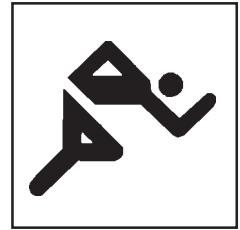


# Athletics - Track events



Dimensions for sport playing areas

## 1. TRACK EVENTS

### ATHLETICS 400m TRACK

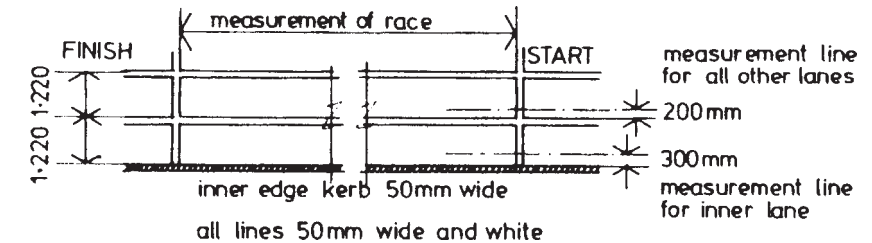
**Track** (refer Diagram 1)

The running track should not be less than 400m in length and not less than 7.32m in width. If possible the track should be bordered on the inside with a kerb of concrete or other suitable material, approximately 50mm in height and a minimum 50mm in width. Where it is not possible for the inner edge of the running track to be a raised border, the inner edge is marked with lines 50mm in width.

For grassed tracks the inside line should be flagged at intervals of 5m. Flags must be so placed on the line as to prevent any competitor running on the line, and are placed at an angle of 60 degrees with the ground away from the track. Flags approximately 250mm by 200mm in size, mounted on a staff 450mm long, are the most suitable for the purpose.

Although the preferred track length is 400m, there is no standard measurement for the length of the straights or the radius of the curves. Both measurements can be varied according to the area of land available, provided the track length remains 400m. However the recommended radius is between 35 and 38m.

The actual track measurement is taken 300mm outward from the inner border of the track, or where



no border exists, 200mm from the line marking the inside of the track.

The formula for measuring track lengths is as follows:

$$\text{Track length (400m)} = (2l) + 2 \pi r$$

where  $l$  is the length of the straights curves.

Given that the track length is 400m and the dimension of one of the two variables has been determined, the dimension of the other can be derived using the above formula.

Remaining lanes shall be measured 200mm from the outer edges of the lines.

Example: If the length of the straights is 84.389m then the radius of the curves  $r$  is:

$$\begin{aligned} r &= \frac{\text{Track length} - 2(l)}{2 \pi} \\ &= \frac{400 - 168.778}{2 \pi} \\ &= 36.8\text{m} \end{aligned}$$

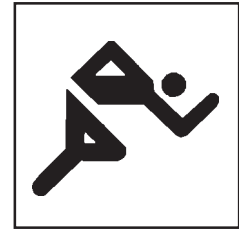
The radius of the track border, which is 300mm inside the actual track

measurement (refer to first paragraph) will be 36.5m. The radius of a line marking the inside of the track, which is 200mm inside the actual track measurement (refer to first paragraph) will be 36.6m.

Alternatively, if the radius of the curve has been set at 36.8m then the length of the straights ( $l$ ) is:

$$\begin{aligned} l &= \frac{\text{Track length} - 2 \pi r}{2} \\ &= \frac{400 - 36.8 (2 \pi)}{2} \\ &= 84.389\text{m} \end{aligned}$$

# Athletics - Track events



Dimensions for sport playing areas

## 2. PREFERRED TRACK LAYOUT

The shape of the track can be varied to suit the shape of the land available.

### Lanes

In international meetings the track should allow for at least six lanes, preferably eight lanes, particularly for major international events. All lanes must be of an identical width, a minimum of 1.22m and a maximum of 1.25m marked by lines 50mm in width.

The inner lane is measured as stated above, but the remaining lanes are measured 200mm from the outer edges of the lines. The line on the right hand only of each lane is included in the measurement of the width of each lane.

An eight lane athletic track requires an area of 180m x 95m (1.72ha). (This allows for approximately 1.5m clearance.)

The direction of running is left-hand inside.

The maximum allowance for lateral inclination of tracks is 1:100 and the inclination in the running of 1:1000.

**See Diagram 1.**

## 3. 100M START

This line is measured 100m behind the finish line so that the event is not run around a curve.

