



# Royal St David's Golf Club

Harlech, Wales

## Increased membership, increased income and increased ranking

**Customer:**

Rhys Butler,  
Links Manager,  
Royal St David's

**Designer and consultant:**

Adrian Mortram,  
Adrian Mortram Associates

**Contractor:**

Robert Green,  
Green Irrigation

**Distributor:**

Robert Jackson,  
Reesink Hydro-Scapes

**Product manufacturer:**

Simon Squires,  
The Toro company

**Products chosen for the Championship course (18 holes)**

Lynx control system with Lynx Smart Hub

240 Flex sprinklers with LSM module on greens and fairways

145 T5 Rapidsets on all tee surfaces

215 PRN 590GF sprinklers for newly installed walkways

168 LSM modules on tees and walkways

19,000m Toro jacketed communication cable

## The club

Royal St David's is a traditional links course on the west coast of North Wales. It has hosted nearly eighty championships of national or international status and is ranked second in the top 50 golf courses in Wales. The location of its 79-hectare site requires careful management of the local ecology, with the conservation and preservation of the sandy links course high on Links Manager Rhys Butler's list of priorities.

## Deliverables

The project commenced in the spring of 2022 and was completed in early November and involved the installation of new Polyethylene mainline and lateral pipework supplying efficient water to all playing surfaces while the course was open.

The fact that installation had to take place while the course was open for play was due to the composition of the course with natural dune slacks and a high-water table in winter. There was no choice but for installation to take place throughout high season, providing one of the biggest challenges of the project-



for Adrian Mortram from Adrian Mortram Associates as he explains: “There are very few irrigation systems in my career that have been installed in high season, on an existing course that is being played on throughout the summer and having to work around the players. But there was no alternative, it would not have been possible to joint the pipe work or cables in trenches under water.”

Add the fact that the club still needed to be able to irrigate efficiently throughout to prevent damage to the sward, and that it was a very dry summer and the water had to be supplied and applied manually, provided yet another challenge to the project.

However, it was a situation adeptly managed by contractor Green Irrigation who according to Rhys “prioritised getting water available as soon as possible which really helped us to produce and maintain good surfaces for our members through installation.”

A further challenge for Green Irrigation came about when Rob Green, Technical Director, and the team started procuring the materials needed for the project in 2019, once awarded the project in a tender process. Soon after the country headed into the pandemic related lockdown with Rob recalling how this effected the price of pipework, which started soaring: “The prices were going up daily and went up by nearly 80 percent in total. It was becoming impossible for us to hold the prices that we’d quoted.”



**The Toro range of products chosen exceeded our expectations. In addition, the installation couldn't have gone any better.**



**Rhys Butler**  
Links Manager, Royal St David's



## Challenges

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This project was a classic example of how well small teams can work together efficiently to bring about big change in the best of ways. It was a pleasure to be able to deliver the irrigation benefits Rhys and the team had wanted for so long.



**Adrian Mortram**  
Adrian Mortram Associates

## Solutions

The advice from Green Irrigation was buy now and store the equipment on site, which the club agreed with. Rob says: “We essentially had the entire irrigation system in storage but if we’d have waited until the project started in 2022, we’d have had to pay significantly more. Ultimately, this decision saved the club £30,000.”

While the club had long recognised the need for a new system, the project was finance critical – there hadn’t been the financial reserves to do a large infrastructure investment until now and to have incurred such a huge, unexpected cost would have put the project in jeopardy. It was a plan which saved the project.

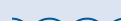
The club chose the Flex series of sprinklers on greens and fairways, T5 Rapidsets sprinklers on all tee surfaces and 590GF sprinklers for newly installed walkways. All new mains and controls were required as was full fairway irrigation for the first time. The entire system is controlled using Toro’s Lynx Control System with LSM technology.



This was our biggest job as a relatively young company and I’m so proud of the process and the results. The difference it made to the course was like night and day. It was incredibly rewarding to see and hear the members’ reactions to the almost immediate changes the new system brought as we turned each newly renovated hole on.



**Rob Green**  
Green Irrigation





## Outcomes

**At conception of the installation the grass was visibly starting to strain and there were signs of disease. As each hole was turned on the difference was almost immediately noticeable to members thanks to the irrigation automation Rhys and the team had never had before.**

The new irrigation system has successfully decreased the significant amount of water that was previously lost due to leaking pipes. LSM technology has given much greater accuracy of water application and run times.

Greens, surrounds and tees are much stronger and more complete than before due to better irrigation coverage and consistency in application.

The sprinklers now deliver water accurately and efficiently to playing surfaces, reducing wastage.

Adding irrigation to fairways and walkways has maintained healthy grass, reducing the need for fertiliser inputs to recover drought-stressed areas.

For optimal irrigation, the club uses a TDR soil moisture sensor, irrigation software, and hardware, along with weather station information. This allows for accurate monitoring of soil moisture and weather conditions, enabling precise and timely irrigation. The result is healthy turfgrasses and maximised efficiency of resources.

The system has provided Rhys and his team with to-the-second runtime accuracy across all newly installed stations via either the central controller or remotely using Toro's smart apps. Using the app in the field gave a level of flexibility and control to be able to water dry spots, water in wetting agents and be minimalistic with water application as is natural for a links course. Water is now used wisely, as and when it is needed.

Rhys sums up the project: "The project was a resounding success and has transformed Royal St David's Golf Club: membership has increased, visitor income has doubled, and our rankings have improved. This is because the irrigation system has given us moisture control on the golf course to produce great playing surfaces."



**It was a real pleasure to work with Royal St David's, Adrian Mortram Associates and Green Irrigation on this prestigious project. Everyone pulled together to make sure the project was installed with little disruption in the middle of the summer and with all the challenges that time of year can bring.**



**Robert Jackson**  
Division Manager, Reesink Hydro-Scapes

