

Engineered for Hockey

Facilities Design Guidance

Hockey5s courts

September 2017



Hockey5s is an official short-form version of Hockey. It is played by five players per side rather than 11 players and is designed as a complementary format of the game.

Hockey5s condenses the best of hockey into an action-packed, skilful and fun game. Each game is high scoring, full of individual moments of magic and high speed passing and running.

Hockey5s purpose is to help ‘raise the status and popularity of hockey’. It has been designed with the following objectives:

- To rejuvenate and reposition hockey by introducing it to a new audience
- To win the hearts and minds of young fans
- To increase worldwide participation

The vision for Hockey5s is a ‘singular discipline of international understanding’. This means Hockey5s not only has a youth and development focus but will be played at all levels from beginners to elite international players.



Hockey5s widens hockey’s reach by reducing the costs of facilities and matches sports trends towards smaller teams and more urbanised experiences. The game is typically played on dedicated Hockey5s courts, on multi-use games areas or on existing sports fields.

From beginners to international stars, from established Olympic winners to new countries, Hockey5s will bring the hockey world closer together.

Court dimensions & layouts

The key principle to designing a Hockey5s court is flexibility. The game can be played on any suitably sized area and on a variety of different playing surfaces. Courts may either be located on existing 11 a-side hockey fields or be purpose built dedicated facilities.

For dedicated Hockey5s courts, as used for the Youth Olympic Games and as recommended for their qualification Tournaments, the specified size is 48 metres long and 31.76 metres wide. Courts of this size are becoming the norm.

Recreational and community Hockey5s can be played on smaller or larger courts. Ideally these will be rectangular and have a length to width ratio of approximately 1:0.7. Current experience shows for five players the maximum acceptable court size is around 55m by 42m and the minimum size is around 40m by 28m. Smaller courts can be used if the number of players is reduced.

The boundaries of the playing area are formed by rebound boards. On dedicated tournament size courts, a run-off is normally provided between the rebound boards and outer perimeter fence. It is recommended that 3m wide margins be allowed at either end and 2m margins on either side, giving a total area of 54m by 35.76m. On recreational and community courts, the rebound boards are often mounted directly onto the perimeter fencing.

The court is divided into two halves by a solid centre line. Each half is further divided by dashed quarter lines. The lines should be 75mm wide and preferably be coloured white or yellow. A circular penalty spot should be marked 6.4m from the mid-point between the goal posts and equidistant from them.

Examples of typical court layouts are shown at the rear of this guide,

Playing surfaces

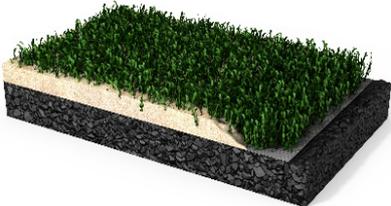
Hockey5s can be played on a range of sports surfaces. These should provide a durable, smooth, safe and consistent playing surface suitable for small-ball games; examples include various forms of synthetic turf, needle-punch textile surfaces, natural grass, plastic interlocking tiles and coated asphalt.

Where budgets allow, the surface should ideally be a specialist hockey turf that complies with *the FIH Hockey Turf and Field Standards* (available at www.fih.ch/facilities). The FIH Standard recognise six categories of hockey turf and their suitability for the various levels of Hockey5s is shown in Table 1.

Details of all the various hockey turf products, from the world's leading manufacturers, that have been independently tested and approved by the FIH can be found at www.fih.ch/hockeyturf.

When deciding on which type of hockey turf is best suited for your project it is important that the requirements of any specific competitions that will be played on the courts are considered. If in doubt please consult with your national hockey association.

Table 1 – types of hockey turf

Surface type		Typical Hockey5s uses
	Non-filled “wet” hockey turf	High level international, national, club and community Hockey5s
	Sand dressed hockey turf	Lower level international, national, club and community Hockey5s
	Sand filled hockey turf	Multi-sport, development, recreational club and community Hockey5s
	Textile surface	Multi-sport, development, recreational club and community Hockey5s
	Long pile multi-sport synthetic turf	Multi-sport, development and community Hockey5s

Court colours

The colour of courts intended for top level and televised competitions (Global Elite and Global category courts) should comply with the *FIH Hockey Turf and Field Standards, Part 4*, clause 4.3.3. There are no restrictions on the colours of National and Multi-Sport category courts.