## 4. 200M START and 4 X 100M RELAY

For the 4 x 100m relay event, the first leg competitors start from the 400m staggered starting positions. The first take-over marks are 100m in advance of each relevant 400m stagger. The second take-over marks are the prescribed 200m staggered starting positions. The third take-over marks are 100m from the finish line. At each stage the take-over zone will be within two lines set out 10m either side of the actual take-over mark in each lane.

**See Diagram 2.**

## 5. 4 X 200M and 4 X 400M RELAYS

In the 4 x 200m and 4 x 400m relays, competitors run the first full lap in lanes.

The second stage runners in the 4 x 400m relay and the third stage runners in the 200m relay remain in their respective lanes until they enter the back straight.

The following method should be adopted to determine the staggered starting positions for the first runner in each lane to ensure that all teams run the prescribed distance of 4 x 200m or 4 x 400m.

Inside lane S1 is identical with A1 (refer to diagram)

Lane S2 = A2 plus normal stagger for 400m

Lane S3 = A3 plus normal stagger for 400m

Lane S4 = A4 plus normal stagger for 400m

**Note:** The positions A2, A3, . . . , A8 allow for the 200m stagger, plus the compensatory adjustments as prescribed for the 800m event.

The central lines of the first takeover zones are determined by advancing the normal starting stagger in each lane for a 200m race by the distance the points B2, B3, . . . , B8 are in advance of the line B1Y, and are identical to the 800m staggered starting positions.

The takeover zone is within two lines set out 10m either side of the central line in each lane. The takeover zones for the second and last takeovers (4 x 400m) will be the normal 10m lines either side of the start/finish line AA.

The arc across the track at the entry to the back straight showing the positions at which the second stage runners (4 x 400m) and third stage runners (4 x 200m) are permitted to leave their respective lanes, is identical to the arc for the 800m event.

