Hockey Pitches – Basic Information

This document aims to provide clubs, local authorities, architects and construction / project engineers with some basic information about hockey pitches.

Types of hockey pitch

Hockey is played on a variety of surfaces but the preferred surface is artificial turf. In England there are now (in 2006) more than 1000 artificial turf pitches (ATP's) that are used for hockey.

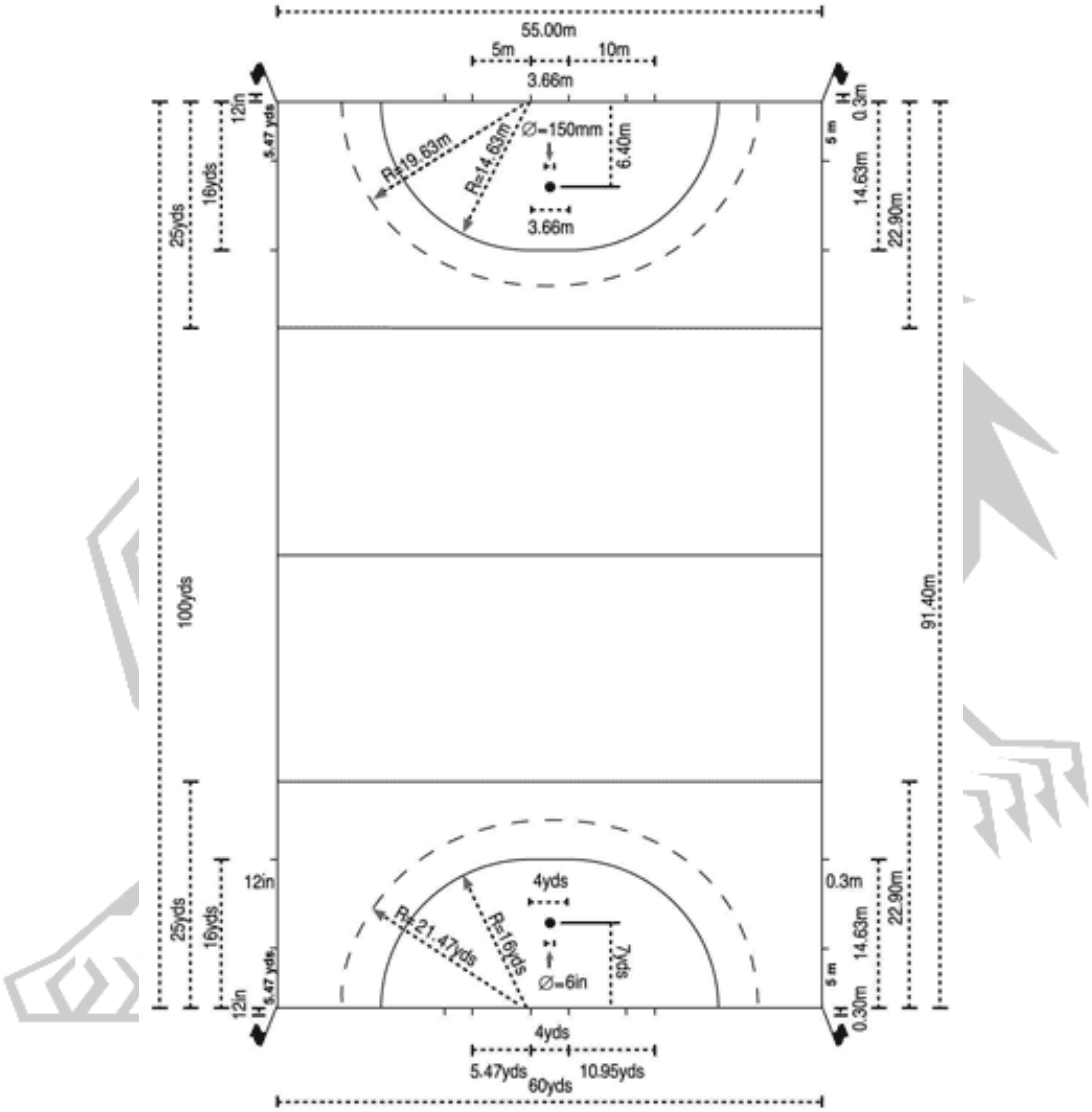
Pitch Construction

Hockey pitches generally consist of a synthetic fibre carpet as the playing surface, laid over or bonded to a shock pad or elastic layer (e-layer) to absorb dynamic forces, and which in turn is laid on the binding or sealing layer of an engineered sub-base. The binding or sealing layer may be pervious or impervious dependent on the hydraulics design.