Court markings

Hockey5s markings can either be permanently put onto the hockey turf using in-laid lines or be temporarily spray painted onto the field as and when required. For 11 a-side fields that are likely to be used for top level competitions, temporary lines are recommended as some competition rules

exclude any other markings. Temporary lines are normally white in colour. For community fields, permanent lines are recommended. If Hockey5s is the priority sport, the lines should be white in colour. If Hockey5s is not the priority sport lines may be yellow, red or a contrasting shade of blue or green depending on the colour of the hockey turf.

Rebound boards

An integral part of Hockey5s is the ability for the ball to rebound from the perimeter boards enclosing the court, so it remains in play.

Several types of rebound board are being used including “home-made” boards based on timber planks and commercially produced rebound-boards. They may be free standing or on dedicated courts socketed (to prevent movement) or be fence mounted.



The key features of whatever system is used should ensure:

- The boards are 250 ± 10 mm high
- The boards are vertical to the playing surface
- The colour of the boards contrasts with the ball colour (especially for televised matches)
- The boards allow the ball to rebound back into play with a predictable bounce. For high level competitions, it is recommended the boards have a Coefficient of Restitution of approximately 0.65 when measured with a ball having an in-bound velocity of 7 ± 0.5 m/s. To achieve this the inner face of the boards needs to be a resilient foam, rubber or another suitable material.

- The design of the boards and the way they interlock ensures the court boundaries remain straight and do not distort because of balls repeatedly hitting them.
- The method of keeping the boards upright does not form a potential hazard to players stepping over the boards during normal play (i.e. the use of diagonal bracing struts is not recommended).
- There are no sharp edges that could injure a player colliding with the boards.

When deciding on what type of boarding to use it is important to consider where they will be stored when not in use.

To ensure player safety, boards should not be stored on the run-offs of the 11 a-side fields and if you are considering a new 11 a-side field it is recommended a suitable storage compound or recess adjacent to the field is provided.

A set of boards will be heavy and a trolley will often be used to move them. To ensure the weight of the trolley and boards does not damage the playing surface the trolley should be fitted with low pressure tyres.

Goals

Hockey5s goals are the same size as those used for 11 a-side hockey. To ensure they are fit for purpose the FIH recommends goals be certified as complying with European Standard EN 750.

Court fencing

Due to the high speed of the game it is important that a Hockey5s court is contained within a fenced enclosure to ensure balls are contained and do not cause injury or damage to spectators or the surrounding infrastructure. The height and type of fencing will vary court to court depending on the likely risks.

On purpose-built Hockey5s courts the fencing will typically be at least 3m high (and often more). On some courts, where there is adequate space for large perimeter margins, lower side fencing is installed to aid viewing.

When courts are positioned on 11 a-side fields division netting should be installed if other activities are likely to take place on the field at the same time as Hockey5s is being played.

Court design and construction

A Hockey5s court is a specialist piece of engineering that needs to have the right playing characteristics whilst withstanding the harmful effects of use and the climate. If the court is badly designed or poorly constructed it will become an unsatisfactory facility. To help ensure this does not occur the FIH have included Hockey5s courts in the *FIH Hockey Turf and Field Standards* (www.fih.ch/facilities). Part 2 specifies the requirements for the various types of hockey turf and Part 4 describe the construction and performance parameters for the various categories of court.

To further reduce the risk of an unsatisfactory new facility the FIH recommends you only appoint specialist contractors that have a proven ability to design and build hockey facilities. Identifying suitable contractors can, however, be difficult, so the **FIH Quality Programme** includes two categories of company that have a proven ability to design and build fields to the standards required.

FIH Certified Field Builders are companies that specialise in building hockey fields. They have appropriate in-house civil engineering expertise for the design and construction of hockey courts, operate a quality management system that helps ensure consistency in their work and provide comprehensive maintenance advice to their customers.

