

Creating a Sustainable Future for Hockey

The development of non-irrigated Hockey Turfs

Project update November 2022





Background

Recent international hockey competitions, including the FIH Pro League and Tokyo 2020 Olympic Games, showcased elite level international hockey at its pinnacle. Played at state-of-the-art hockey stadia, using the latest forms of wet hockey turf that provided fast, predictable, and consistent playing surfaces, allowing the athletes to perform to the best of their ability.

However, as minimising the use of the planet's natural resources becomes ever more important, it is simply not sustainable for elite hockey to continue to require watered turf. In addition, in many parts of the world, installing a wet hockey turf is not feasible either due to the scarcity of water, or due to the cost of the necessary irrigation infrastructure. This limits opportunities, restricts the global growth of hockey and impacts on the environment.

Recognising this, the FIH announced at its 2018 Congress that it was challenging the synthetic turf industry to develop turfs that play the way the athletes need without using watering, targeting the Paris2024 Olympic Games as the first to be played on non-irrigated turf.

Unfortunately, the global COVID pandemic caused a delay in the necessary R&D, so that target has now been pushed back and Paris2024 will be the last Olympic hockey tournament to be played on a watered turf. However, good progress has been made by the industry in the last 12 months and today, innovative research and development continues to be undertaken to achieve the desired hockey performance without the need to water the turf.

The purpose of this update is to provide a progress report and to confirm the revised timeline for the introduction of non-irrigated turf to FIH and elite hockey competitions.

Quantifying the required properties for elite hockey turf

A key part of ensuring these new types of turf have the playing characteristics hockey desires is being able to measure and quantify their performance. This requires us to update our *FIH Hockey Turf and Field Standards* to include new protocols to ensure acceptable performance. At present we know that when surfaces are wet, they have acceptable ball/stick/player/surface interactions, so there is no need to measure these properties; we will not have this certainty when we remove the requirement for Global category turfs to be watered, so we need to update our standards. To enable this, we appointed specialist sports testing institute Labosport UK and their project partner Loughborough University to identify the properties that need to be

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measured, to develop the new test methods required, and to quantify the performance of existing wet turfs.

Athlete input into this entire project is clearly fundamental, and to this point, feedback from international elite players on what they like about playing on wet turfs and dislike about playing on dry turfs was obtained from 227 players from the 11 top ranked hockey nations. The consultees were 52% female and 48% male and represented all playing positions. The feedback identified four key characteristics that any new performance standard needed to include. They are:

- 1. Ball speed / pace
- 2. Angle ball bounce
- 3. 3D skills
- 4. Stick-surface friction/glide

Labosport have now designed new tests for these properties and measured how existing wet turfs and dry national category hockey turfs perform. This now allows FIH to set target criteria for turf and equipment manufacturers to try and achieve.

Since our announcement in 2018 our FIH Preferred Suppliers and hockey equipment industries have been working hard to innovate and develop the solutions hockey desires. The first of these innovative new technologies were trialled this year at the *Lausanne Hockey5s* tournament, which saw 10 international men's and women's teams participate in two days of intense competition on a non-irrigated turf, providing valuable feedback on how the surface and equipment performed.

Looking ahead to 2023

- 1. FIH will introduce an innovation category into the FIH Quality Programme, allowing non-irrigated hockey turfs and sports equipment designed for use on these surfaces, to be endorsed, bringing reassurance to the market, and encouraging clubs, schools and colleagues to consider this new technology as an alternative to the current national category of surfaces and equipment.
- 2. As facilities utilising this innovative technology are built, FIH will be able to collect player feedback on how well the turf performs. The aim is that the differences in performance between wet turfs and these new non-irrigated turfs will be small and we can incorporate the new products into our Global category of hockey turfs, with little change. If, however, the performance of the new surfaces does not fully replicate wet turfs, we will continue to work with the industry to allow the benefits of a more environmentally friendly, sustainable future for elite hockey to be achieved.

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Timeline for the introduction of non-irrigated turf for FIH tournaments

Looking ahead, the FIH Hockey5s World Cups in (January 2024), FIH Hockey World Cups (Summer 2026), Commonwealth Games 2026 hockey tournaments and 2028 Los Angeles Olympic hockey tournaments will be played on non-irrigated hockey turfs.

What about existing wet fields?

Whilst we are confident that the global hockey community will embrace the new nonirrigated hockey turfs with enthusiasm, the use of wet fields will continue to be allowed during a transition period to the new technology, meaning there will be a period when elite hockey matches and tournaments will be played on both existing wet hockey turfs and the new non-irrigated turfs.

FIH Preferred Hockey Turf and Field Suppliers

FIH Preferred Hockey Turf and Field Suppliers are companies that manufacture hockey turf products and build hockey fields, allowing customers to benefit from a one-stop approach to the construction of their new hockey field. FIH Preferred Suppliers have demonstrated a global commitment to working with the FIH to provide innovative high-quality hockey turfs and fields suitable for international, national, club and development hockey.



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