



TRACK LICENSING STANDARDS MANUAL

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1 KNSW Track Licencing Standards

1.1 Preamble:

The following are the standards for permanent bitumen and dirt surfaced Kart Tracks in NSW. These standards are mandatory for new circuits or major circuit alterations to an existing circuit. The Board of Karting NSW (KNSW) and the KNSW Track Inspectors reserve the right to vary these requirements at any time, with issues of safety being paramount. Other additional requirements as required by Local and State Governments may also be applied.

1.2 Purpose and use of this document

This document describes the minimum standards and specifications relating to construction, safety, operation, maintenance and certification of all tracks used for karting competition that fall under the jurisdiction of Karting New South Wales (KNSW).

It also defines the roles and responsibilities of all stakeholders involved in the above.

1.3 Intended Audience

This document is used by all member clubs of KNSW, and all Track Safety Officers nominated within each KNSW club.

1.4 Roles and Responsibilities

The roles and responsibilities listed below are in context of the Track Licencing Standards function. Please note there may also be additional operational and management responsibilities for each role below that are outside the scope of this specification.

Position Description	Position Responsibilities
KNSW Welfare Director	Provides direction to all clubs seeking to make changes to the construction and operation of the tracks under their control.
KNSW Board Members	The Board shall administer and manage the affairs of KNSW for the benefit of its Member Clubs and the sport of karting in Australia (primarily in NSW) generally, as well as promote and advance the causes, purposes and objectives of the sport.
KNSW Track Inspector (TI)	Identifies and manages risk on behalf of KNSW. Conducts track inspections and endorses the annual Track Licence Perform track inspections or consultations at the request of the Clubs either before commencement, during and/or upon completion of construction or modification to the track and facilities. Reports status and results of track inspections to KNSW board level.
Club Track Safety Officer (TSO)	Responsible for maintaining the track at all times in accordance with these regulations, including any variations as per Work Orders; Ensure that all track preparation has been completed and/or any issues found are remedied prior to the next race meeting. Liaise KNSW Track Safety Inspector as necessary. Where possible, participate in any formal track inspection in conjunction with the TI.

2 Track Licensing and Inspections

Any track owners /operators / clubs wishing to conduct a sanctioned KNSW race meeting must have a formal affiliation with KNSW and have the track licensed by KNSW and the Office of Sport in accordance with the Motor Vehicle Sports (Public Safety) Act 1985.

Licences may be issued by Office of Sport via KNSW. A condition of the issuance of a licence is a successful formal inspection by a KNSW Track Inspector.

Refer to the latest version 'KNSW Official Rule Book', Section K – Track & Safety for more information.

2.1 New Tracks and/or changes to Existing Tracks

To assist the Track Licensing process, any prospective track owners /operators / clubs who will commence construction of a new track, or make changes to existing tracks, are encouraged to engage with KNSW in an ongoing consultative and collaborative process prior to start of construction.

At completion of new track construction, the track owner /operator / club is to complete an application to KNSW using the latest version of the Race Facility Licence Application form.

At completion of changes to an existing track, the track owner /operator / club is to complete an application to KNSW using the latest version of the 'Application to change or modified Go-Kart Track or facility' form.

Both forms are available from KNSW.

On receipt of the completed relevant form by KNSW, a KNSW Track Inspector will be engaged to complete the formal track inspection and report on findings to KNSW.

KNSW will then review and approve the application and submit it to the Office of Sport who issue the Licence.

3 Circuit Plans and Approval:

Prior to the construction of a new circuit or extension of any existing circuit, track owners/operators must liaise and consult with KNSW track inspector and upon request provide a copy of the circuit plans.

All circuit plan diagrams to be professionally drawn at a scale of 1:500 and shall include:

1. the track layout including surface contours;
2. the direction of the racing;
3. buildings, installation, access roads, race areas
4. the location of the starting grid
5. ambulance access and parking;
6. Paddock plan showing the pit spaces and access ways.

4 Track Inspection Schedule

Formal onsite track inspections are to take place:

1. Biennially (ie; every second calendar year), or
2. at the discretion of the KNSW track inspector
3. prior to approval being granted to hold a major event (see table below).
4. prior to approval being granted for the commencement, during and/or upon completion of construction or modification to the track and facilities.
5. as a result of a critical incident investigation.

4.1 Track Inspections by Major Event Classification

Track inspections shall take place for Major Events as per the timings / process below.

Event Type	Required Track Inspection Timing
Titled Event	Final inspection minimum 2 months prior to the event date
KNSW special Events	As requested by the KNSW board
Club or Series Events	Bi-annually or at the discretion of the TI

4.2 Track Inspection after a Critical Incident

In the event of a critical incident, the KNSW Board/Welfare Director will advise the KNSW Track Inspector to conduct an investigation of the incident in the context of track safety and compliance. This inspection is to determine if there are any incident related track changes or modifications to be completed prior to the next race meeting.

5 Track Specifications

5.1 Track Design:

The shape of the track, both in plan and vertical profile, is not constrained by these regulations, as it is dictated by certain variable factors, the types of competition for which the course is intended, the character of the terrain, considerations of economics, aesthetics, tradition, etc. However, the construction of the circuit must conform to any safety requirements, which may be specified by Karting NSW Those responsible for a circuit design must also ensure that the prescriptions laid down by the Public Authorities are complied with and must obtain their official approval.

5.2 Track Density/Maximum Number of Starters:

The KNSW Track Inspector (TI) will calculate and determine track density based upon the below formula at the same time taking into account critical safety issues that may affect the approved density.

5.3 Kart to Circuit Density Calculation Formula:

Circuit Length ÷ spacing (25 metres per kart required) +/- 6.25% = Density

Kart to Circuit density is based on a standard formula based on a circuit width of 7metres.

For example:

If the track is 6 metres wide, the density is REDUCED by 6.25% from a 7 metre track.

If the track is 7 metres wide, the density percentage is not used in the formula.

If the track is 8 metres wide, the density is INCREASED by 6.25% from a 7 metre track.

To illustrate:

On a 6m wide track @ 800m length ÷ 25m spacing – 6.25% = 30 karts.

On a 7m wide track @ 800m length ÷ 25m spacing = 32 karts.

On a 8m wide track @ 800m length ÷ 25m spacing + 6.25% = 34 karts.

Notwithstanding the above, following a written request from an individual member club, the KNSW board, in consultation with the TI, may approve a TEMPORARY exemption to the above Kart to Circuit density formula.

5.4 Track Length

The maximum length of any track will be 1.7km (except as approved by the Board of KNSW). The line around a track used for determining its length shall be the centre line.

5.5 Track Straights

The length of a straight shall be measured from the tangent points on the inside of the proceeding and following corners.

5.6 Start Straight

- 1) New tracks are to have a minimum distance of 50m from the start line to the start of the first corner and the total length of the straight to be a minimum of 80m.
- 2) New tracks are to have a minimum width of 7m through the first corner and have a minimum corner radius of 90 degrees or greater.