FIH Preferred Suppliers are companies that are Certified Field Builders and also manufacture FIH approved hockey turf products, allowing customers to benefit from a one-stop approach to the construction of their new Hockey5s court.

Court certification

Verifying a new Hockey5s court has been constructed correctly and is retaining acceptable levels of performance and player protection through its life is important. Therefore, the FIH have incorporated Hockey5s facilities within the **FIH Quality Programme** – the internationally recognised quality assurance programme for hockey facilities. The Quality Programme provides a robust series of quality checks, undertaken by FIH Accredited Test Institutes, that are designed to ensure only well-built facilities qualify for FIH registration as certified Hockey5s courts.

Positioning Hockey5s courts on full size fields

Many wish to play Hockey5s on their existing 11 a-side fields, and this can be done with minimal disruption to the main field. Courts can be located either along the direction of play or across the field. If the court is marked in the main direction of play it is recommended it is centred on the main centre line to avoid additional use in the high wear areas of the main shooting circles. There are then two options:

- Have a full-size court that is 48m long. This means the goal lines are 1.15m behind each 23m line (see Figure 4 at the rear of this document)
- Have a slightly shorter court length using the 23m lines as the goal lines (see Figure 5).

If two courts are required they can be located at 90° to the main direction of play. In this configuration, it is recommended the courts are located 2m either side of the centre line to minimise additional play in the high use areas of the main field (see Figure 6).

The additional markings for Hockey5s may either be permanently set into the playing surface as in-laid lines or be temporarily painted onto the surface. If permanent lines are being considered for a field used for higher level hockey, checks should be made to ensure competition rules do not require a hockey field with no other markings.

As the ball is moving fast during play it is important that if two courts are marked onto a field that they are separated by a division net. This can either be a heavy-duty net suspended from a tensioned cable or a portable fencing system using posts and heavy-duty netting. If a suspended net is used it should

have a weighted lead-line at the bottom to stop the net billowing in the wind and it should be stored in a retaining pouch attached to the main perimeter fencing when not in use.

Sports lighting

To maximise the benefits of a Hockey5s court many are illuminated to allow evening play.



Guidance on lighting may be obtained in the *FIH Facilities Guidance - Sports lighting for non-televised outdoor hockey* (www.fih.ch/facilities). Courts not intended for televised matches should meet the following lighting standards:

	Eh main Lux	Uniformity		Gr Rating	Ra Min	TK*
		U1	U2			
International & national competition	> 500	>0.5	>0.7	<50	>65	4000
Club level competition	> 350	>0.5	>0.7	<50	>65	4000
Community & training use	> 200	>0.4	>0.6	<55.0	>65	4000

U1 = Minimum/maximum illuminance. U2 = Minimum/average illuminance. Gr Rating = Glare rating. Ra Min = Colour rendering. TK = Colour temperature - the same values should be used for all the lamps around a court

Guidance on lighting of courts intended for televised matches may be obtained by contacting facilities@fih.ch.

