



Prestigesportspitches

CIVIL ENGINEERING MADE FOR SPORT

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Hockey Pitches





Introduction

Prestige Civil Engineering has been undertaking high quality groundworks and drainage projects for 25 years and has been working as a sub-contractor to the artificial grass pitch market for the last six years. With successful pitch constructions under its belt, the company has decided to concentrate on the educational and community markets and to offer its own turn-key packages. Please visit www.prestigesportspitches.co.uk for further information regarding our company.

The following information is designed to give you an overview of the issues that need to be addressed when commissioning an artificial turf pitch. Prestige Civil Engineering will guide you from conception to completion and will ensure that you end up with the pitch best suited to your requirements.

Prestige Civil Engineering is acutely aware of its clients' budget restraints and is committed to ensuring that the optimum playing surface is achieved in the most cost effective way. We will tailor a turn-key package to your budget.

Funding may be sought from various federations who may require the project to be built to certain specifications. There are many producers of artificial grass and improvements are being made frequently. This is a guide only and will help with some of the planning decisions that need to be made.

Key Considerations

- Usage criteria
- Planning Permission and Funding
- Site Assessment/Surveys
- Construction
- Infrastructure
- Maintenance



Artificial Hockey Pitch Construction: Hockey pitches generally consist of a synthetic fibre carpet laid over a shock-absorbing pad which, in turn, is laid on an engineered sub-base consisting of free-draining stone and one or two layers of porous tarmac.

- Sand-filled hockey pitches consist of a carpet of woven, tufted or knitted synthetic yarn (approximately 18 to 25mm pile), supported or stabilised by the addition of sand to 100% of pile depth.
- Sand-dressed hockey pitches consist of a carpet of woven, tufted or knitted synthetic yarn (approx. 16mm to 20mm pile), partly stabilised by the addition of filling material e.g. sand, to 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.

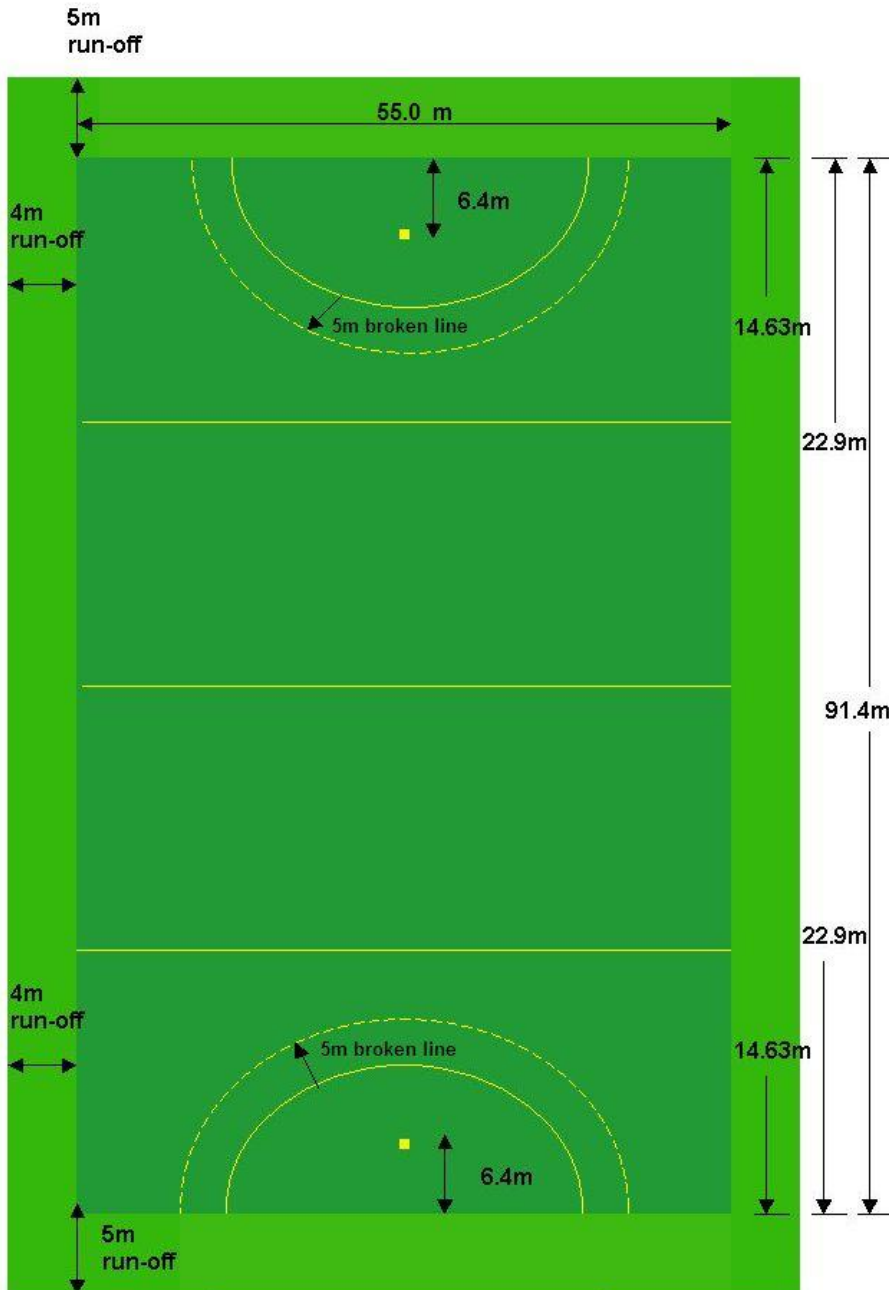
Pitch manufacturers are re-designing their surfaces to obtain the same characteristics as a water-based surface but without the environmental concerns of water usage. In the future it is expected that fewer water-based pitches will be constructed.