5.7 Track Width

- 1) New track straights over 80m in length are to be minimum width of eight (8) metres. For all other straights the minimum width will be 7 metres.
- 2) For all existing tracks, all straights over 80m in length are to be minimum width of 7 metres; elsewhere the minimum width will be 6 metres.
- 3) Track widths will be measured over the sealed bitumen surface, excluding any kerbs or ripple strips.

5.8 Separation

- 1) The distance between high-speed converging sections of track shall be a minimum of ten (10) metres, between the nearest track edges. This shall apply to all new tracks and major alterations to existing tracks, unless the KNSW Board approves a suitable alternative.
- 2) All other sections of the track shall have a minimum of ten (10) metres separation, apart from the area around the internal radius of any corner.

5.9 Track Gradient

The recommended maximum longitudinal gradient will be 5% and recommended maximum transverse gradient will be 10%.

5.10 Vertical Clearance

There shall be no permanent or temporary objects or structures within 2.8 - 3 metres vertically above the track surface.

5.11 Surface

- 1) The surface of tracks **shall** be sealed with asphalt / concrete.
- 2) The surface must be smooth and continuous and, **where practical**, have sufficient fall to prevent formation of puddles in wet conditions (a minimum of 2.5% being recommended).
- 3) Where practical, the track surface levels should follow the natural contours. Verges should be graded level with the track for a minimum distance of 5m from the track edge.
- 4) Both edges of the track surface will be defined with a 100mm wide white line.
- 5) **Any irregularities or deterioration of the track surface (including but not limited to bumps, cracks, surface loss or track sinkage/undulations) that effects the braking, control of direction and/or lateral grip of karts shall be repaired in accord with point (2) above.**

5.12 Starting Grid 'Tram Tracks'.

A track may have as two pairs of parallel lines (known as 'Tram Tracks') and each pair of lines:

- 1) shall extend a minimum of 30m back from the Start/Finish line
- 2) shall not extend from the Start/Finish line any further back than the previous corner
- 3) shall be 2m apart and each marker line shall be no less than 50mm wide;
- 4) shall be no less than 400mm from the track centreline (ie; 800mm separation between each pair of Tram Tracks. This 800mm separation area between the Tram Tracks shall be referred to as No-Man's Land.

5.13 Baulk Line

Tracks are to have a bright green coloured line painted across the out-grid lane a minimum of 5m back from the edge of the track.

5.14 Formation line

Tracks will have a red formation line painted on the track, at 90 degrees to the track edge at a location approximately half track length and in consultation with the KNSW Track Inspector.

5.15 Start Line

A white start line painted across the track at 90 degrees to the track edge, which may also be the finish line.

5.16 Finish Line

A white finish line painted across the track at 90 degrees to the track edge.

5.17 Breakdown Lane

- 1) Where a mechanical breakdown lane is provided, it shall be adjacent to the main track.
- 2) There must be a chicane at the entry to the deceleration lane aimed at substantially reducing the speed of the karts entering the breakdown lane.
- 3) The sealed width of the deceleration lane must be a minimum of 1.5 metres and a maximum of 2.5 metres.
- 4) The sealed width of the stopping area of the breakdown lane must be a minimum of 3.0 metres and separate from the main track by a safety barrier.

5.18 Track edges, verges and run-off areas

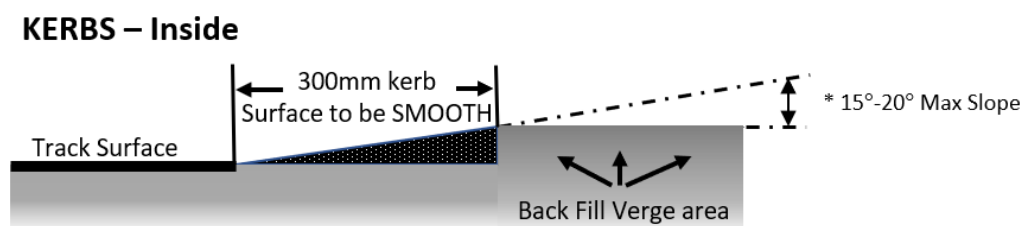
- 1) The track must be bordered all along its length on both sides by compact verges having an even surface.
- 2) These verges must be free of debris or gravel and must normally be grass-covered over a minimum width of 1m
- 3) The verges must be continuation of the transverse profile of the track, with no step between track edge and verge. Any horizontal transition must be very gradual and progressive.
- 4) A run-off area is that the section of ground between the verge and the first line of protection and, unless otherwise specified, must have the same basic characteristics as the verge, although it may be less stabilised.
- 5) The run-off area must be graded to the verge. If there is a negative slope, this must not exceed 5% for a distance of 5 metres from the track edge; if there is a positive slope, this must not exceed 10% for a distance of 5 metres from the track edge, with a smooth transition from track to run-off area.

5.19 Corners

Kerbs must be laid on the inside of corners to prevent karts moving onto the inside verge of corners in normal racing.

