

Prestwick St Nicholas Golf Club



New Irrigation System Progress Update June 2022

Dear Member

Those of you who have been out and about on the course will have seen the new sprinkler system in action. What a difference this will make to our links in the months and years ahead. It has been a massive project but thankfully it is nearing completion.

Almost 15 miles of pipe work and over 16 miles of electrical cable have been laid. We have installed 891 sprinklers – of which nearly 700 have their own “mobile phone” connection to ensure we now have a fully integrated and infinitely flexible smart irrigation system. We have installed 116 control valves, many of which contain solenoid controls and auxiliary access hydrants.

To maintain the manufacturer’s warranty we are completing the installation of 118 electrical grounding rods. Each of these requires a minimum rod penetration of 2.4 metres to meet the electrical surge protection these sophisticated electronics require in the event of a lightning strike. We have installed a new Irrigation Control Centre in our Head Greenkeeper’s office – which now looks like the bridge on the Starship Enterprise – and has been fully certified by the installation engineers. This system comes complete with its own mobile phone application to allow remote operation and control.



[Sprinkler System in operation on 15th Fairway](#)

The new quarry-side pump house has been installed on a custom concrete base complete with the new packaged booster pump plant, capable of supplying 70 m³ of water per hour. This new pump house has been positioned well above the quarry flood line and is fully insulated and installed with frost protection. The majority of the system sprinklers have now been commissioned and tested and we expect the remainder to be completed over the next two weeks. This final commissioning will not require any part of the golf course to be closed.

The initial assessment is quite simply outstanding. The hydraulic pressure and associated water coverage exceeds our expectations and we are well on the way to being able to sign off on the overall system design performance. However, on a project of this size it is almost inevitable that we would encounter some technical issues and we have. During our pump commissioning activities it became evident that the booster pumps were not maintaining sufficient pressure in the suction

manifold to keep the pumps constantly primed. This only occurred when the pumps were on standby mode and not actively running. Nevertheless, it is a serious problem that is preventing us going into fully automatic system operation. The engineering and design specification suggests we should comfortably be able to maintain full pressure on the suction side of the plant. However, in practice this is proving difficult to maintain.

Wherever there is a problem there is a solution. To minimise any future issues with the system a modification to the specification has been agreed. This change requires the installation of a submersible priming pump to ensure the pumps are constantly pressurised. Fortunately, this was an option discussed with the designer at the start of the project and will future proof the system for many years to come.

This has been a once-in-a-lifetime experience for all involved at the Club with the new irrigation system and overall, despite the slow start, has progressed well. The support we have received from both the designer and contractor has been commendable and they remain fully on board and committed to ensure that our irrigation system is everything we hoped for.

Colin Ramsay
Captain
09 June 2022