arising from laws made by federal, state and local government authorities.

#### 3.5. Step 3 – Analyse The Risks (and Evaluate)

This involves analysing the likelihood and consequences of each identified risk and deciding which risk factors will potentially have the greatest effect and should, therefore, receive priority with regard to how they will be managed. The level of risk is analysed by combining estimates of likelihood (table 1) and consequences (table 2), to determine the priority level of the risk (table 3).

It is important to consider the consequences and the likelihood of risk in the context of the activity, the nature of your club and any other factors that may alter the consequences of likelihood of risk.

Risk evaluation involves comparing the level of risk found during the analysis process with previously established risk criteria and deciding whether risks can be accepted. If the risk falls into the low or acceptable categories, they may be accepted with minimal further treatment. These risks should be monitored and periodically reviewed to ensure they remain acceptable. If risks do not fall into the low or acceptable category, they should be treated using one or more of the treatment options considered in step 4.

The criteria for evaluating the risks at your club are shown below:



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# 3.5.1. Table 1– Likelihood Scale

Question: What is the likelihood of the risk event occurring?

Qualitative measures of Likelihood					
Level	Descriptor	Example Detail Description	Frequency		
1	Rare	Could happen, but it is unforeseeable that this will occur	Less than once in 5 years		
2	Unlikely	Could happen but only rarely	At least once in 5 years		
3	Possible	Could happen occasionally	At least once in 3 years		
4	Likely	Could happen frequently	At least once per 1 year		
5	Almost certain	Will occur	More than once per year		

#### 3.5.2. Table 2 – Consequence Scale

Question: What is the loss or damage impact if the risk event occurred (severity)?

Qualitative Measures of Consequence							
Level Descriptor Financial Safety		Property	Operational Efficiency				
1	1 Insignificant Less than \$1000 No injury		No Damage	Little or no hardship to organisation. 0 – Low \$ loss			
2	Minor	\$1000 - \$10,000	First aid injury. No ongoing medical attention.	Internal Repair	Some hardship to organisation. Minor \$ loss		
3	3 Moderate \$10,000 - 50,000		Moderate injuries - medical treatment required (broken bones). Hospital.	External Repair	Moderate hardship to organisation. Medium – High \$ loss		
4	Major	\$50,000 - \$150,000	Extensive (Serious) injuries resulting in major medical treatment. Hospital	Extensive external repair	Significant hardship to organisation. Major \$ loss		
5	Catastrophic	More than \$150,000	Life threatening injuries, death or multiple fatalities	Un-repairable / replace	Major hardship to organisation. Huge \$ loss.		

#### 3.5.3. Table 3 – Risk Priority Scale

The risk priority scale determines the nature of the risk and the action required. They are indicators to assist in the decision making of what action is warranted for the risks.

Question: What is the risk priority?

Risk rating	
Extreme	Stop activity, immediate action required
High	Prioritised action required
Medium	Planned action required
Low	Action when possible



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#### 3.5.4. Table 4 - Risk Management Matrix

The risk management matrix is a simple tool that can be used to assess a risk by evaluating a hazard's likelihood of occurring and its potential consequences. This enables the user to identify the appropriate response and prioritise the implementation of controls.

Below is an example of a risk matrix that has been adopted for MA track inspectors to identify the risk a hazard poses to people. The risk assessment matrix is broken into the following steps:

- The probability or likelihood of an accident occurring is evaluated
- The potential consequences are calculated or estimated and

Based on these two factors, the risks are assigned priority for risk control through the use of a risk rating.

Risk Matrix	2. LIKELIHOOD How likely is it to happen?										
1. CONSEQUENCE How severely could it hurt someone (riders, officials or public)? What impact will it have?	Almost certain (Will occur)	<b>Likely</b> (Could happen frequently)	<b>Possible</b> (Could happen occasionally)	<b>Unlikely</b> (Could happen but only rarely)	Rare (Could happen, but it is unforeseeable that this will occur)						
Catastrophic	Extreme	Extreme	Extreme	High	High						
Major	Extreme	Extreme	High	High	Medium						
Moderate	High	High	High	Medium	Low						
Minor	High	Medium	Medium	Low	Low						
Insignificant	Medium	Low	Low	Low	Low						

#### 3.5.5. Recording Data

The hazard identification data must be recorded so that it can be used for risk assessment activities and in determining appropriate control measures.