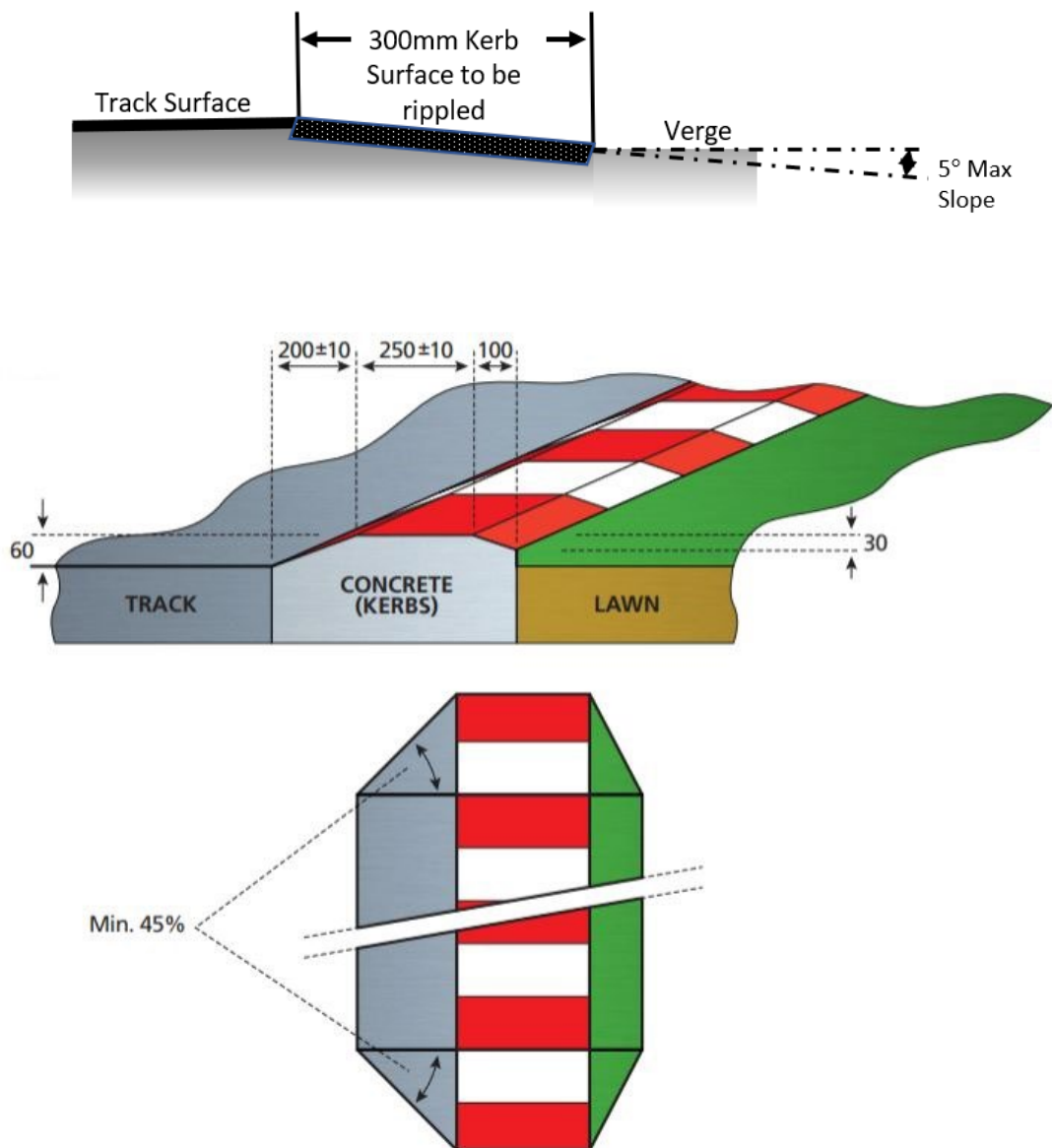
5.20 Kerbs

- 1) Kerbs, are to be at least 300 mm wide and a maximum of 500 mm wide.
- 2) The kerb surface must form a positive angle to the plane of the track being a minimum of 15 degrees and maximum of 20 degrees (for a 300 mm wide kerb, this is equivalent to an 80mm to 110mm rise measured at the kerb extremity).
- 3) As an approved alternative the [current CIK/FIA kerb profiles](#) may be used.
- 4) Drainage slots inserted in inside kerbs are recommended.
- 5) The adjacent verge meeting the external edge of the kerb will be finished level with the top of the kerb.



* For a 300mm kerb, the kerb height is equivalent to an 80mm – 100 mm rise above track surface, measured at extremity of kerb height

KERBS – Outside



5.21 Ripple Strips

- 1) Ripple strips are to be “a minimum” 300 mm wide and generally placed on outside corner kerbs only. In some cases ripple strip can be used on the inside corner kerbs with the approval from KNSW track inspector
- 2) The top surface will be constructed with ripple strips. Dimensions and configuration of the ripple strips to follow the [FIA Karting exterior kerb recommendations](#). Refer Appendix 25 for details.
- 3) They will be sloped at a negative angle to the plane of the track to a maximum of 5 degrees.
- 4) Drainage slots to allow for the run-off of surface water to be included as appropriate.
- 5) Ripple strips are to be painted with contrasting colours in sections no smaller than 300mm and no larger 600mm.

6 Use of Safety Barriers and Catch-Traps

- 1) The primary and optimal form of protection for karts is to ensure suitable run-off distances are provided between the edge of the track and any solid object. In general, the minimum distance to a fence or safety barrier will be 5m.
- 2) Safety barriers and catch traps must be installed to prevent karts crossing in any area where two sections of track are close to each other and/or there is a possibility that karts may cross.
- 3) Solid objects should be removed from the track area where possible. If this is not possible, then suitable run off distance and protection is required.
- 4) Any structure or solid object (either permanent or temporary) of any type closer than 10 metres to the nearest track edge must be protected by safety barriers and/or catch traps built to the appropriate standards.
- 5) In high speed areas, a catch-trap shall be installed in front of a safety fence (refer Section 8.2 'Catch Traps')
- 6) For the protection of all trackside Officials posts, a double tyre barrier at right angles to the track shall be constructed with a minimum of four (4) tyres long by four (4) tyres high with a minimum height of 600mm with a 300mm separation. The traffic-side of tyre barriers are to be painted a different colour from all other tyres.
- 7) Where possible, safety barriers are to be located a minimum of 5m from the edge of the track and have verge and catch trap protection prior.

6.1 Safety Barriers

Safety barriers shall be designed to absorb the energy from impact with a kart and to rapidly decelerate an out-of-control kart with minimum damage to both kart and driver.

6.1.1 Safety Barrier Construction

- 1) Tyre barriers shall be constructed of similar size passenger car tyres with (used supercar race tyres are preferred), securely bound in vertical stacks and longitudinally in a manner that forms a flexible structure.
- 2) The tyre wall shall be constructed so as curve away at the end of the barrier. Tyre barriers are constructed to a minimum of 600mm high by four bundles long, unless directed otherwise.
- 3) Tyre barriers must be bound together with strapping or synthetic rope or bolted or TEK screwed. Washers shall be used each side of the tyre wall. If TEK screws are used, a suitable "speed nut" must be fitted to the threaded end.
- 4) Bolt or screw threads shall not protrude from the outside face of the completed wall. The barriers shall not be attached to the ground so they may move freely when hit by a kart. Tyres must be in good condition and no external metal strapping is permitted.

6.1.1.1 Commercial Safety Barriers

Alternative commercial barriers currently approved are Air fence kart inflatables and Air fence kart

6.1.1.2 Safety Barrier Separation

Safety barriers must be separated by a minimum of 300mm from any solid object or other safety structure.

6.1.1.3 Safety Barrier Facings

Facings may be used to supply continuous belting face to safety barriers in the areas of frequent impact. Minimum height to be 500mm, minimum thickness 5mm.

6.1.1.4 Safety Barrier Fixings

- 1) TEK screws will be a minimum of 4mm diameter with 25mm diameter washers each side of the fixing.
- 2) Bolts shall be a minimum of 8mm diameter with 25mm diameter washer each side of the fixing.
- 3) Facings to be secured with minimum 6mm dome headed bolt with washers and nuts internally only, to be fixed on every second tyre row top and bottom.

6.2 Catch Traps

Catch traps are an area of loose material designed to slow a kart, which has left the track surface, before it impacts a safety barrier or fence.

