

Servicing your most expensive asset

Don't catch a chill this winter, by cutting corners on a proper shutdown of your irrigation system, cautions Jim Fairclough

Last winter's extreme cold snap caught many Course Managers and golf clubs off guard. Having delayed or decided against the recommended winter shutdown procedures to protect their irrigation systems against the cold and frost, many clubs paid the price with costly damage to sprinklers, pipework and pumps.

When system can cost up to a million pounds, heeding the advice of manufacturers and contractors can save maintenance headaches next season and enhance the operational lifetime of one of the biggest outlays on the course.

"With budgets under pressure and a predicted milder winter on its way, the temptation may have been to once again delay the October shutdown to late November or even December, or – worse – skip shutdown altogether," says Lely UK's Toro Irrigation Manager, Robert Jackson,

"But my message is simple – don't! The truth is, during even the mildest of winters, if you don't take essential irrigation shutdown precautions it is merely luck if your system doesn't suffer."

Now is the time, therefore, to start planning, preparing for and performing irrigation system winter shutdown procedures, adds Robert.

Follow the manufacturer's advice by turning to your irrigation contractor and/or consultant to do this

professionally and successfully, he advises.

Attempting to drain or depressurise your system yourself could be asking for trouble, he cautions.

"If you are unsure of the procedure or are unsuccessful, you could put your system – or the health and safety of yourself and your colleagues – at risk."

The contractor will depressurise the system and use a compressor to remove the water – ensuring that water will not be left to expand in pipes, pumps and other components when it freezes, "the main cause of damage", said Robert.

"That's why it's essential to do this work in October or November before the frost sets in – December is too late. As we learned to our cost last year, no one is safe from the UK's increasingly unpredictable and adverse weather conditions."

Golf clubs in coastal locations have thought themselves "immune" to winter irrigation system damage but last year several of his major links course customers – "who had fortunately taken our recommended shutdown advice" – found themselves under a heap of snow.

Inclement weather can affect new or existing systems, so the advice remains essentially similar. But an old irrigation set-up can become too problematic to continue in use any longer, as an East of England course discovered.

Glen Lodge Bawburgh Golf Club



in Norfolk was the first course in the UK to feature a complete, fully working John Deere irrigation system, which was officially commissioned at the end of April 2009.

The system covers the club's existing 18-hole course and an additional new nine new holes.

More than a year later and the decision to invest in new irrigation is reaping maintenance as well as environmental dividends.

"With budgets under pressure and a predicted milder winter on its way, the temptation may be to delay or – worse – skip shutdown"
Robert Jackson (inset)

"What with the expansion of the course, as well as taking over responsibility for maintaining the driving range, we thought investing in a new irrigation system made the most sense," explains course manager Mike Ward.

"We were having problems with our old irrigation controller. We often didn't know a problem existed until parts of the course dried out, or faults were signalled – but we didn't know where to find them in the system."

Existing pipework on the 18-hole course was upgraded with new solenoid valves, sprinkler heads and decoders, plus a new Aurora control box mounted in the greenkeepers'



shed and an outdoor pedestal controller, each of which can control the other as required.

The system now irrigates all the tees, approaches and greens, some fairways where necessary, and the club's five gardens. It even controls a fountain with lights situated in a lake by the 18th hole.

Ward is able to operate, interrogate and programme the entire system from anywhere in the world by radio control or via the Internet using a computer or mobile phone, as well as save water using the Aurora controller.

An evapotranspiration (ET) meter linked to the system calculates the amount of water needed for irrigation based on prevailing weather conditions and rainfall, to prevent over- or underwatering. The Aurora controller also provides programming to the second rather than the minute, which can lead to large water savings over a season.

"This also saves on electricity usage, and long-term wear on the sprinkler heads and pumps," said Mike.

"Agronomists love it too, because if you're not overwatering you avoid the build-up of disease.

"I can run multiple programmes, turn individual heads on and off on different parts of the course, and turn individual programmes on and off as required while leaving others running – the whole system's extremely flexible."

This year Mike added a rain bucket to the system. Sitting next to the ET meter, it delivers increased accuracy, he reports, as it compares actual rainfall against evaporation, and can switch the system off if necessary.

"In 2009 we ended up utilising only about a quarter of our normal water usage in what was a very dry summer, during which we went eight weeks without rain," added Mike, who identifies several reasons for the savings. The ET meter linked to the system is adjusting the rate all the time and I can also use my iPhone to make adjustments while I'm out on the course, based on what I'm seeing, without having to go back to manually operate the controller all the time."

Ward usually uses his iPhone for on-course control, as it's "easier, quicker and has a better range than the radio", he notes. "You can also see what you're operating by name rather than having to carry a separate list of decoder numbers when using the radio.

"I can log in, find the heads I want to control, make the settings and log off quicker than with other phones. The iPhone also tells you when the system's about to come on, whereas the radio doesn't."

This year marked a first for Mike in another way. "It was the first time I've ever started up the irrigation system and not had any electrical faults to worry about.



"With our previous system, we often had to put in at least 35 new decoders at the start of the season. This time round, we simply turned on the new system, everything fired up perfectly and there were no faults."

Some clubs, particularly council-run ones and smaller enterprises, may blanch when service contracts are mentioned but the sense of them is clear to see, says Jon Jinks, Director of Osprey Water Management, who specialise in installing and maintaining irrigation systems.

"Avoiding a frozen system is a key priority as winter comes on," he stressed.

"Under a service contract, we would drain the system then undertake a commissioning in the spring, refilling with water and checking there are no leaks, that sprinkler heads turn correctly and deliver the correct amount of water in the correct arc and in an even pattern. As irrigation systems are closed, leaks can be detected if pressure levels fluctuate."

Clubs that decide to forego servicing and do not drain their system run the risk of a costly outcome.

"Pumps are made in cast iron and can split if temperatures fall low enough," Jon added.

"My first thought then would be to ensure a thermostatic heater was installed in the pump house, which comes on when temperatures reach a critically low level."