

A WORLD CUP PITCH WITH IRISH ROOTS

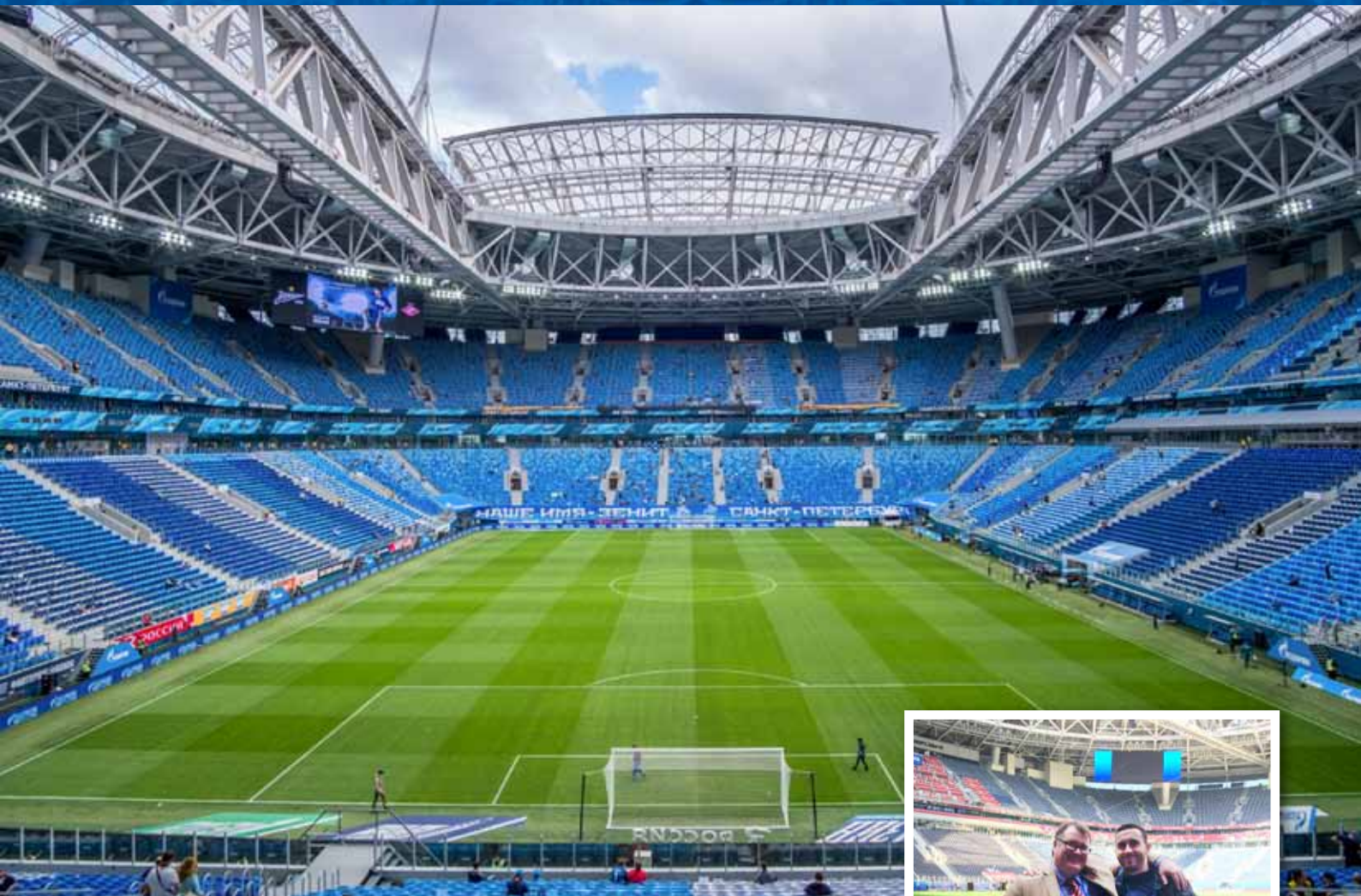


Richard Hayden



BY **RICHARD HAYDEN** B AGR. SC., C.S.C., M.ENG.

My adventure in Russia started in 2009 with a commission for UEFA to recover some pitches for the Champions League at the time. The harsh Russian winter means that pitch problems in February are likely.



Krystovsky Stadium

Since this time, I have been employed as the official consultant to Zenit Saint Petersburg in Russia. The club, founded in 1925, is one of Russia's most successful clubs with a cabinet of silverware earned in Russia and Europe. My role involves the provision of consulting and advice over 4 sites, including 2 stadiums and 2 training sites, with 12 pitches in total under the direction of General Director Vladimir Litvonof. This piece covers the challenges faced, and overcome, in the new Krystovsky Stadium.