6.2.1 Catch Trap Construction

- 1) A bed of gravel a minimum of two metres wide by 250mm deep set down 250 mm into the existing surface level so as to produce a level leading edge (In total 500mm deep).
- 2) The stone to be used shall be either round river stone or clean crushed stone of a single size 5 – 10mm.
- 3) On a regular basis, the surface of the trap is to be deeply raked up into ridges approximately 100mm deep and 200mm apart, along the direction of racing. A correct prepared gravel trap should be difficult to walk on.
- 4) If either material is not available, then a locally available suitable non-compactable material may be used as approved by KNSW Track Inspector.
- 5) In high-speed run-off areas the width of the trap shall be increased to minimum of 4 metres.
- 6) The catch trap must be graded to the verge or track surface. If there is a negative slope, this must not exceed 5% for a distance of 5 metres from the track edge. If there is a positive slope, this must not exceed 10% for a distance of 5 metres from the track edge, with a smooth transition from track to run-off area.

6.2.2 Catch Trap Locations

Catch Traps are to be installed in front of fences in high-speed areas, or in all areas where deemed necessary by KNSW Track Inspector.

6.3 Safety Catch Fence

- 1) A safety catch fence is a last line of restraint in critical areas where a kart may otherwise be projected over a safety fence or safety barrier and cross to another section of track or spectator area. It will normally only be used on existing circuits.
- 2) On new circuits or alterations to existing circuits, it is preferable to provide adequate run-off areas rather than to rely upon barriers to control karts.

6.3.1 Safety Catch Fence Construction

Safety Catch Fences shall:

- 1) be made of a 50mm square x 2.5mm diameter chain wire fence with steel rails, or a heavy wire or cable along the top, and a heavy wire or cable along the bottom;
- 2) have fencing components shall be installed to manufacturer's recommendations;
- 3) shall have a minimum height of 1.8m.

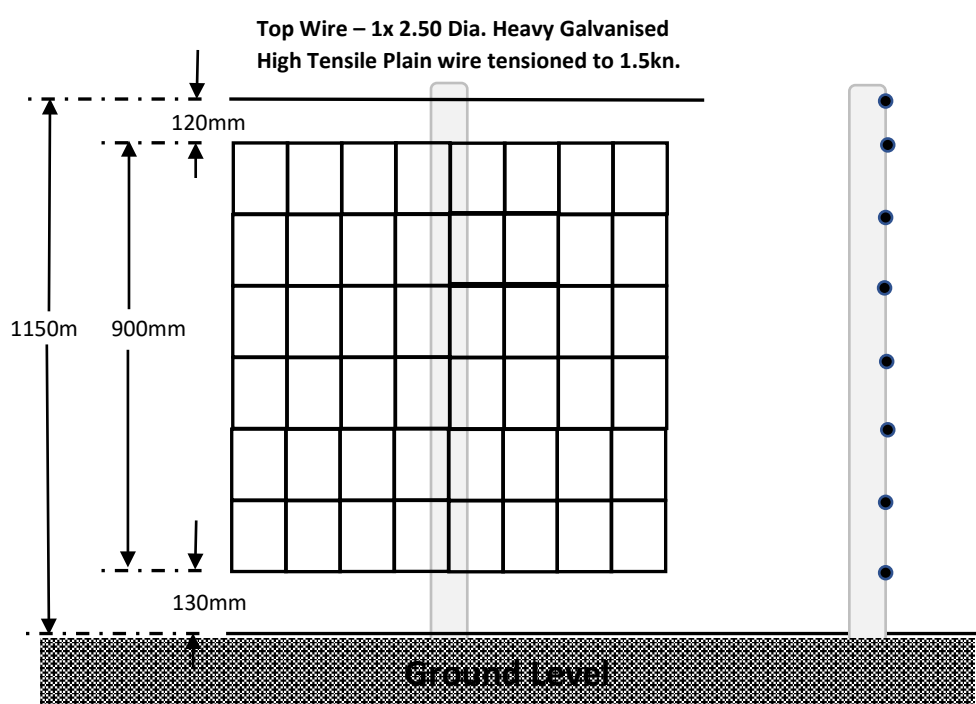
6.3.2 Safety Catch Fence Locations

- 1) A safety catch fence will typically be located in high-speed run-off areas or in response to an issue raised by the TI during a safety analysis.
- 2) A safety catch fence will be located at the maximum distance possible from the outside edge of the track.

6.4 Safety Fence

- 1) A safety fence is used to control the access of spectators and unauthorised persons into dangerous or controlled areas. They may be permanent construction or temporary fixtures (eg; parc ferme barriers).
- 2) Where possible, all circuits will have a safety fence for the full perimeter of the track.
- 3) Gates may be provided in a Safety Fence, but must be lockable. Gates must only swing outwards ie; away from the track.

6.4.1 Safety Fence Construction



Safety Fences to be constructed as follows:

- 1) be 1.8m high above the adjacent track surface;
- 2) be constructed from heavy galvanised wire with a 2.5mm high tensile tensioned top wire and a lower panel of 6/90/30 hinge joint fencing from 2.5mm wire;
- 3) be installed to manufacturer's recommendations;
- 4) have a maximum spacing of posts of three metres with corner braces and strainers as recommended by the manufacturer;
- 5) have a minimum post specification of 75mm diameter CCA treated timber or 50mm NB galvanised steel posts and must be capped;
- 6) have the wire mesh installed on the trackside of any supporting posts;
- 7) be located a minimum of 5 metres from the outside edge of the track.
- 8) Above is an example of the construction of a typical safety fence.

6.5 Spectator Fence

A spectator fence is used to control the access of spectators and unauthorised persons into dangerous or controlled areas and to maintain a separation from safety or catch fence at all tracks.

6.5.1 Spectator Fence Construction

A spectator fence shall:

- 1) have a minimum of five (5) 2.5mm wire strands evenly spaced over the entire height;
- 2) have support posts at a maximum spacing of 3m;
- 3) be 1.2m in height;
- 4) have warning signs at 10m spacing's stating, "KEEP OUT - PROHIBITED AREA";
- 5) be set back a minimum of 800mm and a maximum 1.8m from any safety fence or safety catch fence.

7 Fire Extinguishers:

- 1) Fire Extinguishers are to be located at the following positions.
 - a) At the weigh in scales and at least four other accessible points in the paddock area for meetings with up to 200 entrants plus one additional extinguisher for each 100 (or part thereof) entrants. For Titled or special events, fire extinguishers are to be located at the scales, start grid and four accessible points in the paddock area.
 - b) At any fuel dispensing area (must have the appropriate approved fuel spillage kit), if in use.
 - c) At any fuel testing area (must have the appropriate approved fuel spillage kit), if in use.
 - d) At all flag points.
- 2) Fire extinguishers to be of a type suitable for flammable liquid fire and be non-hazardous to humans.
- 3) Minimum 2.5kg and must have current certification tag.
- 4) Notices for fire extinguishers, 1000mm by 600mm in size, with lettering a minimum height of 180mm, are to be located with the bottom of the sign 2.5metres and a maximum of 3.5metres above the ground at all locations in the parc ferme/paddock area, exceptions being the scale area and the fuel dispensing and testing areas and these areas must have suitable signs displayed.
- 5) Entrants may be required to supply an approved filled fire extinguisher in their paddock space, but the presence of such extinguisher shall not relieve the organisers of the obligation to supply adequate fire-fighting equipment for the circuit as a whole.