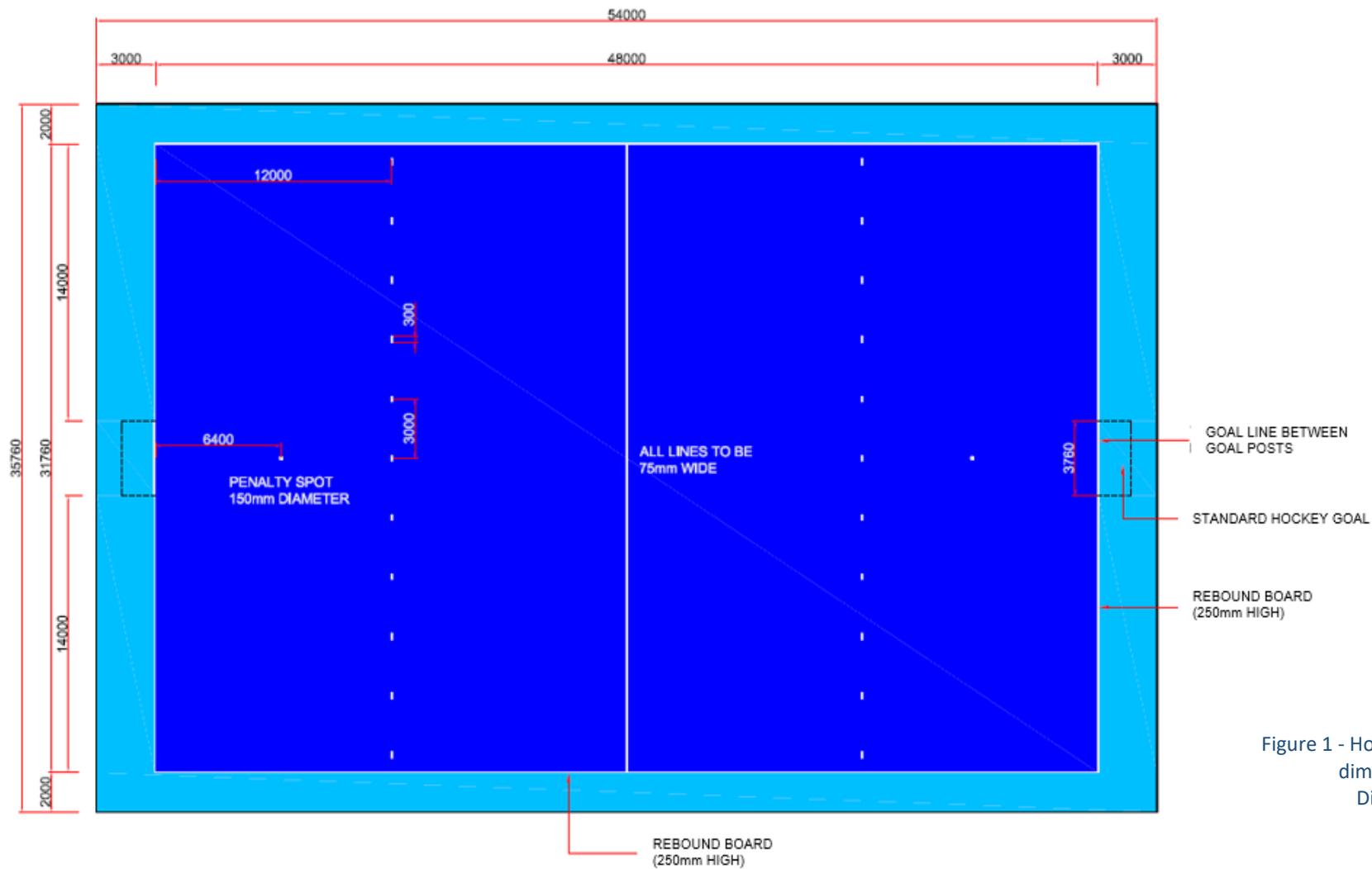


Figure 1 - Hockey5s competition court –
dimensions and layout
Dimensions in mm

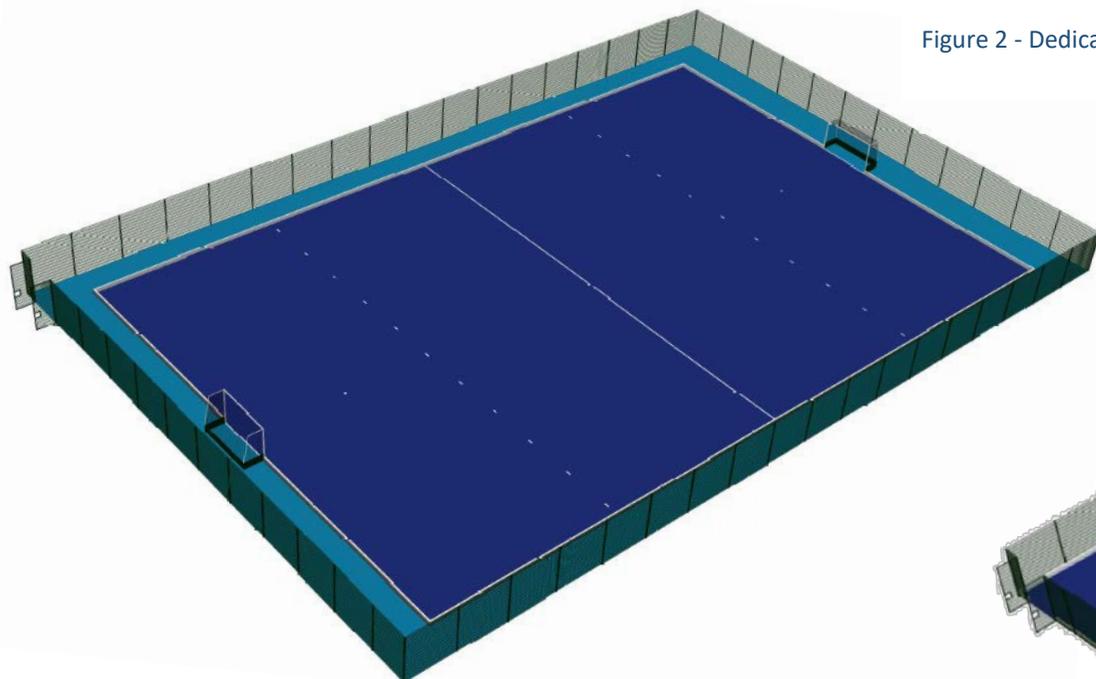


Figure 2 - Dedicated Hockey5s competition court with run-offs outside the rebound boards

