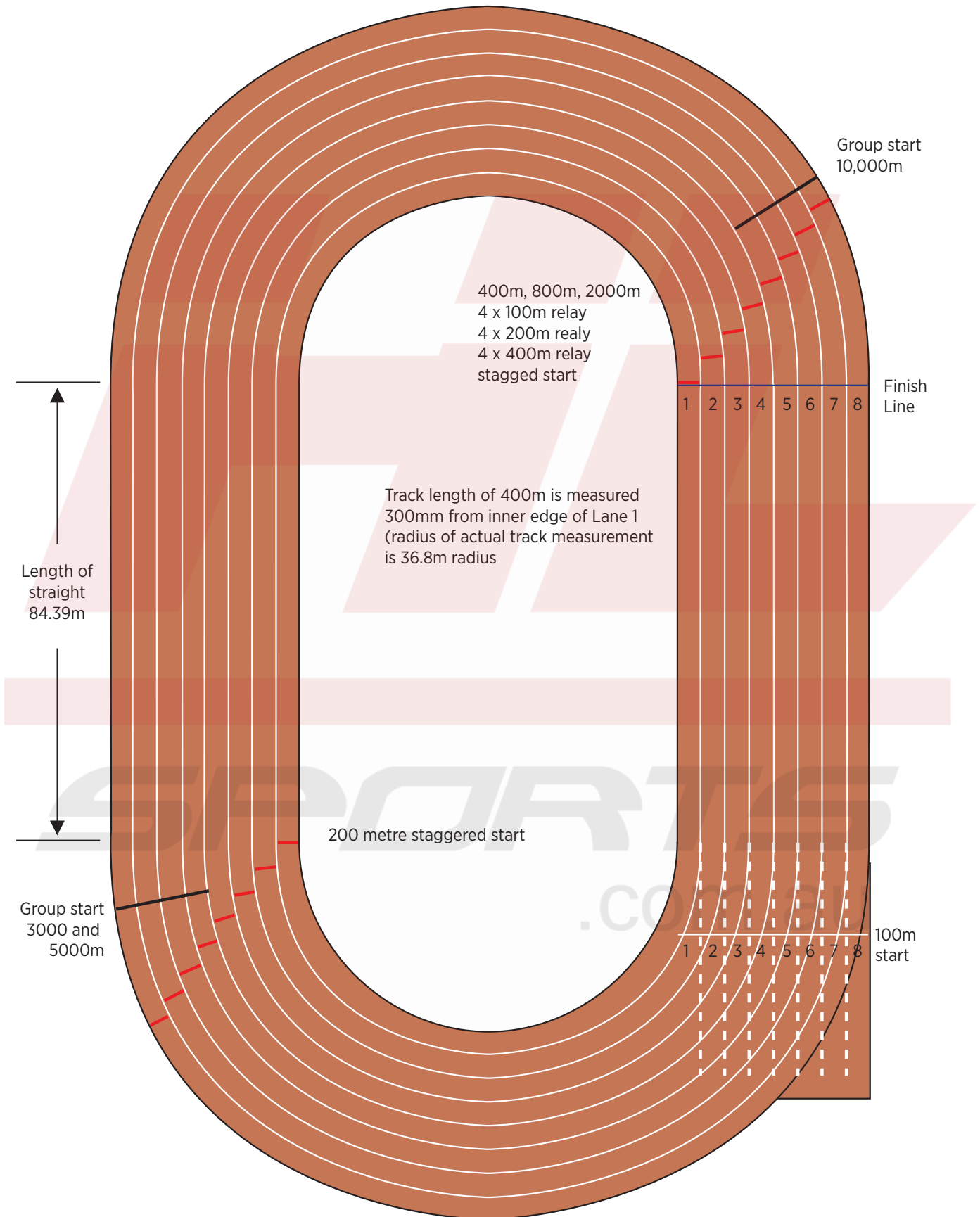


400 metre track



## Jumping events

The Jumping events are long jump, triple jump, high jump and pole vault.

### Long jump

The long jump facility includes a runway, a take-off board and a landing area. Usually, it is placed outside the track along one of the straights with two adjacent runways with a landing area at each end. This allows competition in either direction by two groups of athletes simultaneously.

### Runway

The runway is 40m minimum long, 1.22m  $\pm$  0.01m wide and is measured from the beginning of the runway to the take-off line. It is marked by white lines 0.05m wide or broken lines 0.05m wide, 0.10m long and 0.50m apart. The runway is usually covered with the same surface as the track.

