INSIGHT



ELLIE PARRY

Future-ready irrigation

Ellie Parry provides an insight into the implementation of a Rain Bird irrigation system that prepares Royal Bled in Slovenia for the long term

here cannot be many finer backdrops to any game of golf than at Royal Bled. The majestic rise and fall of the Julian Alps give way to the picturesque tranquillity of the destination's courses. The King's is the oldest and largest in Slovenia, dating back in its original design to 1937 and renovated by Donald Harradine in the early 1970s. This was complemented by the addition of the nine-hole Lake's course two decades ago. Vistas from both layouts take in the iconic precipice-perched Bled Castle, which overlooks Lake Bled.

Howard Swan had worked at Bled for some ten years, for a Slovenian conglomerate which owned and operated the club and hotels in the town. But it was when the Šolak family acquired the club that the long-planned renovation got underway in 2015.

Over the next three years, Howard and his son William directed the design process to revolutionise what had been laid out before, leading a project team of foresters, earthmovers, shapers, lake lining specialists, drainage experts and constructors from 17 nations, as well as local specialists. The redesign extended



the course to championship length – over 7,400 yards from the tournament tees, one of five sets on each hole – reconstructed tees and greens, and saw ten new lakes designed to create a dramatic and spectacular course.

Key to the design principles practiced by the Swans in the rebirth was a focus on protecting the natural environment and important habitats as the holes were built. Fundamental to this was comprehensive planning in the management of water for the courses: where it came from, where it was to be stored, how it was to be used and how its quality could be sustained. This was embodied in the system design specification developed in collaboration with Rain Bird Europe and its authorised service partner In-Aqua, based in Zagreb, Croatia, to provide Royal Bled with one of Europe's most advanced irrigation systems.

The design concentrated on conserving, harvesting, recycling and optimising the use of water on the golf course. The comprehensive and long-term strategic plan drew together these interdependent elements of best practice and related them to the wider environment of the course, given its proximity to the Triglav National Park.

One of the requirements set out by the architects was to create a system to encompass the wholesale King's course renovation and the future development of the Lake's course. This was reflected in the pump station sizing and design as well as mainlines and cables. Royal Bled pays for irrigation water supplied from a lake at the hydropower plant some five kilometres away, but supply pipe limits the daily volume available. Consumption reaches 1,500 cubic metres per day at peak, so In-Aqua was also asked to prepare a water management study proposing options for supplying water from a nearby river and for the movement of water through lakes at the course. They also installed temporary flow measurement at a nearby spring to establish its capacity.

The irrigation system proposal included water sourcing and lake management, in addition to irrigation system design, pumping and pH control, central control programming, advanced weather and soil sensing features, and other adjacent systems. Critical to In-Aqua being commissioned for the project – alongside its ability to provide wider water management support and a comprehensive programme for the King's course – was Rain Bird's capacity to deliver the requirements and its consistent commitment to its systems.

Slovenia is prone to lightning strikes, recorded as often as three or four days

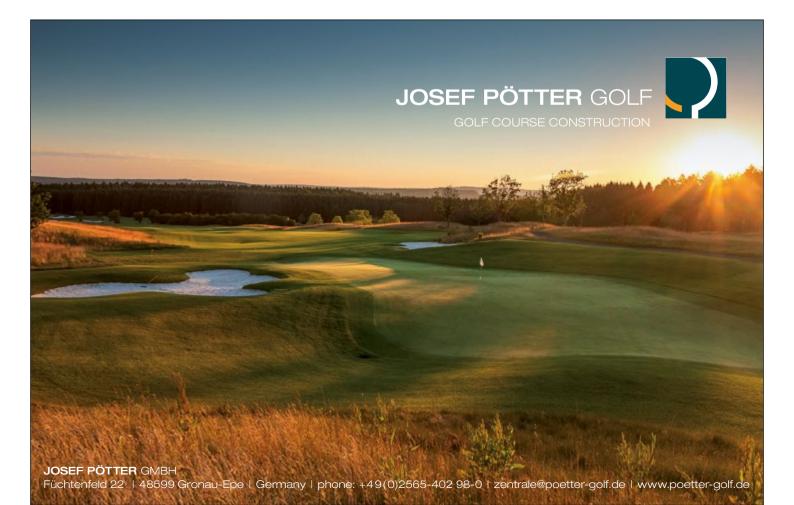
Huxley Golf All-Weather Greens

Huxley Golf

Premier All-Weather Surfaces for Golf

Private All-Weather Practice Facility, Northern Italy.







The proposal for the irrigation system covered water sourcing and lake management

of the week, so a Rain Bird IC System was specified, eliminating the use of satellites and decoders and providing multi-function real-time response along with powerful diagnostics and end-user control. It enables the course superintendent to run a status poll and voltage check of the whole site in three minutes – invaluable for fault detection and rectification after a strike. Having the system in the ground during construction also provided an with two sensors per green for soil monitoring. Other features include a weather station and a Rain Watch rain gauge all feeding data to the control system in real time. Golf contractor All Golf Services was subcontracted for the physical installation.

In-Aqua partner Damir Čizmek says: "The architects looked to the longterm future in all aspects of the project and were prepared to advocate to the client being 'future-ready'. They really

"Having the system in the ground during construction also provided an invaluable way of monitoring the site"

invaluable way of monitoring the site, flagging up if machinery hit cables. Once the system was integral again, contractors could move on to the next hole. This time-saving, problem solving monitoring wouldn't have been possible with a decoder system.

A Rain Bird Stratus II Central Control operated via PC at the facility and on a mobile device from anywhere in the world is enhanced with the largest Rain Bird soil sensing system in Europe, understand irrigation and were able to put forward robust proposals."

Owner Gordana Šolak likened the skilfully remastered King's course to Sleeping Beauty when it was revealed to the golfing world in 2017. Reawakened after years of neglect, the new jewel in Europe's golfing crown was opened by HRH Princess Jelisaveta Karadordevic of Serbia and instantly tipped as a future Ryder Cup host, while ascending rapidly into Europe's Top 50.





The project's success is testimony to the talent of all those who worked under the Swans' direction and guidance, and was underpinned by their master plan and the owners' long-term view. Their vision for the Lake's course remains to be realised in the years to come, but the irrigation infrastructure is in place for when that day arrives. **GCA**

Ellie Parry is a turf industry marketing specialist