8 Lighting

8.1 Start Grid and Weigh Area Lighting

Must be such that no shadows are cast, which may be a danger to competitors and pit crews whilst starting or retrieving karts

8.2 Paddock Lighting

Must be adequate enough for competitors and pit crew to move around the paddock without endangering themselves by objects hidden in shadows.

8.3 Track Lighting

- 1) No point of the track surface will measure less than 20 Lux.
- 2) Track lighting is to be measured at ground level on the centre line of the track.
- 3) The area on the track used to record kart numbers will measure no less than 38 Lux.
- 4) The starting area will measure no less than 38 Lux.
- 5) No section of track surface will have its intensity of lighting vary by more than 20% over a 10 metre distance.
- 6) No lighting source shall cause glare to drivers or officials.
- 7) All new track lighting must be designed by a qualified person.

8.4 Emergency Track Lighting

- 1) Tracks will have emergency lighting.
- 2) The emergency lighting will have an alternate source of power supply to that which powers the main track lighting.
- 3) The emergency lighting will be permanently on during racing.
- 4) The minimum number of lights will be one (1) light for every two hundred metres of track.
- 5) Positioning of the lights will be at the discretion of KNSW Track Inspector.
- 6) Alternate power supply must comply to electrical authorities.

8.5 Flashing Amber Lights / Red and Blue Lights

- 1) The minimum requirement for flashing amber light shall be 150mm diameter light mounted maximum 2.5 meters and no higher than 3.5 metres.
- 2) A solid red and blue light may also be included in a light bank.
- 3) Blue and amber lights shall be independently switched, red shall be full course.
- 4) All lights shall be controlled from a central point.
- 5) All flag points must have a portable light source with Red, Blue and Yellow lights.
- 6) All cabling must comply with relevant electrical codes.
- 7) Position, construction and number positions of lights to be decided in consultation with KNSW Track Inspector.

9 Paddock Area:

- 1) The paddock must be clearly defined and fenced. Under most conditions the public are permitted in the paddock. All karts shall be accommodated within the paddock area. The paddock must be of sufficient area to cater for the maximum number of karts likely to attend a race meeting.
- 2) The paddock area surface is to be of a suitable material, graded and drained to maintain access during all weather conditions.

- 3) The access ways to paddock spaces are to be a minimum width of 3 metres.
- 4) A trade area is to be set aside, for exclusive use of Trade Vehicles that have prior arrangements with the Promoters.
- 5) The promoting club, in conjunction with KNSW Track Safety Inspector, will designate a safe area for the starting of kart engines. This area will be clearly marked and sign posted.
- 6) All circuits shall have a main notice board. This board is to have a map showing;
 - a) emergency vehicle access routes
 - b) fire extinguishers
 - c) parc ferme boundary
 - d) paddock boundary
 - e) all track licence & Sport and Recreation licences
 - f) kart engine starting area.
 - g) evacuation plan & emergency phone numbers
- 7) The notice board will be located in close proximity to the Race Secretaries Office and will be used to display all official communications to competitors and race information. It is recommended that the notice board be lockable and protected from the weather.

10 Track Entrance and Exit

- 1) Entrance to the race track is through the Outgrid. The Outgrid must be labelled with 'OUT' clearly visible to all competitors.
- 2) Exit from the race circuit is through the Weigh-In area or a clearly designated area. Track exits must have speed limiting barriers to control kart speed.

10.1 Outgrid Areas

- 1) Outgrid areas may be a Single Grid, a Double Grid or Herringbone Grid. Refer to Appendix 4 for required dimensions of each Outgrid type.
- 2) All Outgrids must be large enough to accommodate the maximum number of starters permitted on the racing circuit.
- 3) Kart positions on the Outgrid to be clearly marked as per grid layout diagram for that track (i.e. Single, Double or Herringbone Outgrid styles).
- 4) The Outgrid to be fully enclosed by a spectator fence with entrance and exit gates at opposite ends.
- 5) The Outgrid surface to be smooth sealed bitumen or concrete and well maintained.
- 6) A large weather-proof sign with an arrow showing the direction of racing and practice is to be clearly displayed at the Outgrid. The location of the sign is to be determined by KNSW Track Inspector.

10.1.1 Single Outgrid (side by side)

- 1) The minimum grid surface width for a Single Grid is 7m.
- 2) At a minimum both sides of a Single Outgrid must be enclosed with a spectator fence spaced at a minimum of 7m to a maximum of 9 metres apart.

10.1.2 Double Outgrid (2 grids side by side)

- 1) The minimum surface width for a Double Outgrid is 15m.
- 2) Both sides of a Double Outgrid must be enclosed with a spectator fence spaced at a minimum of 15m to a maximum of 17m apart.

10.1.3 Herringbone Outgrid (2 rows of karts angled at 45 degrees)

- 1) The minimum surface width for a Herringbone Outgrid is 15m.
- 2) Both sides of a Herringbone Outgrid must be enclosed with a spectator fence spaced at a minimum of 15m to a maximum of 17m apart.

10.2 Exit Lane

- 1) The sealed width of the Exit Lane (between the Outgrid and the racing circuit) to be a minimum of 5m.
- 2) The width between any structures on either side of the Exit Lane to be a minimum of 7.5m apart.
- 3) The Exit Lane to the track must be fitted with an egress gate to the track to of sufficient strength at least equivalent to the adjacent fence.
- 4) The egress gate to be located on the edge of the Outgrid closest to the track.

10.3 Deceleration Lane

- 1) The Deceleration Lane to include suitable bends or a tyre chicane 4 tyres high by 4 tyres long to slow the travel of karts before entry to the In-Grid.
- 2) A broken line painted on the track to guide competitors to the start of the Deceleration Lane.
- 3) The sealed width of the Deceleration Lane must be a minimum of 1.5m with an overall clear width of 3.0 m.

10.4 In Grid Area

The In-Grid Area:

- 1) must be large enough to accommodate the maximum number of starters permitted on the racing circuit;
- 2) to be sufficiently enclosed to prevent entry by unauthorised personnel;
- 3) hard surfaces to be smooth, sealed bitumen or concrete and well maintained.

11 Weigh-In Areas

- 1) The Weigh-In Area to be located within the boundaries of the In-Grid area and may be fenced to prevent entry of unauthorised personnel.
- 2) Weigh scales to be located at the end of the weigh in area away from the track.
- 3) The surface is to be smooth, sealed bitumen or concrete and to be of sufficient area to accommodate the maximum grid capacity. An area with a minimum of 4.0 m² per kart to be provided.
- 4) The weigh in area should be protected from an out-of-control kart by a catch fence or safety barrier.
- 5) Access to the weigh in area will be by way of a deceleration lane.
- 6) A stop sign to be installed and a red line painted on the entry to the Weigh-In Area.
- 7) An area must be provided in the Weigh-In area for protection of weigh-in marshals and officials.