### Take-off board

The take-off board is a white rectangle and measures 1.22m  $\pm$  0.01m long and 0.20m  $\pm$  0.002m wide and not more than 0.10m deep. The surface of the take-off board must be flush with the surface of the runway.

In the case of a runway with a permanent surface, this requires a built-in installation tray made of corrosion protected metal in which the take-off board is correctly positioned. During sport free periods, the take-off board can be removed. If it has a track surface on its reverse side, it can be turned over and used as part of the runway. This makes it possible to combine the long and triple jump with two or three take-off boards (which can be used on both sides) on a triple jump runway.

### Landing area

The landing area is 7-9m long depending on the distance between its nearest end and the take-off line. It is 2.75m wide. Generally, a landing area 8m long placed 2m from the take-off line is recommended. The landing area is placed so that the middle of the runway coincides with the middle of the landing area.

If two landing areas are situated parallel side by side or staggered, the distance between them is at least 0.30m.

The landing area has a border not less than 0.05m wide and 0.30m high, rounded off towards the inside (eg wooden plank or concrete border with soft covering) and level with the ground.

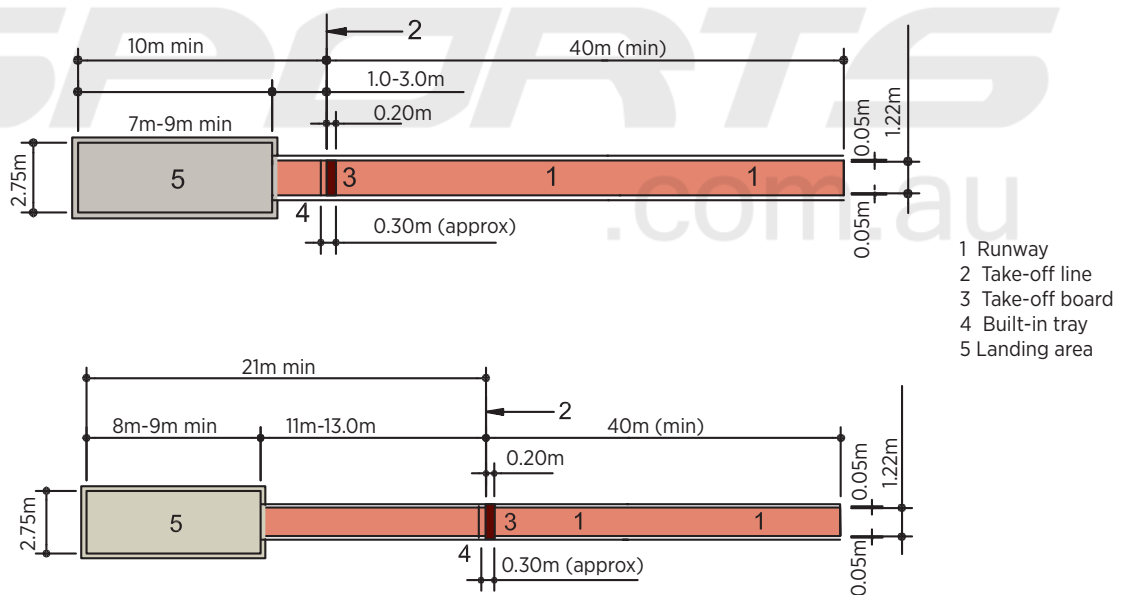
The landing area has a water permeable substructure or a suitable drainage system (draining well or canal connection) and filled with sand to a depth of not less than 0.30m at the edges and slightly deeper at the centre.

The top edge of the border of the landing area, generally also dictates the level of the sand, which must be level with the take-off board.

### Triple jump

With the exception of the placement of the take-off board, the same facilities are used for triple jump as for long jump. For international competition, it is recommended that the take-off board is not less than 13m for men and 11m for women from the nearer end of the landing area. For other competitions, this distance is appropriate for the level of competition.

Long jump and triple jump facility



## Pole vault facility

### Layout

The pole vault facility includes a runway, a box for inserting the pole, two uprights with crossbar and a landing area. It can be located either outside the track, parallel to one of the straights or within one of the segments.

When located outside the track, it is usually constructed as a symmetrical facility with one landing area in the middle of two runways. When located within a segment, it is usually constructed with two parallel runways with positions for landing areas at each end.