Long Pile Turf: Long Pile or third generation (3G) turf, used for football, is suitable for recreational hockey but a hockey ball does sink further down into the pile of this type of pitch increasing drag and restricting ball movement. Lifting of the ball is also more common. Competition hockey is not allowed on turf in excess of 40mm.





Hockey Pitch Dimensions: A hockey pitch is 91.40m long and 55m wide. See dimensions below. England Hockey rules require all new or re-surfaced pitches to have a broken 5m line outside the circle to assist players and umpires with the Free Hit which cannot be taken within 5m of the circle edge.



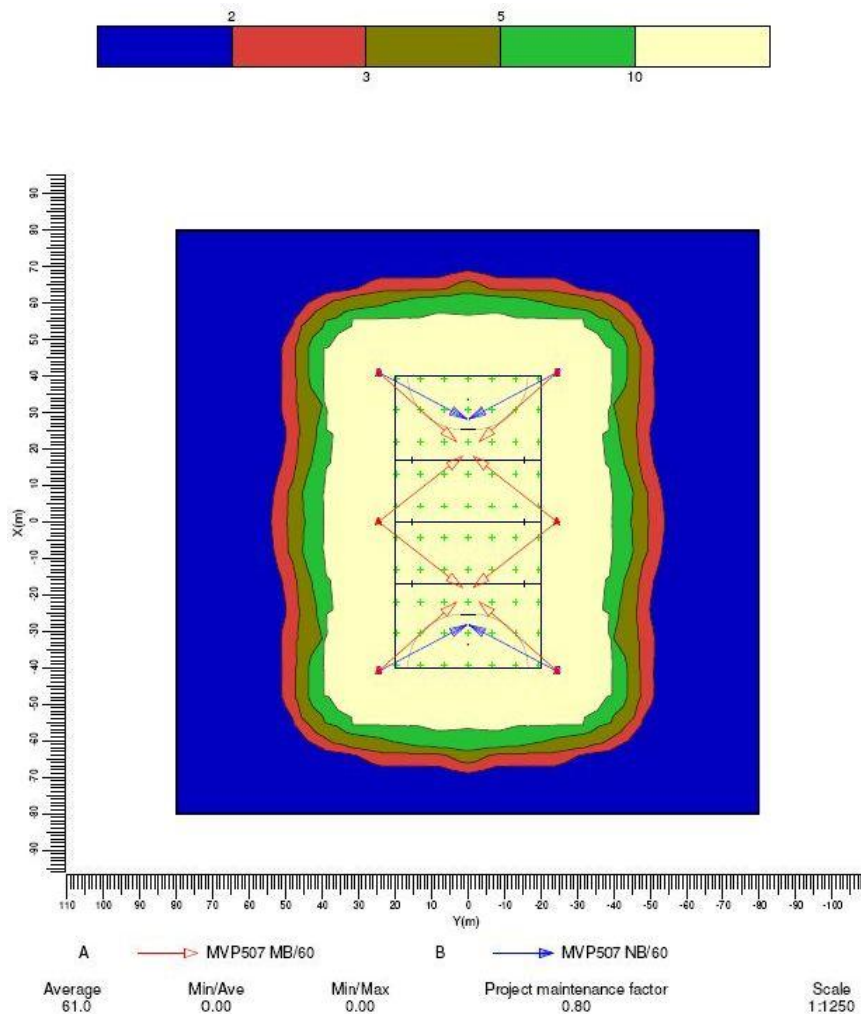
Run- offs: The recommended minimum run-offs are 4m on each side-line and 5m on each back-line. The run-offs are to be of the same material as the pitch and must be kept clear of debris / obstructions at all times.



Floodlighting: Floodlights are a good investment and can as much as double your income generation by enabling the pitch to be used in the evenings.

Lighting masts must not be erected within the run-off areas (4m on each side-line and 5m on each back-line). For non-competitive activities, the recommended mounting height is 15m, however for competitions and training the mounting height needs to be at least 18m in order to avoid glare. To avoid disturbing shadows for the goalkeeper, it is recommended that at least 6 masts are used.