12 Technical Inspection Area:

Enclosed and covered facilities with adequate power, lighting, ventilation and suitable benches to be provided for Engine Measuring and Fuel Testing purposes.

13 Parc Ferme Area:

- 1) The purpose of the Parc Ferme area includes, but is not limited to, impounding karts for technical checks and any tyre or fuel impound area and may include the Start-Grid Area, the Weigh-In Area.

- 2) The boundaries of Parc Ferme must be clearly defined and fenced by appropriate spectator or security fences.

14 First Aid Requirements:

- 1) A secure, room that is clean, tidy and suitable to provide minor first aid or a pickup by ambulance
- 2) Clear access for ambulances to be provided to and from the track and race circuit.

15 Stewards Meeting Room:

A secure, room that is clean, tidy and suitable for the purpose for conducting Steward's hearings.

A sign board to be displayed in the Stewards' room with a facility map showing (as a minimum):

- 1) fire extinguisher locations;
- 2) Parc Ferme boundaries
- 3) paddock boundary
- 4) evacuation plan & emergency phone numbers
- 5) engine starting area.

16 Control Tower:

Control towers are to be adequately covered, fully enclosed and ventilated with access by way of an approved permanent stairway. The control tower must have air conditioning.

17 Track Amenities:

- 1) Toilet and canteen facilities are to comply with Local Council regulations.
- 2) The design and maintenance of all facilities should be such to ensure that the safety of spectators and competitors is paramount.
- 3) Paths and trafficable surfaces should be even and non-slip.
- 4) Electrical and communication wires should be under ground or strung on poles and any hazardous areas isolated.
- 5) New and existing tracks must have at least one toilet that is accessible for disabled persons. The quantity of toilets must comply with the applicable regulations for the location. Where spectator numbers to toilets ratio will potentially be exceeded during specific events, the quantity of fixed toilets must be supplemented by the use of portable units. Refer to the [Hire & Rental Association "Code of Practice Portable Toilets"](#) as a guide.

18 Parking:

New and existing circuits must have:

- 1) a designated parking area for competitors, officials and spectators.
- 2) a designated area, outside the fenced-in-track area, for the storage of track maintenance equipment and the parking of service vehicles.
- 3) a designated area for parking an ambulance and pick up vehicle/s. This area must be positioned so as not to cause a hazard for competitors or officials. If necessary, a safety barrier must be constructed.

19 Mandatory Signage:

The following is a minimum list of MANDATORY safety and other signage to be displayed at a track.

- 1) Motor racing is dangerous.
- 2) Spectator Warning;
- 3) Covered Footwear required;
- 4) Track Facility Signs (including but not limited to Track Map, Stewards Room, First Aid Room)
- 5) COVID Check-In instructions
- 6) Emergency Exit Plan
- 7) No Smoking
- 8) Weigh Bridge;
- 9) Canteen Signage including Personal Hygiene, Cross Contamination, Emergency Exit
- 10) Fire Extinguisher signs
- 11) In-Outgrid, Direction of Travel, Restricted Area Signage.

20 SPEEDWAY DIRT TRACKS

In all respects the rules governing speedway dirt tracks references the above with regards to track installation and inspections, except where shown below. The following references specifically deal with the setup, maintenance and marking of speedway dirt tracks.

20.1 Track Layout

Direction of racing must be anti-clockwise.

The track should be as close as possible to the spectator and paddock areas, be on level ground and must be an oval (formed by two straights joined by two semi-circles).

If there is banking on the track it must rise from the inner edge of the racing surfaced to the outer edge of the track.

20.2 Preparation and Maintenance

The track should be properly watered in ample time prior to the meeting so as to ensure satisfactory racing and to protect the competitors and the public from excessive dust during the event.

To preserve the evenness of the track surface it should be graded as necessary between races.

20.3 Track Marking

Line marking normally is temporary using products such as chalk or similar. Remarkings may be required throughout the meeting as required

20.3.1 Formation Line

All tracks to have a large orange marker cone located on the inside edge of the track at approximately the entry to turn 3 but no closer than 40m to the start/finish line. Rule M.2.20(b)

20.3.2 Baulk Line

All tracks are to have a large orange marker cone located on the inside edge of the track no more than 40m from the outgrid exit line or pre-determined starting area that serves as a point at which a kart must continue under its own power. Rule M.2.16(c)

20.3.3 Start Line

All tracks are to have a large orange marker cone located on the inside of the track that indicates the start/finish line. This cone should, where possible, be located as close as possible to the timing loop.

20.3.4 Finish Line

All tracks are to have a large orange marker cone located on the inside of the track that indicates the start/finish line. This cone should where possible be located as close as possible to the timing loop.

20.3.5 Safety Fence

Where a track is fully encompassed by a safety fence, the fence must act as a final defence to safely restrain the forward movement of a kart that has left the track. This circuit type will have a safety fence for its full perimeter.

The safety fence must be a minimum .6m in height when measured from track ground level, be constructed of minimum 19mm thick plywood. All panels are to be securely attached to a tyre wall of minimum 3 tyres high and preferably in rows of two. The tyre wall should act as an energy absorption / impact zone. The plywood panels should be overlapped at each joining spot with the overlap facing away from the direction of travel.

A dirt windrow must be placed against the bottom of the plywood so as to prevent a kart from being lodged under the panel in the event of an accident or collision.

For a track not encompassed by a safety fence, then normal safety protocols will apply as per the standard rules previously noted in sections 9.3.9 'Use of Safety Barriers and Catch-Traps, 9.3.10 'Safety Catch Fence'.

21 Appendix 1 - Motor Sport is Dangerous signage specifications.

The signs must measure at least 1.8m x 1.2m and have a white background with the words **WARNING** in **LARGE BOLD LETTERS** and contain ALL the words shown below in **LARGE BLACK TEXT**.

MOTOR SPORT IS DANGEROUS

The following conditions of entry apply to all persons entering this circuit/premises unless written consent has been granted from Karting (New South Wales) Inc (“KNSW”). Event specific conditions may also apply.

DISCLAIMER AND ASSUMPTION OF RISK

In exchange for being able to attend or participate in the Event as defined in KNSW Rules & Regulations, you agree:

- to release KNSW, promoters, sponsor organisations, landowners, and lessees, organisers of the event, their respective servants, officials, representatives and agents (collectively, the “Event Organisers”) from all liability for your death, personal injury, trauma, loss, or damage (including property damage) (“harm”), howsoever arising from your participation in or attendance at the Event, except to the extent prohibited by law;
- that KNSW and the Event Organisers do not make any warranty, implied or expressed, that the event services will be provided with due care and skill or that any materials provided in connection with the services will be fit for the purpose for which they are supplied; and
- to attend or participate in the event at your own risk.