**See Diagram 3.**

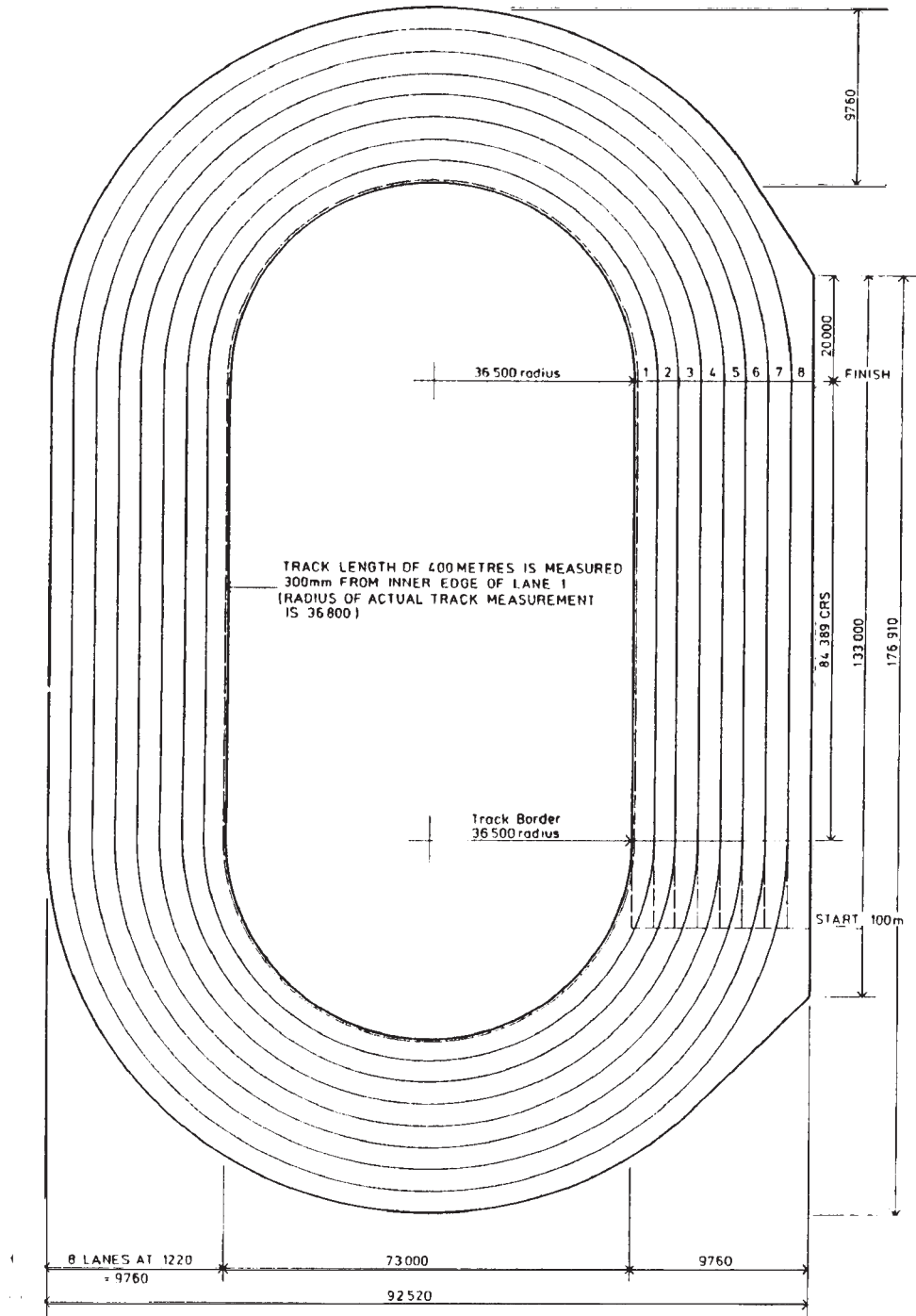


# Athletics - Track events



Dimensions for sport playing areas

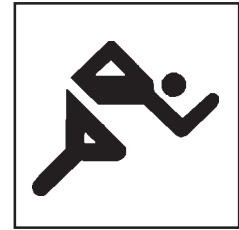
DIAGRAM 1 – 400M TRACK



Not to scale