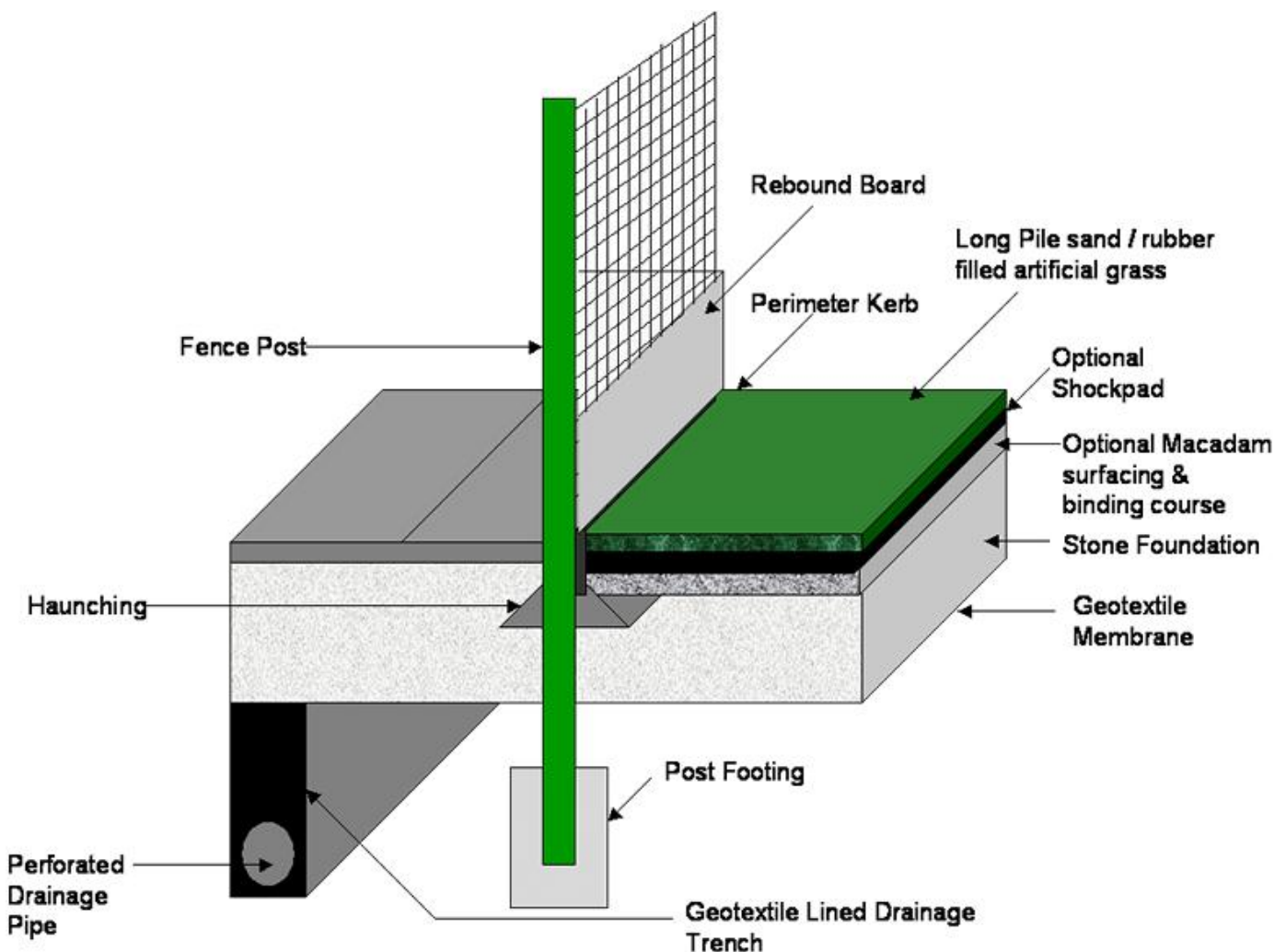
Lux Levels (maintained): 200 lux for non-ball training; 300 lux for competition of regional programme level or below; 500 lux for high grade national and international competition. The diagram shows an environmentally -friendly lighting system with graded lux levels so that maximum luminescence is achieved where it is most needed and external areas are not lit unnecessarily.





Fencing for Hockey Pitches: Most fences for hockey are supported on box section steel posts. 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 have a treated softwood sawn kick/rebound board at the base which should be between 40 - 50mm thick and 150 - 300mm wide. This can be cushioned for noise reduction.





Pitch Maintenance: Any guarantee from Prestige Civil Engineering or their suppliers will be conditional on maintenance schedules being adhered to and logged.

Please see below for an example of a recommended maintenance schedule: Please note that all maintenance should be done using specialist equipment.

At least **Weekly**

- Redistribute infill – this can be done by brushing or drag matting
- Lift pile by brushing
- Top up fill materials where required to keep surface response consistent (e.g. penalty/corner spots)
- Remove debris/litter

Periodic

- Relieve compaction of infill to ensure ball and foot response: 1-4 times per year
- Removal of moss/weeds: as required.

As a rough guide to annual cost to cover the above maintenance schedule, £8000 - £10,000 should be set aside.

Rejuvenation: After 5 or 6 years, it is likely that dirt and fibre debris will have become mixed in with the fill. It is advisable to remove the contaminated fill and replace with new to avoid compaction and flooding (the surface will have become less porous). The cost of the rejuvenation process is likely to be in the region of £30,000 for a full size pitch.

Preventative measures to reduce contamination of playing surface

- Boot clean facilities at main access points
- Litter bins at main access points
- Paved or tarmac access to the pitch.

Floodlight Maintenance

- Fittings should be regularly cleaned
- Aiming angle of the lights should be regularly checked and adjusted as necessary.