### Runway for pole vault with box

The runway is a minimum of 40m long and is measured from beginning of the runway to the O-line. The runway is 1.22m ± 0.01m wide.

It is marked by white lines 0.05m wide or broken lines 0.05m wide with a length of 0.1m and a distance of 0.5m. At the end of the runway, the box is mounted flush with the runway and installed such that the top inside edge of its end board lies on the O-line and at the same height. The O-line is marked by a white line, 0.01m wide which extends beyond the outside edges of the uprights.

### Uprights

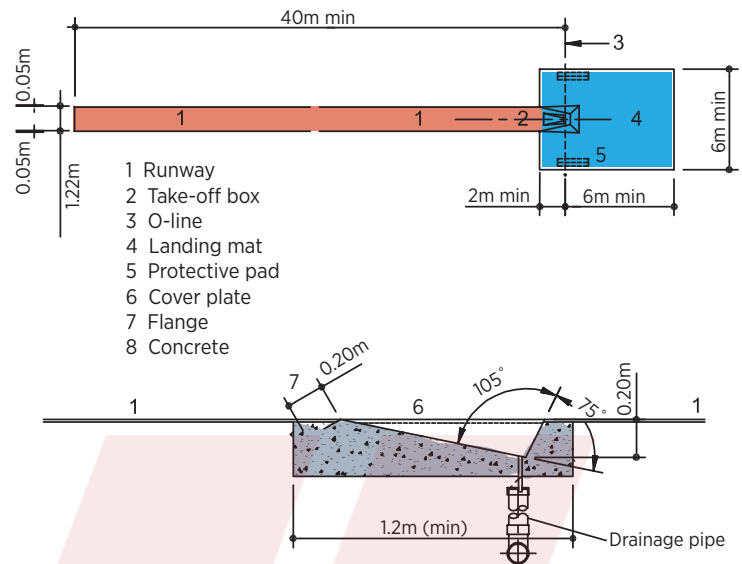
The two uprights must be installed on horizontal bases, level with the O-line, such that each can be moved from the O-line not less than 0.80m towards the landing area (eg on a built-in double rail) or in fixed sockets with movable cross bar supports.

They are not less than 5.20m apart with approximately 0.10m between each upright and the landing mat. The lower part of the uprights are covered with appropriate padding to protect the athletes and their poles. The landing mats are recessed to take the uprights and any horizontal bases.

### Landing mats

The landing mats are the same as for the high jump, except for the dimensions.

For major international competitions, the landing area is a minimum of 6m long (excluding the front pieces), 6m wide and 0.80m high. The front pieces must be at least 2m long. The sides of the landing area nearest to the box are 0.10m-0.15m from the box and slope away from the box at an angle of approximately 45°. For other competitions, the landing area is not less than 5m long (excluding the front pieces) x 5m wide.



## High jump facility

### Layout

The high jump facility includes a semicircular runway, a take-off area, two uprights with cross bar and a landing area. By temporarily removing sections of the kerb, it is possible to use the oval track as part of the runway. For major championships, the high jump facility must be large enough so that two high jumps can be conducted simultaneously.

### Runway

The semicircular runway, with a radius of at least 20m, will permit approaches from every direction. If it is necessary to remove the kerb temporarily in order to be able to use the oval track as a runway, care must be taken to ensure that the heights of the surfaces of the oval track and the segment are the same along the track border.

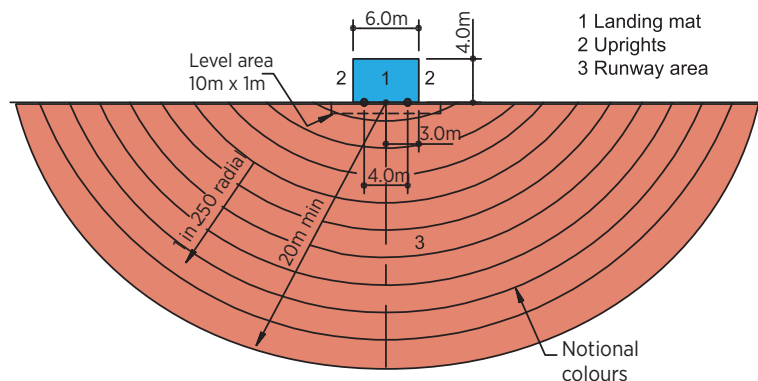
The runway and take-off areas are usually covered with the same surface as the track.