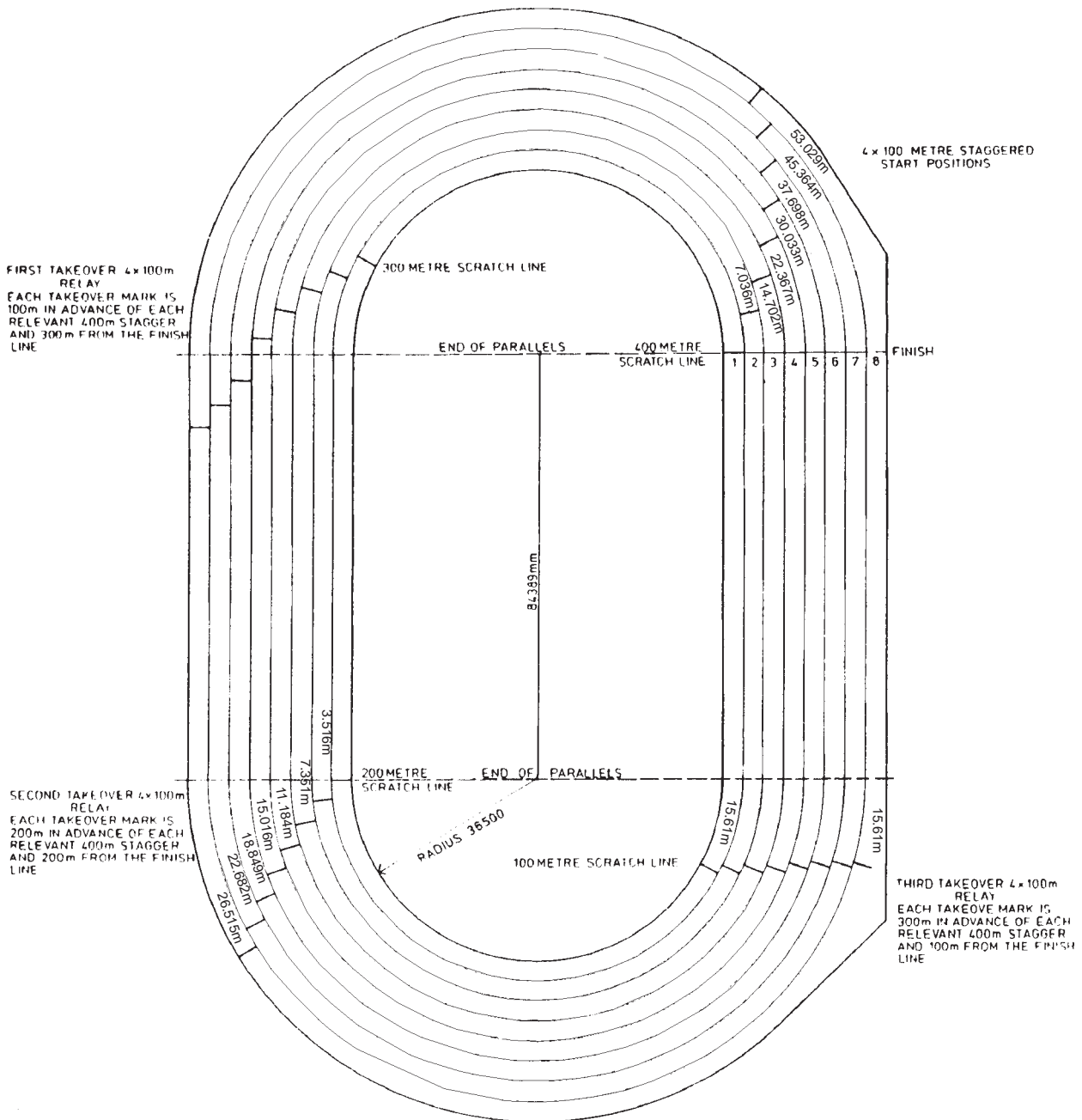


# Athletics - Track events



Dimensions for sport playing areas

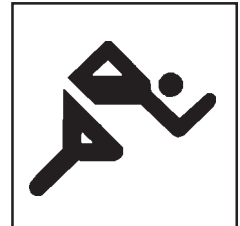
**DIAGRAM 2 – STARTING & TAKE-OVER POSITIONS  
4 X 100M RELAY**



Not to scale