Krystovsky Stadium; the problems

The stadium is a similar design to the Toyota Stadium in Tokyo, except much bigger. The pitch is a rolling pitch, which facilitates the movement of the pitch in and out of the stadium, allowing the pitch to receive sunlight and air when not in use. The stadium can also then be used for concerts etc. without damaging the pitch. The

roof is retractable but the level of sunlight available on the brightest day of the year is a fraction of that compared with other stadiums I have worked in. Even in mid summer, sunlight levels are about 20% of that of a large stadium such as Croke Park. Initially, due to technical reasons, the pitch movement mechanism was not used. This led to 2 pitch failures in 2016 and again in 2017. Even with full supplementary lighting systems, the lack

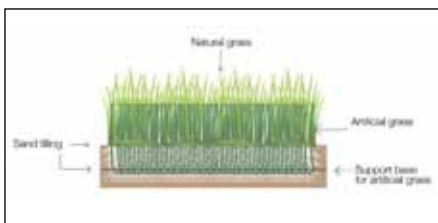


Richard Hayden and head groundsman Kosta Kreminsky

of air movement, and sunlight, present the most extreme environment to grow grass. In September 2018, I developed a master plan on how to solve this issue. This involved removing the pitch in the middle of Winter during the Christmas period of 2017/18 in time for the UEFA European competitions.

Hybrid Turf

Hybrid Turf is the term used when we grow natural grass within a synthetic turf carpet. The carpet is filled with sand and a combination of the carpet backing and the fibres hold the turf in place. The product used was a Mixto Hybrid carpet from Italy, similar to that used in The Barnebau stadium in Madrid. The project had a very tight window to be completed so we decided to grow a new pitch in a disused greenhouse in Odense, Denmark. Growth in the glasshouse allowed us to establish turf in a similar environment to the stadium, but also allowed us to heat the climate through the winter and guarantee harvesting dates. This was the first time in the world that turf was grown for commercial harvest in a glasshouse and it wasn't without its challenges.



Hybrid Turf Concept

“ THIS WAS THE FIRST TIME IN THE WORLD THAT TURF WAS GROWN FOR COMMERCIAL HARVEST IN A GLASSHOUSE AND IT WASN'T WITHOUT ITS CHALLENGES. ”

Old Pitch removal

The old pitch was removed under my supervision in December 2017. Under the competent eye of Offaly excavator driver Dominic Cross, the pitch was removed and replaced over a 2 week period, stretching right through Christmas including Christmas day. The roof was closed, so a comfortable 15 degree environment sheltered us from the raging snow and cold of -20°C outside. A new rootzone was fully tested and



Initial pitch failure in 2016 and 2017



Electric motors to move the pitch in and out of the stadium



Growing turf in greenhouse in Odense for Saint Petersburg



Pitch removal December 2017

approved by Hayden Turfcare before contractors Queensgrass International graded the newly installed material. With the new rootzone down, a date for January 13 was chosen for the installation.

Harvest, transport and logistics

The turf was harvested and transported for 72 hours across a journey of 3000 km. The logistical challenges of keeping turf alive in fridge wagons over logistically challenging jobs such as this cannot be underestimated. Combining this with phytosanitary and customs clearance time and procedures was a challenge. Thankfully, the project was supported by the Russian Government who were a huge help in this aspect.



Customs officers and Russian Department of Agriculture had to inspect every turf load to ensure phytosanitary regulations were adhered to. Each of the 1220 turf roles had an ID number



Catching up with Dominic Cross from Offaly on site before pitch removal



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Installation

The turf was installed over a five day period by contractor Queensgrass International. Installing Hybrid turf is a challenge in itself, with the initial result being far from what would usually be expected from soil based turf. The turf must be cut using angle grinders and con saws due to the carpet backing and fibres. However, the contractor persevered and, together, with groundsman Kosta Kreminsky, took the pitch to an acceptable European level for the Zenit V Celtic game on 15th of February 2018.

Technology

The main technology used to grow the grass is a full pitch coverage of SGL and TLS lights as well as a series of turbo fans around the pitch edge for air circulation. The pitch rolling mechanism is only used in summer due to the Russian winter, so the grass must be grown in a completely artificial environment from October through to April each year. A full and extensive suite of machines are available to us for the maintenance of the pitch as are the eight groundstaff led by Head Groundsman Kosta Kreminsky. Kosta actually trained under Corkman Martin Galvin in 2012 while delivering the pitches for EURO 2012, and with Johnny Plumber through Mike O’Keeffe’s Ohio State Programme. He has become one of the finest in the business.



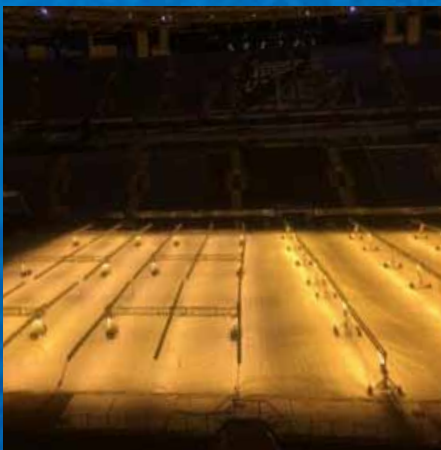
Rootzone importation January 2018



Turf installation



Pitch Rolling



Supplementary lighting on pitch

FIFA World Cup 2018

Due to the overlay for the world cup including cabling, advertising etc. the pitch was rolled out for a limited period in May 2018 pre World Cup. The result of natural sunlight on the pitch was amazing, but short lived, with the requirement to roll it back in again one week before kick off. The pitch has performed excellently and is a new milestone in our quest for better pitches in tournaments. In the world’s most extreme grass growing environment, one of the best pitches of the FIFA World Cup 2018 Russia has been the Saint Petersburg stadium. This is down to teamwork and dedication.



Pitch prepared for the worlds stage



Iconic Stadium