### Uprights

They must be 4.02m ± 0.02m apart.

### Landing area

The landing mats measure not less than 6m x 4m and are covered by a spike proof protective mat. The overall height is a minimum 0.70m.



## Throwing events

The throwing events are discus, hammer, javelin and shot put.

### Discus throw

#### Layout

The discus throw includes a throwing circle, protective cage and landing sector. They are located near the ends of the back straight and the landing sector is located in the grass area inside the track.

The facility for discus throw, near the 1500m start, is usually combined with a facility for hammer throw. The only difference is the diameter of the throwing circle is 2.50m for discus throw and 2.135m for hammer throw. The protective cage must meet the more stringent requirements for hammer throwing. If two separate discus and hammer circles are placed within the hammer protective cage then the discus throw circle is the circle closer to the landing sector.

### Throwing circle

The throwing circle is made of band iron, steel or other suitable material, the top of which is flush with the ground outside or the synthetic surface or concrete surround. The interior of the circle is constructed of concrete and must not be slippery.

Further information on the construction of the throwing circle is in Section 2.4.1.2 of the Manual, page 59.

### Safety cage

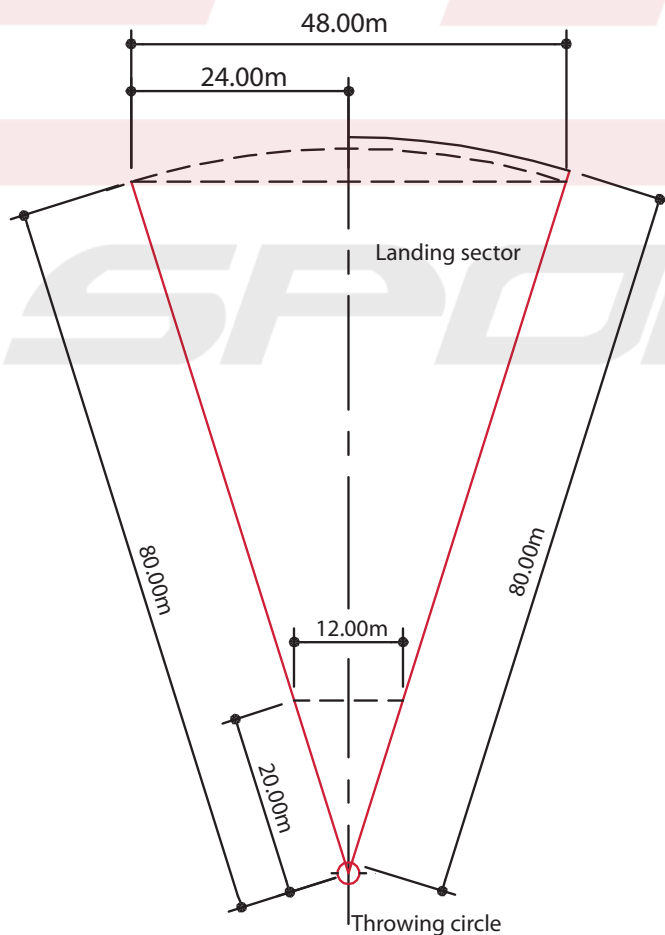
Frequently discus and hammer are thrown from a combined facility. In those instances the higher standards required for hammer throwing apply to the protective cage design. To provide greater safety it is desirable to extend the netting on the side of the cage nearer to the track further than 7m from the centre of the circle and/or increase the height of the netting for the last 2m.