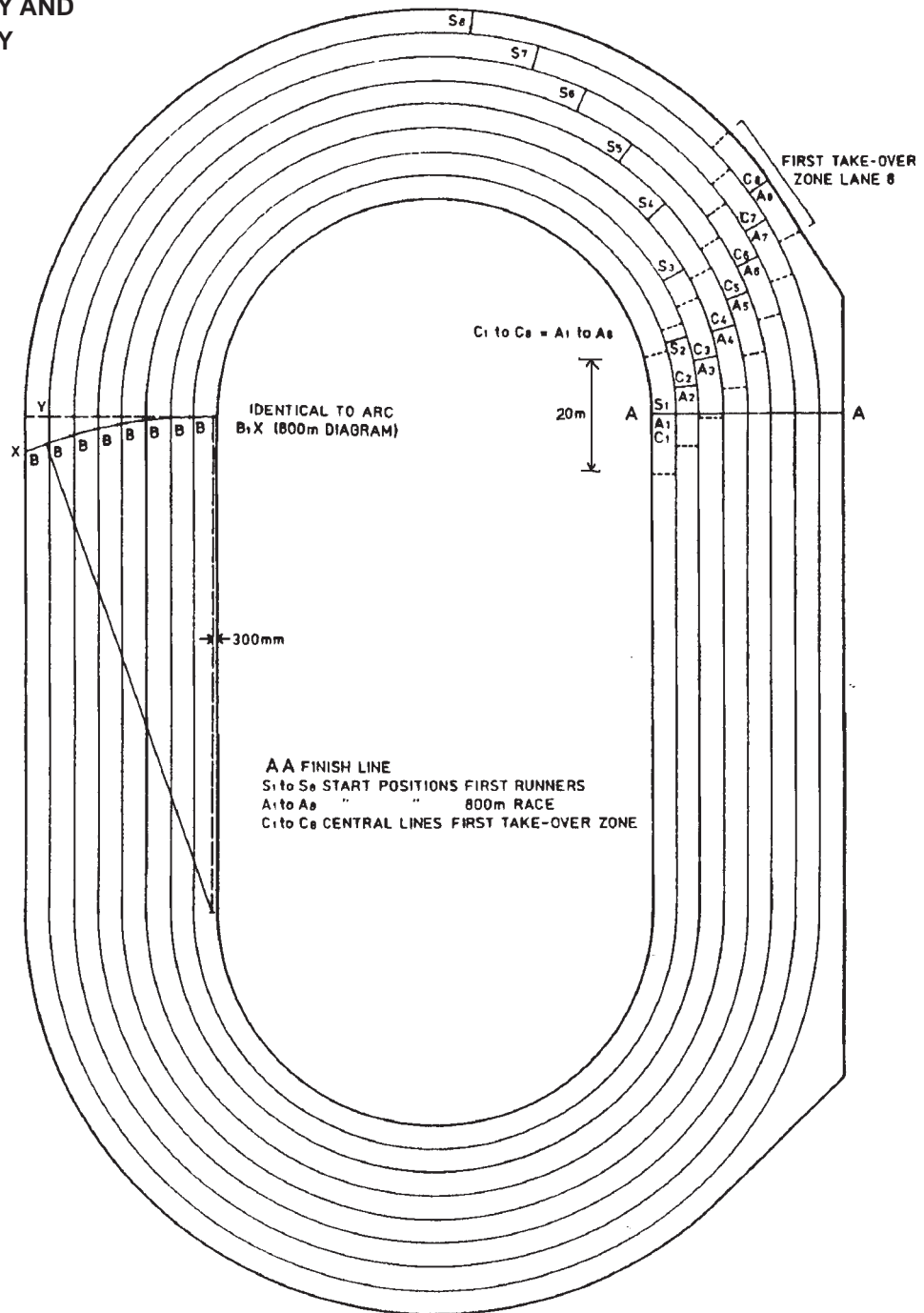


# Athletics - Track events



Dimensions for sport playing areas

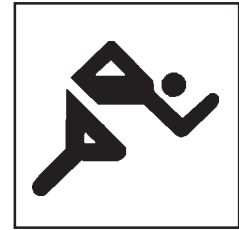
**DIAGRAM 3 – STARTING & TAKE-OVER POSITIONS**  
**4 X 200M RELAY AND**  
**4 X 400M RELAY**