- *Sand-filled hockey pitches* are made of carpet of woven, tufted or knitted synthetic yarn of approximately 19 to 25mm pile, supported or stabilised by the addition of sand for 100% of pile depth.
- *Sand-dressed hockey pitches* are made of carpet of woven, tufted or knitted synthetic yarn of approximately 16mm to 20mm pile, partly supported or stabilised by the addition of filling material e.g. sand, for up to 80% of pile depth.
- *Water-based hockey pitches* have an extremely dense pile of a shortened length (compared to a dressed pitch). It is important that they are irrigated and kept wet – continuously as the water acts as a wearing factor for the carpet and effects playability as much as the sand in a filled or a dressed pitch.

Hockey Pitch Dimensions

A hockey pitch is rectangular. It is 91.40m in length and 55m in width. Detailed below are the pitch dimensions and markings.



Run-offs

The recommended minimum run-offs are 4m on each side-line and 5m on each back-line. The run-offs are to be of the same material as the pitch and must be kept clear of debris / obstructions at all times.

Fencing for Hockey Pitches

Most fences for hockey are supported on box section steel posts in sizes to suit the required height. The fence should be installed to 3m high on the side-lines with an up-lift to 4.5 or 5m high at the 21m section goal areas (on the back-lines).

Fences are completed at the base with a treated softwood sawn kickboard and this should be between 40 - 50mm thick and 150 - 300mm wide.

Recommended Suppliers

The International Hockey Federation (FIH) has a list of recommended / approved suppliers on the website. Please see www.worldhockey.org

Long Pile Turf

Long Pile or third generation (3G) turf which is increasingly being used for football is **not** suitable for hockey. This type of pitch is not as dense as a sand-filled or a sand-dressed pitch. The pile is also considerably longer.

The diameter of a hockey ball is much smaller than a football, and so a hockey ball sinks further down into the pile of this type of pitch. Consequently, there is much more frictional drag on a hockey ball on this type of pitch which restricts the movement of the hockey ball. The same principle also applies to the hockey stick and therefore makes good stick-work difficult. In addition, because the long pile type of pitch is not as dense as normal hockey pitches the stick can more easily get under the ball causing lifting. In view of this, England Hockey strongly recommends that **no** competitive hockey be played on this type of pitch.

Flood Lighting

Lights are found around a substantial number of pitches now and certainly in budgetary terms, they are a very sensible investment as they usually double the income generation for the facility as the pitch can be used in the evenings.

Lighting masts must not be erected within the run-off areas (**minimum** of 2m on each side-line and **minimum** of 3m on each back-line). For non-competitive activities, the recommended mounting height is 15m, however for club

competitions and ball training the mounting height needs to be at least 18m so as to avoid glare.

To avoid disturbing shadows for the goalkeeper, it is recommended that 8 or at least 6 masts are used.

Minimum Lux levels (maintained)

- 200 lux for non-ball training
- 350 lux for competition of regional programme level or below
- 500 lux for high grade national and international competition

An Update on the Future of Synthetic Turf

In January 2006 it was announced that the FIH is working towards specifying a water-free synthetic turf for top level hockey and a multi-sport turf for other levels.

Developing a water-free turf is an important project because it recognises environmental concerns about water usage. The multi-sport turf will facilitate access to community or shared facilities at a reasonable cost.
Consultations are taking place with the turf industry and specialist advisers. The views of players are being sought in various ways. The prospects for having draft specifications available for development and consultation later in the year (2006) are therefore good. However, it will be some years before new turfs are widely available.

In the interim and in relation to top level hockey, water-based pitches will continue to be specified. Even when new turfs are available, there is no intention of not continuing to allow top events to be played on existing water-based pitches which meet the FIH performance specifications.

Organisations considering the installation of new pitches or refurbishment of existing pitches can therefore use current products with confidence. Pitches installed in the near future using these turfs will continue to provide good facilities for hockey.