### Landing sector

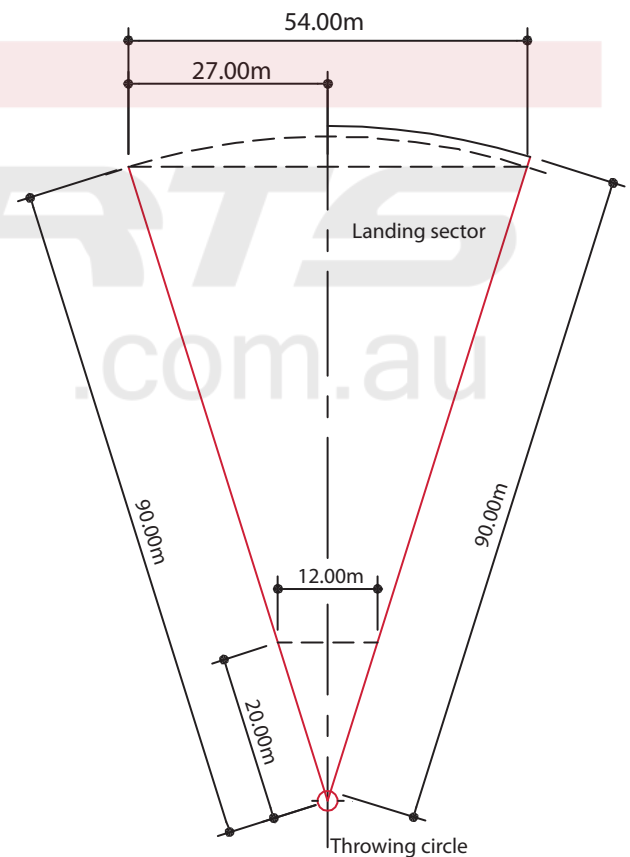
The landing sector consists of cinders or grass or other suitable material with an even surface soft enough to ensure that the place of the initial fall of the implement can be clearly established by the judges. The landing surface must not allow the implement to bounce backwards, thus creating a risk that the measuring point is obliterated.

The landing sector is laid from the middle of the circle with an angle of 34.92 degrees and marked by 0.05m wide white lines, the inside edges which form the boundary of the sector. The length of the sector is 80m. Its angle of 34.92 degrees will be attained if the two sector lines at a distance of 80m are spaced 48m apart.

### Discus throw facility



### Hammer throw facility



## Hammer throw

### Layout

The hammer throw facility includes a throwing circle, a protective cage and a landing sector. It is usually combined with the facility for discus throw.

### Throwing circle

The circle for the hammer throw is slightly smaller than the discus throw.

The surface finish to the concrete circle is slightly smoother for hammer throwing than for discus throwing. When a circle is used for both discus and hammer throwing a compromise finish is required.

See section 2.4.2.2 of the Manual for further information.

## Safety cage

Hammer and discus must only be thrown from an enclosure or cage to ensure the safety of spectators, officials and athletes.

Cages specified in the manual are intended for use in major stadia in high class competition when the event takes place outside the arena with spectators present or when the event takes place in the arena and other events are taking place at the same time. Simpler and smaller cages may be adequate for competition of lower standard and for well regulated training facilities.

Further information is available from section 6.3.2 of the Manual.

## Landing sector

The length of the landing sector is 90m. The angle of 34.92 degrees is attained if the two boundary lines 90m in length, are spaced 54m apart.

## Javelin throw

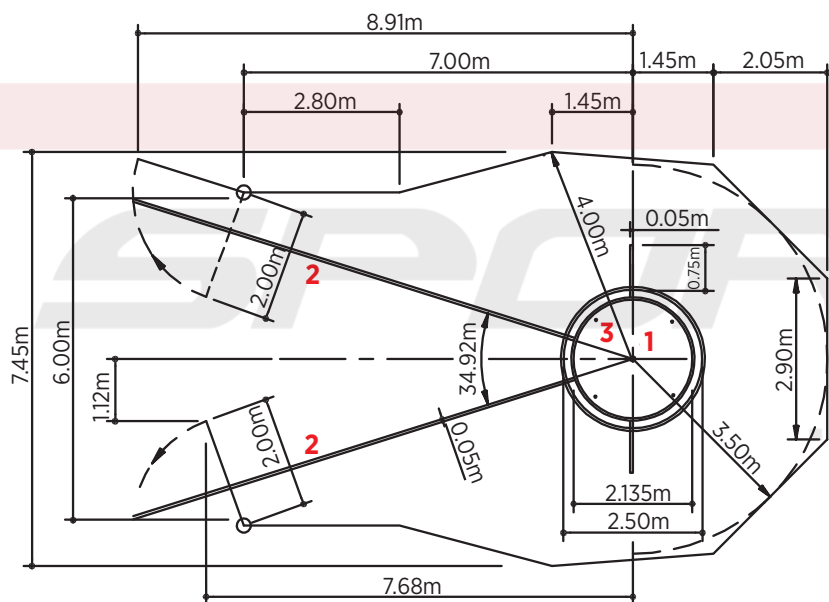
### Layout

The javelin throw facility includes a runway, a throwing arc and a landing sector. Since the length of the runway exceeds the space available in the segment, it is usually extended across the track and track border.

It is necessary to have a removable kerb and the height of the surfaces of the oval track and the segment must be the same along the track border. For a runway in either segment, the landing sector is located in the grass area inside the track.