This process is documented on MA's Targeted Risk Assessment (TRA):

- That you thought about what could go wrong
- That you thought about who could be affected
- That you thought about how likely it was to happen
- That you thought about what could be done about it
- That all people involved were consulted



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#### 3.5.6. Targeted Risk Assessment (TRA)

Targeted risk assessments involve examining and evaluating the likelihood and possible consequence(s) and severity of the potential outcomes of hazards in order to prioritise risks for control.

There is nothing complicated about risk assessments and we can all do them!

When identify the RISK - Look at what is being done and consider what could go wrong.

Any risk score of "Extreme" or "High" on the matrix should be referred to the RCB.

The Risk Matrix indicates that anything extreme or high risk will require control measures or mitigating actions for the purposes of reducing the likelihood and/or severity of the risk.

If in doubt contact the RCB.

#### The Targeted Risk Assessment will indicate the acceptable level of risk.

The risk ratings determined during risk assessment enable decisions to be taken on the amount of effort to be expended in controlling risks associated with particular hazards.

Any hazard that is 'highly likely' or 'certain/imminent' to cause harm must be attended to and the risk reduced even if the severity is low.

Those hazards identified as not adequately controlled can now be prioritised in a list for action using the risk rating as a guide to those which will require urgent attention, and those which can be listed for action sometime in the future.

#### 3.6. Step 4 – Treat the Risks

Risk treatment involves identifying the range of options for treating the risk, evaluating those options, preparing the risk treatment plans and implementing those plans. It is about considering the options for treatment and selecting the most appropriate method to achieve the desired outcome.

Options for treatment need to be proportionate to the significance of the risk, and the cost of treatment commensurate with the potential benefits of treatment.

According to the standard, treatment options include:

- Accepting the risk for example most people would consider minor injuries in participating in the sporting activity
  as being an inherent risk.
- Avoiding the risk is about your club deciding either not to proceed with an activity or choosing an alternate activity
  with acceptable risk which meets the objects of your club. For example, a motorcycle club wishing to raise funds
  may decide that a simple BBQ rather than a competition is a safer way of raising funds.
- Reducing the risk likelihood or consequences or both is commonly practiced treatment of a risk within sport, for example use of back protectors or helmets.
- Transferring the risk in full or in part, will generally occur through contracts or notices for example your insurance contract is perhaps the most commonly used risk transfer form used. Other examples include lease agreements, waivers, disclaimers, tickets, and warning signs.
- Retaining the risk is knowing that the risk treatment is not about risk elimination, rather it is about acknowledging
  the risk is an important part of the sport activity and some must be retained because of the inherent nature of the
  sport activity. It is important to consider the level of risk which is inherent and acceptable.
- Financing the risk means the club funding the consequences of risk i.e. providing funds to cover the costs of implementing the risk treatment.

Whichever option you choose to treat a risk, if the risk has rated highly you will need to carefully consider necessary policies, procedures and strategies to treat the risk.



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These will include:

- what is needed to treat the risk
- who has responsibility
- what is the timeframe
- how you will know when the risk has been successfully managed.

Also, seek independent advice from your broker, insurer, solicitor, financial advisor and/or affiliated state body.

#### 3.7. Step 5 – Monitor and Review

As with communication and consultation, monitoring and review is an ongoing part of risk management that is integral to every step of the process. It is also the part of risk management that is most often given inadequate focus, and as a result the risk management programs of many organisations become irrelevant and ineffective over time. Monitoring and review ensure that the important information generated by the risk management process is captured, used and maintained.

Few risks remain static. Factors that may affect the likelihood and consequences of an outcome may change, as may the factors that affect the suitability or cost of the various treatment options. Review is an integral part of the risk management treatment plan.

As discussed earlier, risk management is an integral part of all core business functions, and it should be seen and treated as such. Risk management should be fully incorporated into the operational and management processes at every level of the organisation and should be driven

from the top down.

#### 3.7.1. Recording Results of Risk Assessment

It is important that the conclusions reached about risks are documented and that any supporting information on how that decision was made is included in associated records. This is not only a legal requirement but is also important for knowledge and also demonstrates how a decision was achieved with regard to investigating a hazard.

The second page of the TRA will allow you to record your assessment.