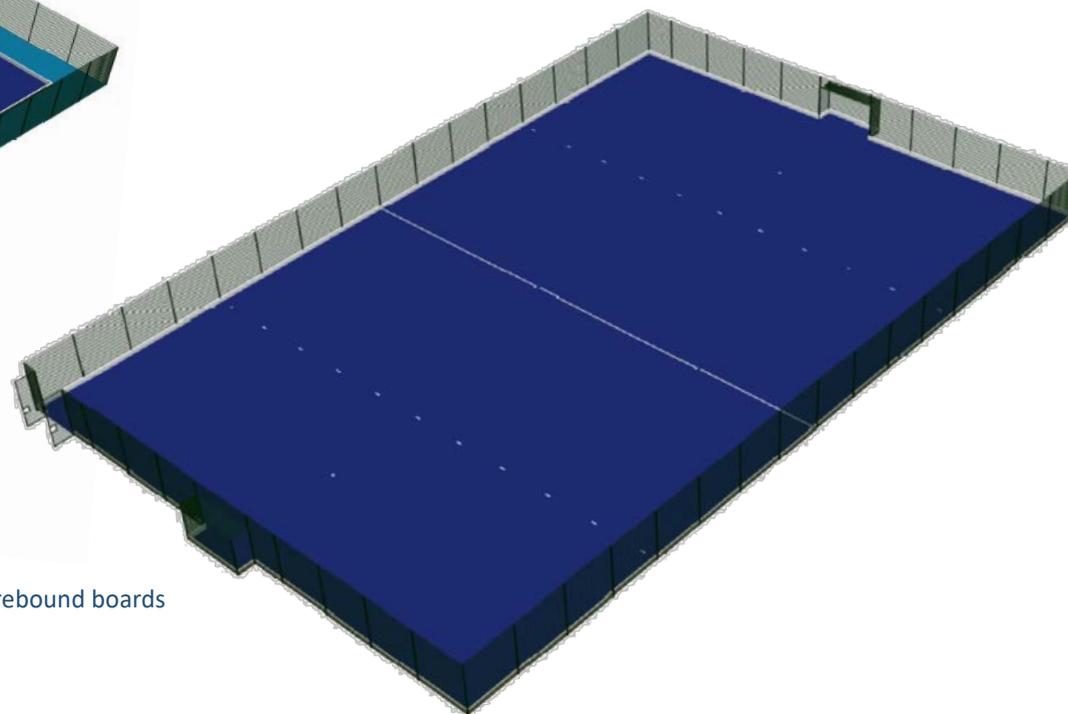


Figure 3 - Dedicated Hockey5s court with fence mounted rebound boards

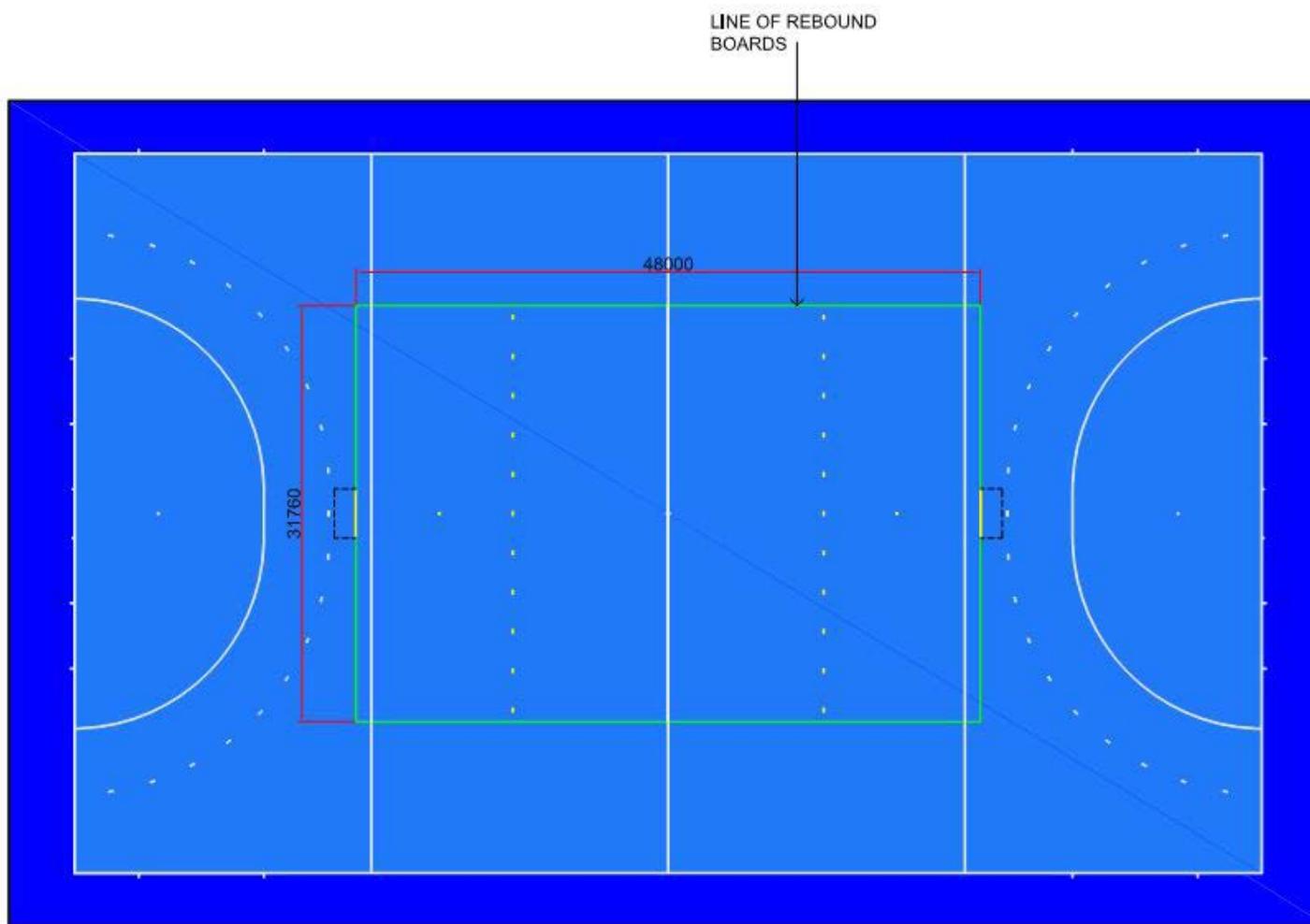


Figure 4 - Full size Hockey5s court on 11 a-side field (green lines show position of portable rebound boards). Dimensions in mm.