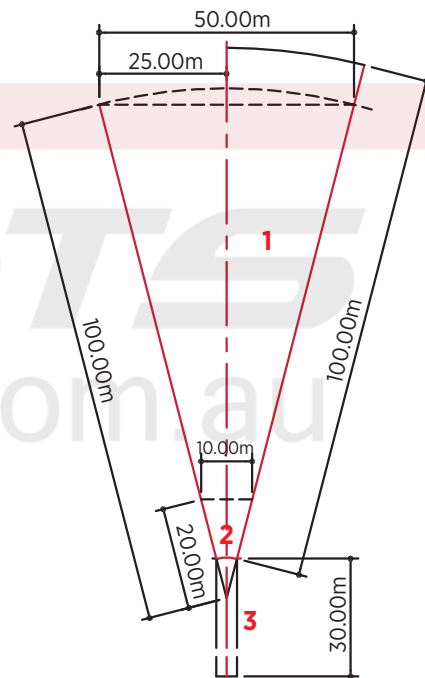
The runway is 30m minimum long and measured from the beginning of the runway to rear edge of the side markings outside the runway at the same level as the throwing arc. It is marked by two parallel white lines 0.05m wide and 4m apart. The runway is covered with the same surface as the track.

## Combined discus and hammer throw facility



- 1 Centre point
- 2 Marking for landing sector
- 3 Demountable hammer insert

## Javelin throw facility



- 1 Landing sector
- 2 Throwing arc
- 3 Runway

## Throwing arc

The throwing arc is situated at the end of the runway. It is painted or made of wood (3 to 5 weatherproof, bonded layers) or a suitable non-corrodible material like plastic. If not marked with paint, it must be installed flush with the surface of the runway.

The throwing arc is 0.07m wide, white and curved with a radius of 8m from the centre point in the middle of the runway, in the throwing direction. It is advisable that the centre point is marked with a synthetic plug of a different colour to the surface, with a diameter and surface thickness of 20mm-30mm. Lines are drawn from the extremities of the arc at right angles to the parallel lines marking the runway. These lines are white, 0.75m in length and 0.07m wide.

## Landing sector

The sector lines are laid from the centre point on the runway through the crosspoints of the throwing arc and the lines of the runway. The length of the sector is 100m. At this distance the inner edges of the sector lines are 50m apart. The marking of the sector lines extends to a distance appropriate to the competition.

## Shot put

### Layout

The shot put facility includes a throwing circle, a stop board and a landing sector.

The landing sector is usually located in the grass area inside the track.

### Throwing circle

The inside diameter of the throwing circle is  $2.135\text{m} \pm 0.005\text{m}$ .

### Stop board

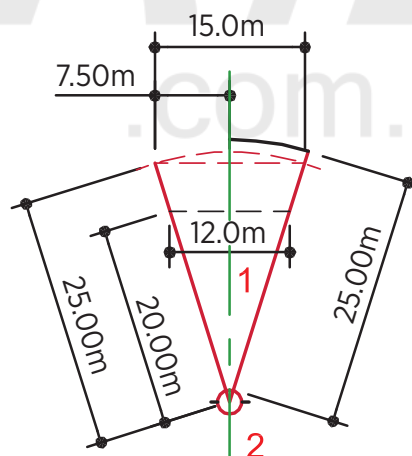
The stop board is painted white and made of wood or other suitable material in the shape of an arc so that the inner edge coincides with the inner edge of the circle. It is placed midway between the sector lines and firmly fixed to the ground. It measures  $1.21\text{m} \pm 0.01\text{m}$  long on the inside. The width at the narrowest point is  $0.112\text{m} \pm 0.002\text{m}$  and the height is  $0.10\text{m} \pm 0.002\text{m}$  measured above the adjoining surface of the circle when the stop board is firmly in position.

### Landing sector

The length of the sector is 25m. The angle of 34.92 degrees is attained if the two sector lines, at a distance of 25m, are spaced 15m apart.