DESCRIPTION OF IDENTIFIED RISK	CONSEQUENCE	LIKELIHOOD	RISK RATING	CONTROLS / TREATMENT What has or will be done about it?					
	(describe word)	(describe word)	(describe word)						
						••••••			
					•••••				
es entre managementation come estates este		excesses ex							
CONSULTATION REGISTER - Who did you talk to?									
NAME	POS	TION	EXPERIENCE		SIGNATURE	DATE			
Responsible person advised >									
Person responsible for review >						C.			
Who else was notified? >									
Who else was notified? >						6			
When also and ifin 12 a					1	1			

The TRA must be included in the Track Inspection Report and must outline the hazard, Risk Score, Treatment, Responsible person and the treatment (control).

The Track Inspection Report. must be completed in accordance with these Standards and the relevant module.



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#### 4. APPENDICES

#### 4.1. APPENDIX A: HOW THE RISK RATING WORKS

#### HOW THE RISK RATING WORKS.

#### Step 1 & 2: Establish Context & Identify risk

A risk identified at the track - "Does our club take all reasonable steps to check the track for foreign objects which may result in injury to a rider" would be considered as follows:

#### Question: Step 3 Analyse the risk

Is it likely that some of our events may not be checked properly or at all prior to commencement of activity [likelihood]?

#### Answer:

Maybe (probability Yes)

#### Question:

If yes, how likely?

Answer: Table 1

Likelihood rating would be a "3" (reasonable likelihood) over a year.

#### Question: Table 2

If yes, what would be the consequences and/or the loss or damage impact of those consequences [severity]?

#### Answer:

Impact rating would be a "3" (moderate, some objectives threatened i.e. rider injury may occur but can be easily remedied (prevented), with some effort, objectives can be achieved).

#### Question:

What is the nature of the risk and the action required?

#### Answer: Table 3 rate the risk

Given the likelihood rating is a "3" (possible) and the impact rating is a "2" (minor), the risk rates as a medium (level 3) risk on the risk rating scale.

So, it is a medium risk that is possible to arise over a five year period but can be easily remedied.

#### Question: Step 4 Treat the risk

How should it be treated?

#### Answer: Step 4 and 5.

Ensure all volunteer officials and coaches are aware of their event obligations as required by Motorcycling Australia under their risk management program (Clerk of Course to review track prior to activities). Club office bearers should ensure that volunteer officials / coaches receive the appropriate training, information and compliance checklists and provide feedback. They should have first aid kits and medical plan.

# Motorcycling Australia TARGETED RISK ASSESSMENT (TRA)



DATE	EVENT or	r VENUE		AREA or LOCATION						E of official co		SIGNATURE of official completing this form				
DESCRIPT	10N OF	IDENTIFIED	RISK		CONSEQU	JENCE	LIKELIHOOL	RISK RATING		RATING	CONTROLS / T	REATM	ENT			
					(describe	word)	(describe w	ord) (	ord) (describe word)		What has or w	ill be do	ne abou	it it?		
	-		THE EXPERIMENTAL PRODUCTS AND INCOME. AND AND													
CONSULT	ATION I	REGISTER - V	Who did vou talk	to?												
						DOCIT							TURE		DATE	
-		IN MAY	NAME		POSITION				EXPERIENCE		SIGNATURE		DATE			
Responsibl	le persor	n advised >														
Person res	ponsible	for review >														
Who else v	was notif	ied? >														
Who else v	was notif	ied? >									10					
Who else v	vas notif	ied?>			I											
TTHE CIPE I	i do no ch		~~			~~										
Risk Calcula	ator										LIKELIHOOD	): How I	ikely is it t	to happen?	N.	
CONSEQUENCE: How severely could it hurt someone (riders, officials or public)? And what					l what				LIKELY	POS		UNUR	IKELY RARE			
impact will it have?					Y			ALMO	ALMOST CERTAIN		Could happen	Could happen		Could happen		Could happen, but it
PERSONAL INJURY				ADM	ADMINISTRATIVE			will occur		cour	frequently	occasionally		but only rarely		that this will occur
CATASTRO	PHIC	Life threatening i fatalities	injuries, death or multipl	e Major loss.	Major hardship to organisation. Huge \$				Extreme Extreme		Extreme		High		Medium	
MAJOR	R Extensive (Serious) injuries resulting in major Signifit medical treatment. Hospital. \$ loss				icant hardship to organisation. Major				Extreme		Extreme	High		High		Medium
MODERATE	RATE Moderate injuries - medical treatment Moder required (broken bones). Hospital. – High			rate hardship to organisation. Medium h \$ loss			High		jh	High	High		Medium		Low	
MINOR	NOR First aid injury. No ongoing medical Some loss			hardship to organisation. Minor \$				High		Medium	Medium		Low		Low	
INSIGNIFICANT No injury.			or no hardship to organisation. 0 – loss				Medium		Low	Low		Low		Low		
RISK RATING			1	RISK TREAT	MENTS					LEVELS OF	CONTROL METHOD	c.	1			
Extreme: Stop activity, immediate action required AVOID: Don't do the activity						v				1. AVOID	< Try to start here	-	5. REDUC	ICE admin warping and rules		
High: Prioritised action required TREAT: R				TREAT: Red	uce - use cont	trols				2. SUBSTIT	TUTE		6. PPE < Last resort			
Medium: Planned action required ACCEPT: If low or					ow or if consec	or if consequences are tolerable				3. ISOLATE	E					
Low: Ac	tion when p	possible		TRANSFER: (Caution – cannot transfer duty of care)						<ol> <li>REDUCE by physical controls</li> </ol>						