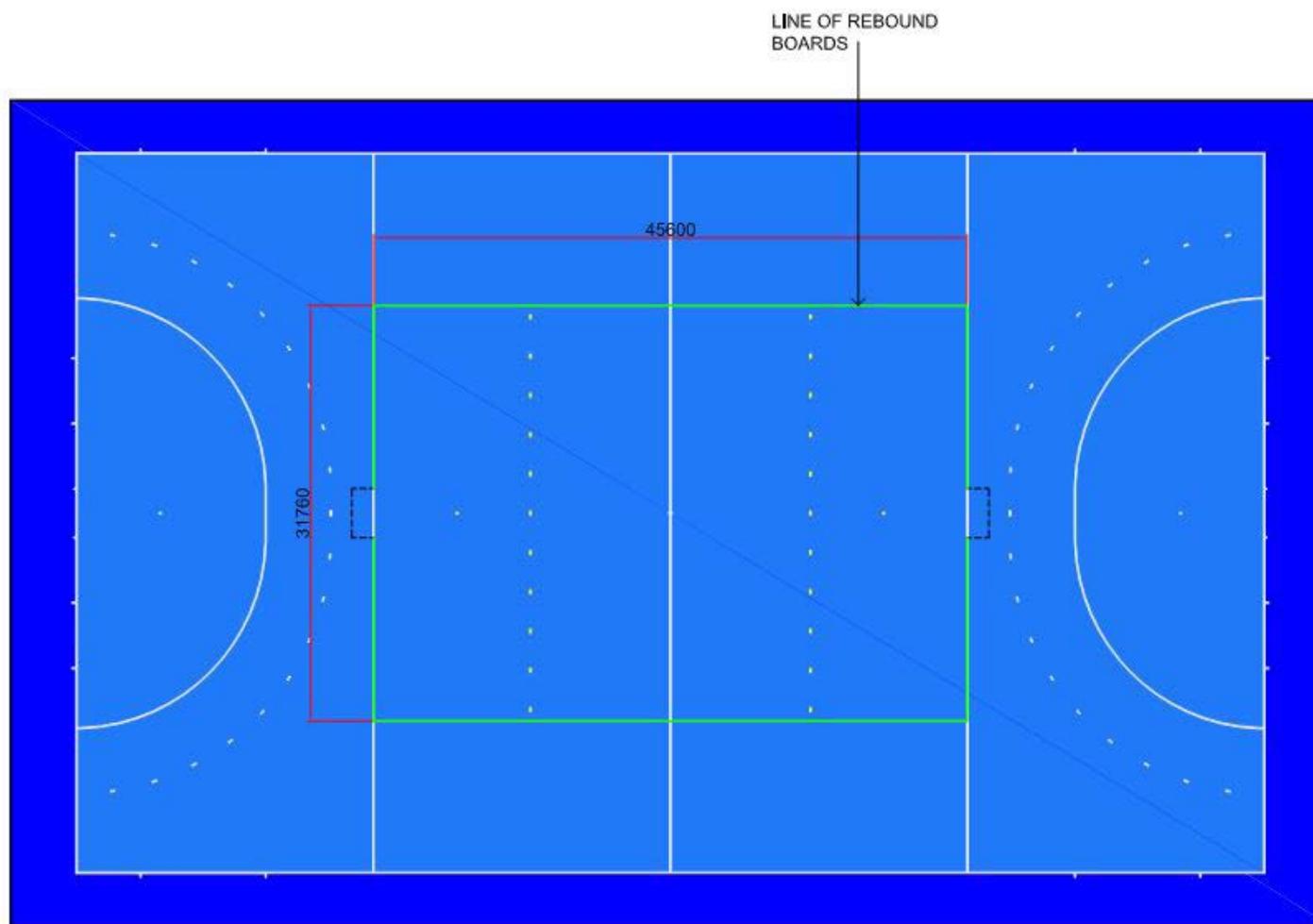


Figure 5 - Hockey5s court using 23m lines on 11 a-side field (green lines show position of portable rebound boards). Dimensions in mm.