## Shot put facility

Setting out plan



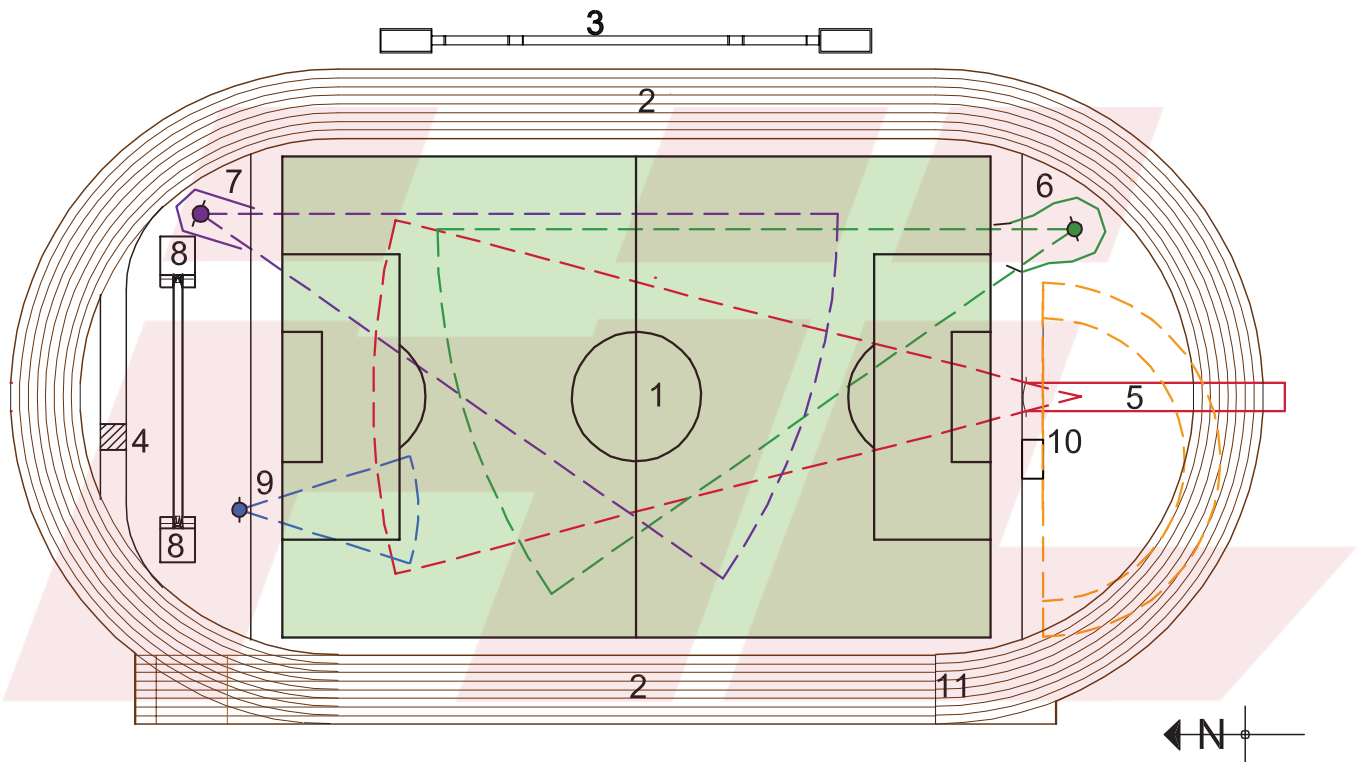
- 1 Landing sector
- 2 Throwing circle

## Standard competition layout

This diagram is the layout recommended by the IAAF as Standard Competition Area.

The field events are evenly distributed over the arena to avoid congestion and to satisfy the needs of the spectators. This layout avoids undue disruption of events by ceremonies and counterbalances the concentration of interest in the finish area.

The layout is flexible. Local climatic conditions particularly wind conditions and the effects of the rays of the sun on jumpers and vaulters must be considered.



1. Football (soccer) pitch

2. Standard track

3. Long and triple jump facility

4. Water jump

5. Javelin throw facility

6. Discus and hammer throw facility

7. Discus throw facility

8. Pole vault facility

9. Shot put facility

10. 10 High jump facility

11. Finish line

12. High jump facility

## References

IAAF Track and Field Facilities Manual 2008  
Edition updated 12 December 2014. Chapters 1-3  
and Chapters 4-8. <http://www.iaaf.org/about-iaaf/documents/technical>

## Little Athletics

For sport days or inter school carnivals, one of the most important requirements is a clearly and accurately marked track and field.