You further acknowledge that:

- the risks associated with attending or participating in the event include the risk that you may suffer harm; and
- motorsport is dangerous and that accidents causing harm can and do happen and may happen to you. You accept the conditions of, and acknowledge the risks arising from, attending, or participating in the event and being provided with the event services by KNSW and the Event Organisers.

GENERAL RISK WARNING

Under the CIVIL LIABILITIES ACT 2002; General Admission Crowds may cause Recreational Risks. Patrons must assess their own risk on entry.

22 Appendix 2 - Definition of Terms:

Term Name	Definition
Catch Trap:	An area of loose material designed to slow a kart, which has left the track surface, before it impacts a safety barrier or fence.
Circuits	The area and all features, bounded by and including the perimeter safety fence and grids.
Critical Incident	A racing incident occurring during competition resulting in the hospitalisation of any event attendee greater than 24 hours and/or the loss of life.
Complex	The race complex in its entirety, including track, paddock, grids, buildings, spectator areas and vehicle parking.
Corner	A change in direction of the track, in excess of 20 degrees, generally with a radius to the inside and outside edges.
Exit Lane	The sealed area between the Outgrid and the edge of the racing circuit.
Kerb	A raised concrete barrier on the inside edge of a track corner, constructed to a specified profile, to deter karts from driving off the track.
Paddock	An area set aside for the use by competitors for kart maintenance, repair and storage during the course of an event. Clubs may put in place access exclusions to the paddock for vehicles and the general public.
Parc Ferme:	A secure area adjacent the track and under the control of Officials. The general public is prohibited to enter this area and procedures may be put in place to restrict access by competitors and other persons.
Ripple Strip	A profiled concrete strip on the outside edge of a track corner, constructed to a specified profile, to deter karts from driving off the track.
Run-off Area	The area from the edge of the track to the first line of protection.
Safety Barrier	An energy-absorbing barrier designed to protect a kart and driver from hitting a solid object or official.
Safety Catch Fence	A structure erected as a final defence to safely restrain the uncontrolled movement of a kart that has left the track.
Safety Fence	A safety fence is used to control the access of spectators and unauthorised persons into dangerous or controlled areas.
Spectator Fence	A low-profile fence constructed to restrict the access of all persons to a specified area.

Term Name	Definition
Start Grid	An area set aside from the paddock and track for the assembly of karts in race order prior to the start of a race. Access restrictions may apply.
Straight	The section of track between two corners.
Technical Area	An adequate secured area for the impounding of karts, tyres, fuel, etc.
Track	A permanent or temporary course being a surface, kerbs and ripple strips at each side of the course used for karting competitions. However, for the purposes of this document, it shall also include the entire circuit facility, including but not limited to spectator areas, car parking, paddock facilities, public amenities.
Track Edge	The track edge clearly defined by a single painted white solid line of not less than 100mm width.
Stands and Temporary Structures	All spectator stands, viewing platforms and like structures whether of a temporary or permanent nature, must be approved by the appropriate statutory or regulatory body(ies) charged with the responsibility of approving such structures and thereafter be maintained and repaired so that such structures, at all times, remain in full and strict compliance with the approval conditions as they exist from time to time.
Weigh-In-Area	An area set aside from the paddock and track for the assembly of karts at the end of a race prior to being weighed. Access restrictions shall apply.
Karting NSW	Governing body for the sport of karting in NSW and includes all affiliated member clubs regardless of geographical location.
Major Events	Is the highest level of race as defined in KNSW current rule book sect N meeting levels and groups
Public Authorities	Any federal, state or local government authority, including but not limited to energy, water and communications providers and relevant statutory bodies.

23 Appendix 3 - Track Signage Checklist for Track Inspectors

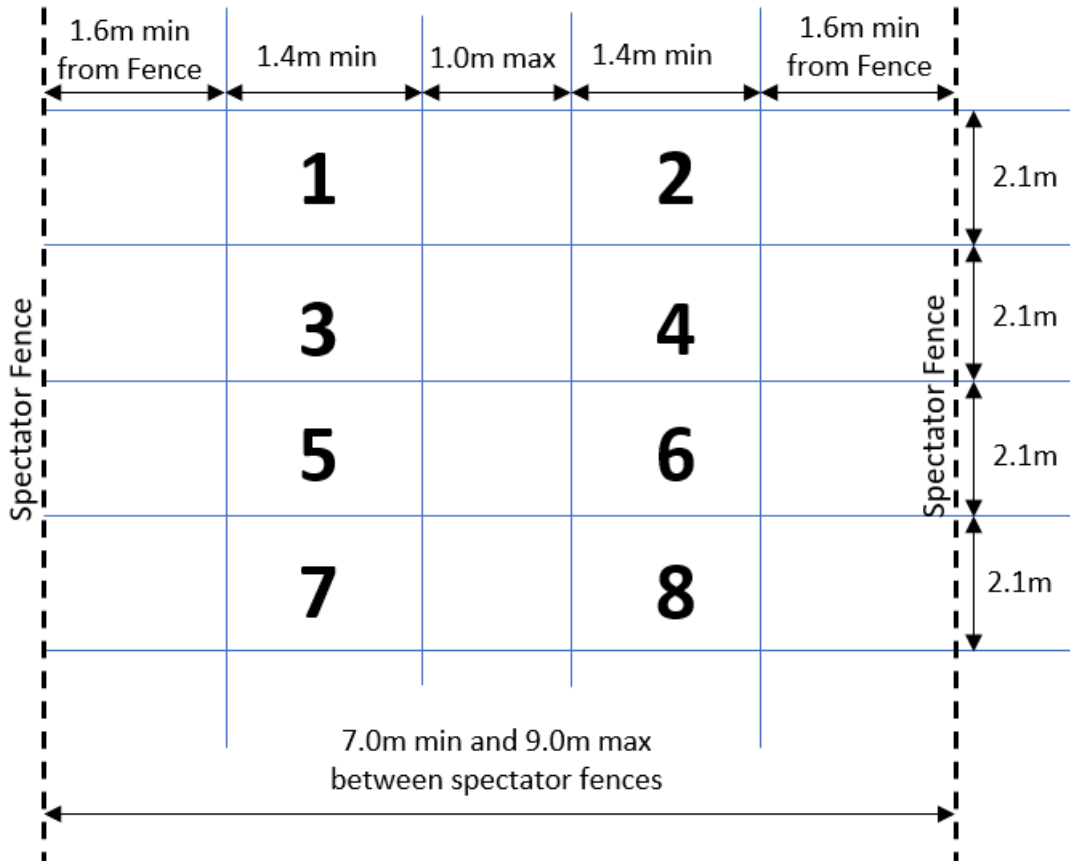
The checklist below is for use by KNSW Track Inspectors (Tis) during Track Inspections to help them ensure the appropriate signage is present and correctly placed.