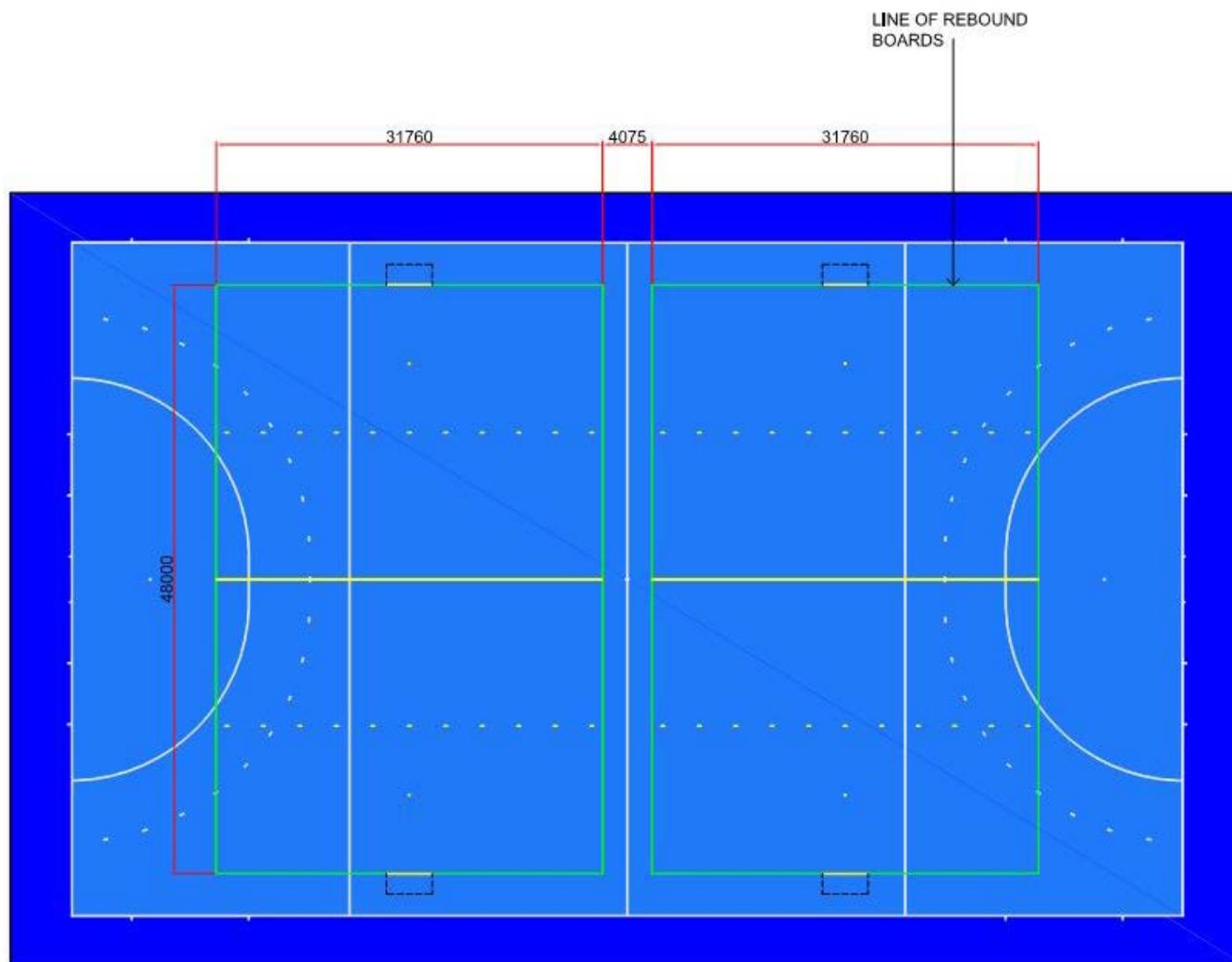


Figure 6 - Two Hockey5s court on 11 a-side field (green lines show position of portable rebound boards). Division net required along centre line of hockey field

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Twitter
followers



95k
Instagram
followers



45million+ minutes watched
on YouTube



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sport of **INDIA**
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INCLUSIVE

50/50
male/female
sport

Strong continental representation

132

National
Associations



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152

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at both ends

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London
in **1908**



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BBC viewers

best moment
of the Olympics



Excellent

anti-
doping

record