When preparing the layout to a track, several points need to be taken into consideration:

- All judges and timekeepers must have a clear view of the starts and the starter.
- Judges and timekeepers should not be looking into the sun approaching the finish line.
- Runners should not have to look into the sun as they approach the finish line.
- All races are in an anti-clockwise direction so that all field events are kept on the left hand side of the runners.
- The jumps and throwing events are placed so that the sun is not in the eyes of the competitors at crucial times.
- The safety of all competitors and officials is always the prime consideration. It is recommended to place the throwing zones for these events so that the athletes throw towards the centre of the field.

The centre of the field becomes a recognised zone from which all persons except relevant officials are excluded. Throwing zones may overlap. However, if zones are overlapped then events must not be held simultaneously.

Where possible, the facility should comply with specifications laid out within the IAAF Track and Field Facilities Manual 2008.

### Line marking

Generally a line-marking machine is used to mark lanes, starts, finishes etc. The standard line width is 5cm.

### Paint

There are several ways to mark the lines:

- Kerosene—this is the cheapest form of line marking. It leaves a clear line of dead grass and bare soil for a complete season.
- Powdered lime—the lime is mixed with water prior to application. The white line produced does wash away with heavy rain or watering.
- Semi-permanent line—a mixture of water-based white plastic paint and water. This can last for several weeks.
- Kerosene and paint—use kerosene three weeks prior to the event and then line with white plastic paint mixture a couple of days before the event starts.

### Track events

The following events are conducted entirely in lanes—70m, 100m, 200m, 400m, 4x100m relay and all hurdles races.

For international competitions, the 800 metre event is run from a staggered start and the runners stay in their lanes until the end of the first bend.

For competitions at most other levels, the event is run from a curved start and competitors may change lanes immediately. A curved start gives each competitor an equal distance to run around the first bend and allows more than eight competitors to compete in the same race.

The 1500 and 3000 metre events commence from a curved start, which is produced in the same manner as the 800-metre curve start.

A 400-metre hurdle event is often included for older age groups. For most hurdle events, the 100m track on the main straight is usually used. Further starting lines will be necessary for the conducting of hurdle events over 80m, 90m and 110m.

## Throwing events

### Shot put and discus

The dimension of the circles used for shot put and discus, and the runway used for javelin conform to the specifications set out in the IAAF Track & Field Facilities Manual.

In most school competitions, these official throwing specifications may be difficult to conform to and a circle with an inside diameter of 2.135m on a hard ground with the above stopboard is acceptable.

The landing sector consists of cinders, grass or a suitable material on which the shot makes an imprint.

The landing sector is marked with lines at an angle of 34.92 degrees such that the lines, if extended, would pass through the centre of the circle. These lines are 5cm wide.

### Javelin

The minimum length of the runway is 30-36.5m and marked by two parallel lines 4m apart. The throw is made from behind an arc of a circle drawn with a radius of 8m. The arc consists of a line painted on the ground, or a strip made of metal or wood and painted white. Lines are drawn from the extremities of the arc right angles to the parallel lines marking the runway. These lines are 75cm long and 7cm wide.

## Jumping events

### High jump

The run up to the high jump is not usually marked, but a 25m fan-shaped radius will provide an adequate space regardless of the style of jump being attempted. Marking a run up area for the high jump will help to prevent non-competitors to remain out of the area. The angle of the fan is not critical and 130-140 degrees is usually adequate.

Behind the bar, a 5m x 3m deeply padded landing area is provided.



## Long jump and triple jump

The runway should be at least 1.22 metres wide and at least 40 metres long to the edge of the take-off board. Where conditions permit, this minimum length should be 45 metres. In school competitions this is not often marked, but it is recommended that it be marked to clearly identify the competition area.

The take-off board is 1.22 metres long across the runway and placed between 1m and 3m from the nearest edge of the landing area. The board is 20cm from front to back and about 10 cm deep, sunk so that the top surface is flush with the surface of the surrounding ground. It should be painted white to make it plainly visible to competitors.

The landing area is a sand pit between 2.75m and 3m wide and approximately 10m long, positioned between 1m and 3m from the take-off board. The surface of the sand must be level with the surface of the runway and take-off board. The runway must project centrally to the sand pit. The depth of the sand pit is not subject to official specification, but 50 centimetres could be sufficient to allow safe landings.

Specifications for the triple jump are the same as for the long jump, except that the runway is lengthened between the take-off board and the landing area to ensure that jumpers land in the pit and not through it. It is recommended that the same runway and landing area be used as for the long jump, but with take-off boards at additional positions of one metre intervals, beginning at 6m from the pit to accommodate different abilities, with a maximum board of 13m.