1. Motor racing is dangerous sign
2. Spectator Warning signs
3. Covered Footwear required signs
4. Track Facility Signs (including Track Map, Stewards Room, First Aid Room)
5. COVID Check-In instructions, if applicable
6. Emergency Exit Plan
7. Weigh Bridge
8. Canteen Signage: Personal Hygiene, Cross Contamination, Emergency Exit
9. Fire Extinguisher sign posted
10. In-Outgrid, Direction of Travel, Restricted Area Signage.

24 Appendix 4- Outgrid Dimensions and Specifications.

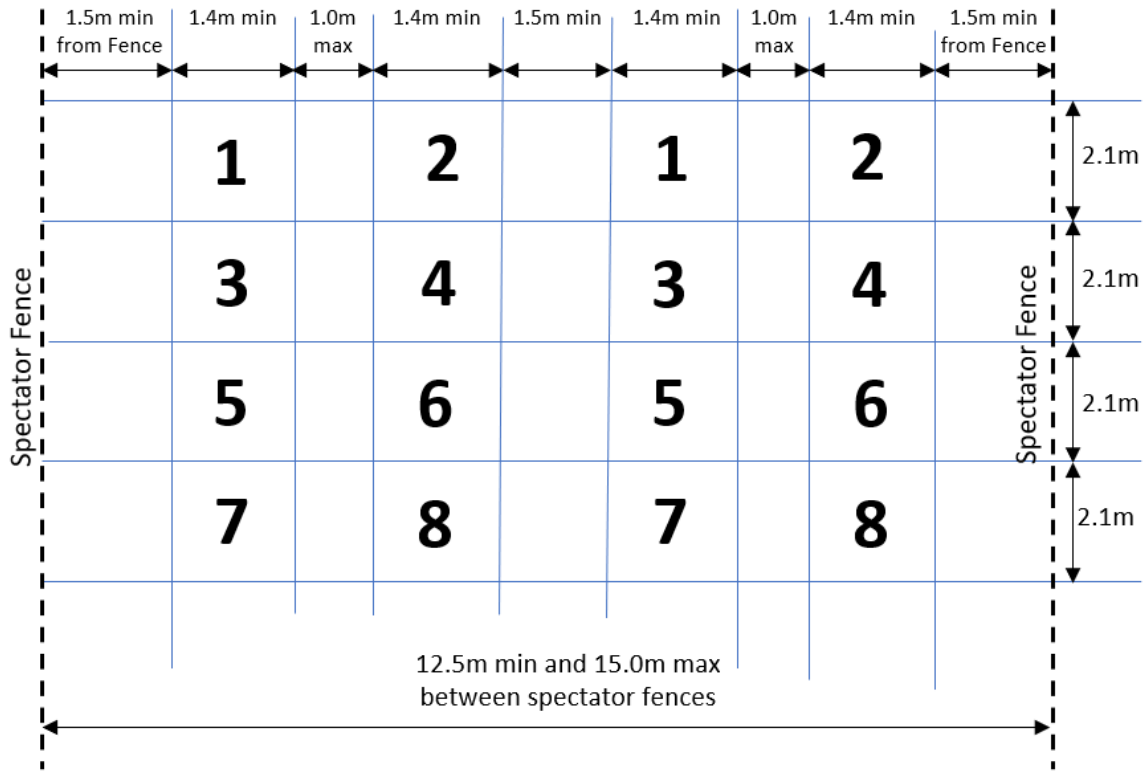
24.1 Single Outgrid Layout & Dimensions

Single Outgrid Layout (NOTE: not to scale)



24.2 Double Outgrid Layout and Dimensions

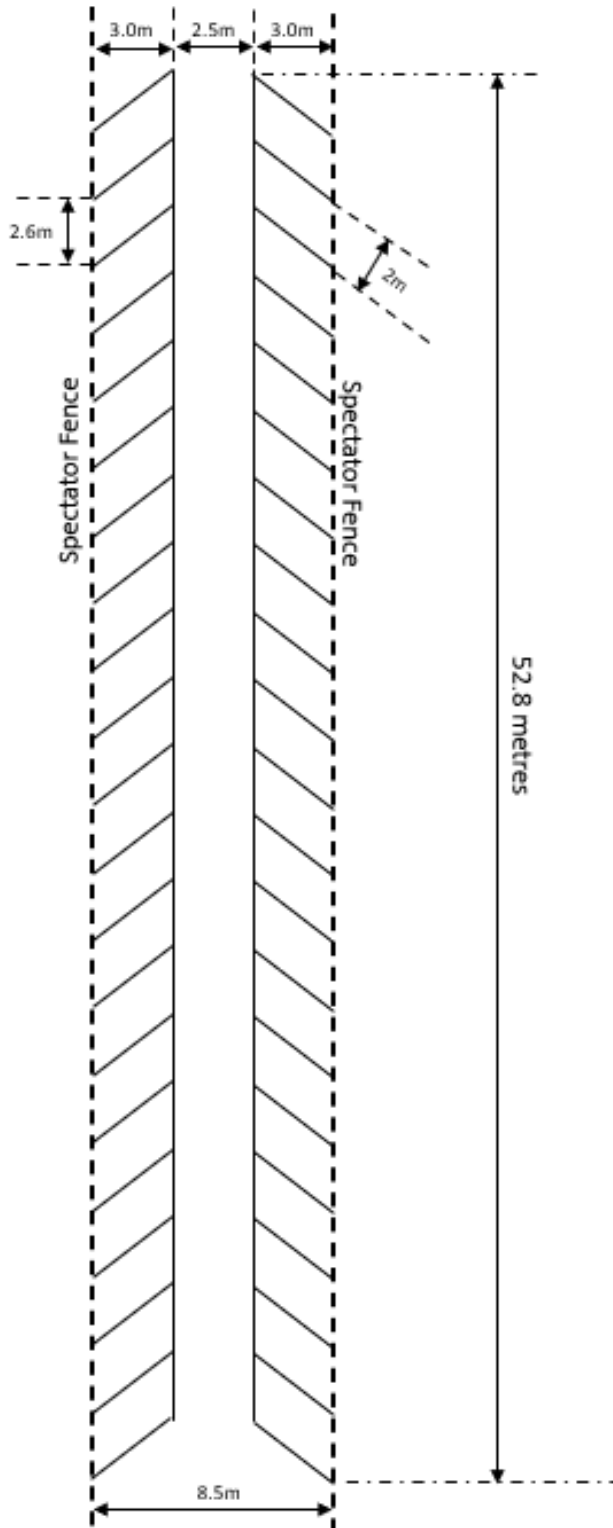
Double Outgrid Layout (NOTE: not to scale)



24.3 Herringbone Outgrid (2 rows of 20 karts angled at 45 degrees)

Single Herringbone Outgrid Layout

(NOTE: not to scale)



25 Appendix 5 – Ripple Strip Dimensions and Structure