# APPENDIX I: TYRE BARRIER ASSEMBLY INSTRUCTIONS

# FIM SPECIFICATIONS AND ASSEMBLY INSTRUCTIONS

Tyre Barriers Horizontal Tyre Barrier (Type C)

- a) Compulsory specifications
  - i) The tyre barrier shall be assembled according to the layout as shown in Figure 2.
  - ii) Only tyres for 4-wheel vehicles are allowed.
  - iii) Minimum rim diameter: 15"; maximum rim diameter: 17".
  - iv) Tyres shall be drilled following a hexagonal arrangement as shown in Figure 1 (suggested hole diameter of 10 mm).
  - v) The fixation between tyres shall be done with min M8 metal screws, as shown in Figure 2 (Detail A).
  - vi) The fixation of tyres to the rear support (guard-rail) shall be done every other column of tyre, with the use of plastic straps, as shown in Figure 2.
  - vii) A conveyor belt shall be present and be of type "Gummibarrier" or similar, i.e.based of SBR-NR rubber with EP reinforcement plies.
  - viii) Conveyor belt thickness:  $10 \pm 2$  mm.
  - ix) Conveyor belt height: equal to the tyre column height (without anti-sliding "skirt").
  - x) The conveyor belt shall be bolted to each tyre of every other column, as shown in Detail-B in Figure 2 (min M8 metal screws).
  - xi) For the first and last tyre barrier module, the conveyor belt shall be folded on the sides and fixed to the guard-rail.
- b) Recommended specifications
  - i) Minimum tyre width: 195 mm.
  - ii) Tyres should be new at the moment of building the barrier.



Figure 1. Hole arrangement.



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Figure 2. Horizontal tyre barrier general assembly



# Vertical Tyre Barrier (Type C)

- a) Compulsory specifications
  - i) The tyre barrier shall be assembled according to the layout as shown in Figure 2. Only tyres for 4-wheel vehicles are allowed.
  - ii) Minimum rim diameter: 15"; maximum rim diameter: 17".
  - iii) Tyres shall be drilled following a hexagonal arrangement as shown in Figure 1 (suggested hole diameter of 10 mm).
  - iv) The fixation between tyres shall be done with min M8 metal screws, as shown in Figure 2 (Detail A).
  - v) The fixation of tyres to the rear support (guard-rail) shall be done every other column of tyre, with the use of plastic straps, as shown in Figure 2.
  - vi) A conveyor belt shall be present and be of type "Gummibarrier" or similar, i.e. based of SBR-NR rubber with EP reinforcement plies.
  - vii) Conveyor belt thickness:  $10 \pm 2$  mm.
  - viii) Conveyor belt height: equal to the tyre column height (without anti-sliding "skirt").
  - ix) The conveyor belt shall be bolted to each tyre of every other column, as shown in Detail-B in Figure 2 (min M8 metal screws).
  - x) For the first and last tyre barrier module, the conveyor belt shall be folded on the sides and fixed to the guard-rail.
- b) Recommended specifications
  - i) Minimum tyre width: 195 mm.
  - ii) Tyres should be new at the moment of building the barrier.



Figure 1. Hole arrangement.



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Figure 2. Vertical tyre barrier general assembly.