Not to scale

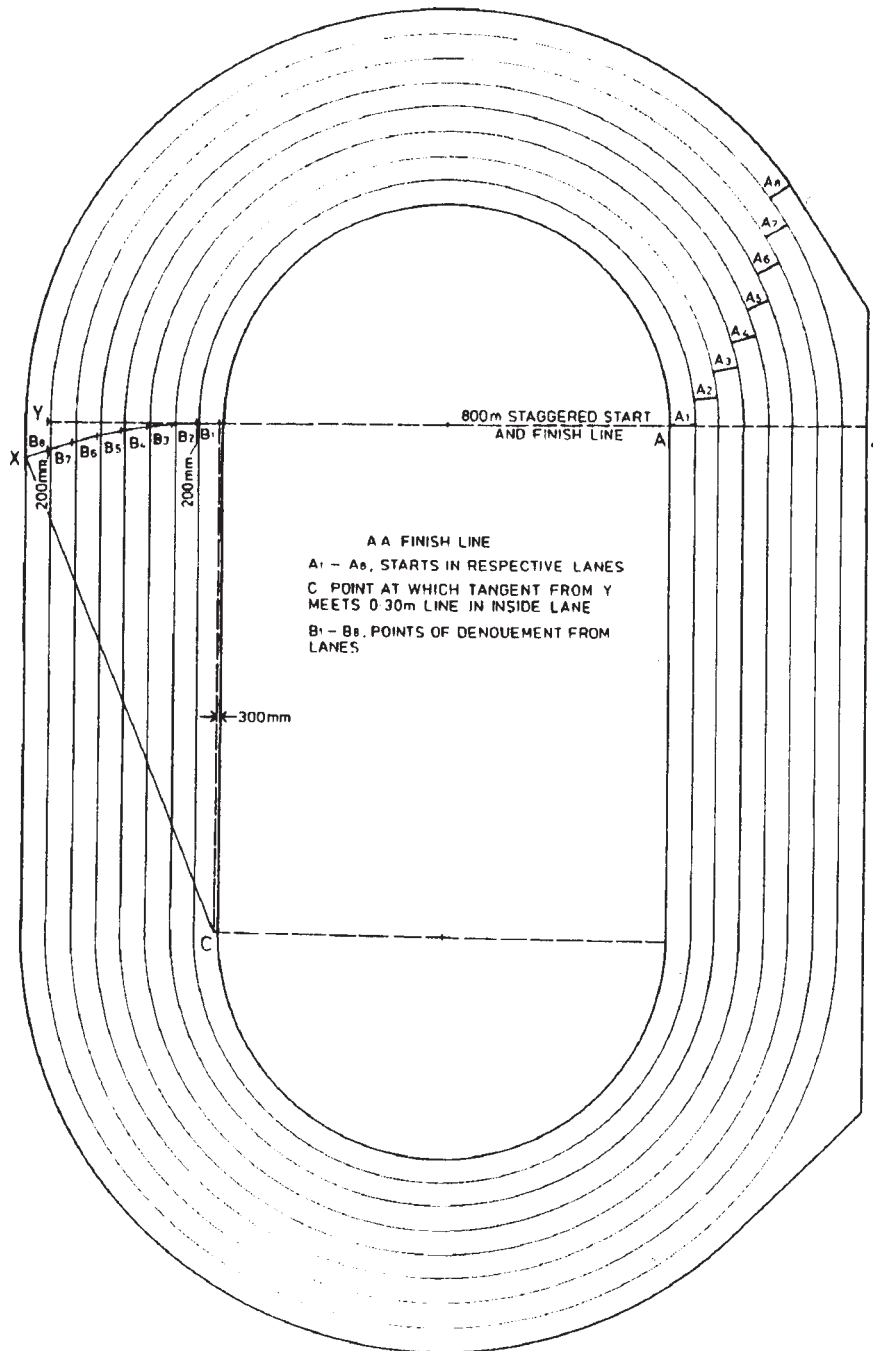


# Athletics - Track events



Dimensions for sport playing areas

DIAGRAM 4 – STARTING POSITIONS FOR 800M



Not to scale

# Athletics - Track events



Dimensions for sport playing areas

## 6. HURDLE RACES

The following are the standard distances for hurdle races. There are different distance sprint hurdle races for school age athletes. These are not uniform throughout Australia.

Men - 110m and 400m

Women - 100m and 400m

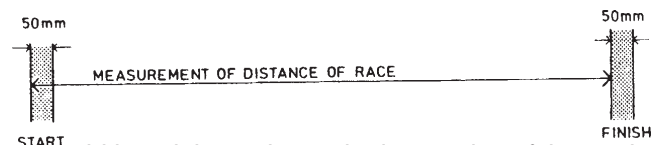
There are ten flights of hurdles in each lane, set out in accordance with the following tables:

### Men

Distance of Race	Height of Hurdle	Distance from Start Line to First Hurdle	Distance between Hurdles	Distance from Last Hurdle to Finish Line
(m)	(m)	(m)	(m)	(m)
110	1.067	13.72	9.14	14.02
400	0.914	45	35	40

### Women

Distance of Race	Height of Hurdle	Distance from Start Line to First Hurdle	Distance between Hurdles	Distance from Last Hurdle to Finish Line
(m)	(m)	(m)	(m)	(m)
100	0.840	13	8.5	10.5
400	0.762	45	35	40



### The Start and Finish

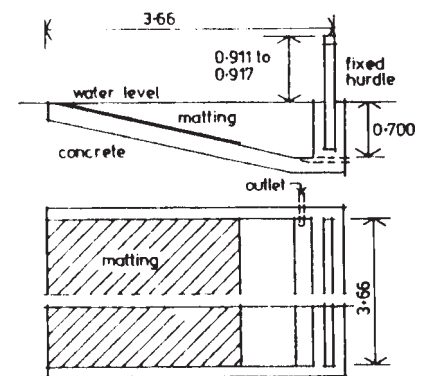
The start and finish of the race is denoted by a line 50mm in width at right angles to the inner edge of the track. The distance of a selected race is measured from the edge of the starting line further from the finish, to the edge of the finish line nearer to the start.

## 7. STEEPLECHASE

The standard distances are 2000m and 3000m (2000m for juniors only).

The water jump, including the hurdles, is 3.66m ± 2cm in length for men, 3.06m ± 2cm for women, and 3.66m ± 2cm for both sexes. The bottom is 700mm deep in front of the hurdle and slopes to the level of the ground at the approach end. The hurdle at the water jump is firmly fixed in front of the water and is of the same height as the others in the competition. The women's steeplechase hurdles are 0.762m ± 3mm and the men's are 0.914m ± 3mm. A horizontally and vertically adjustable hurdle for the water jump should be provided to allow for women's steeplechase.

To ensure safe landing of the competitors, the bottom of the water jump is covered at the approach end with suitable matting at least 3.66m wide and 2.5m long, the thickness of which should not exceed 25mm.



Water Jump for men's event