

As the acceptance of – and demand for – benefits provided by the automatic watering of extensive sports turf playing surfaces gathers momentum, it is evident that the sourcing and conservation of viable water supplies are fast becoming major issues.

This is especially relevant to golf where, in addition to the numbers of new courses being constructed every year, more and more existing Clubs, faced by increases in traffic, are investing in automatic watering systems to help greenkeepers overcome maintenance problems created by wear and tear – and equally important, present courses on a par to those seen during televised tournaments.

In the south, the vast growth of residential development plus a big increase in the building of industrial estates requiring water has compounded the situation. These factors and the undoubted change in climatic conditions which we are experiencing is now reaching a point of real concern.

But all is not lost! The key to future sports turf irrigation and golf course watering in particular is the provision of large scale water storage facilities in the form of a reservoir or ornamental lake.

Utilising impounded water – out of season water supplies boosted by natural, winter rainfall – the storage facility, if designed to match the needs of an automatic watering system, could provide sufficient water to last through the bulk of most long, dry summers.

Examples of this far-sighted approach are already beginning to take shape. In Devon, the design for a new 27 hole golf course at Dartmouth, currently under construction, includes a lake capable of storing 1.5 million gallons of water.

Fed from boreholes for which an abstraction licence has been obtained, water will be pumped into the lake to service their automatic watering system, which, unusually, consists of 216 full circle pop-up sprinklers covering all 27 greens and tees.

Despite the fact that full circle sprinklers use 50% more water than the more conventional part-circle heads, the capacity of the lake is such that in the unlikely event of the boreholes drying up, the automatic watering system would be able to continue to operate daily for up to six weeks before supplies were exhausted.

In real terms, the lake, full of 'winter water' for use in say late March or early April onwards, would only require topping-up through the summer. If the watering programme was carried out over six months, the use of 'peak season water' could be reduced by up to 50% – a substantial saving.

In contrast, the specification for the nine-hole pay and play Thorney Farm golf course, being developed close to Heathrow Airport, includes the construction of a five million gallon lake.

From what Richard Skehan, director of the company developing what was



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# Wise up to winter water

a waste disposal dump, tells me, fairway watering has been specified in addition to planning for pop-ups around greens and tees. In this instance, the lake – initially filled with 'winter water' – will be capable of supplying enough water to service the system without replenishment for up to three and a half months!

On the Solent coast, the Barton-on-Sea Golf Club – founded in 1898 – have embarked upon an imaginative, phased re-development of their existing 18 hole course which, when completed, will consist of 27 holes plus an ornamental lake featuring an island green.

As might be expected, the lake is not being created just to make the course look attractive – it will also serve as a reservoir for a pop-up system for greens, tees and approaches. The lake, capable of holding 1.25 million gallons, will be fed by two natural springs and possibly a stream containing treated water which runs from the nearby sewage treatment plant. Top-up supplies – mains water – will be piped into a break-tank and held, prior to being pumped into the lake.

Tony Gadd, course manager at Barton says that the treated water supply will most probably be used as an emergency source although tests may well prove its viability for everyday use on the course.

So how much is it going to cost members who, having an existing automatic system, appreciate the importance of the need to become relatively self-sufficient in terms of water supplies?

Surprisingly little. The provision of a reservoir – such as a large pond or lake – should, I'm told, be no more than £10-£15,000, depending on location, soil structure and ease of construction. When I asked about disposal of the resultant spoil, he replied to the effect that this could be used to build a feature somewhere else on the course – or as he succinctly put it; "sell it!"

Talking of costs, the provision of a reservoir can also reduce the price of water being piped onto the course. 'Winter water' is a far cheaper buy in volume than peak season water – if it is available both in time and quantity.

Safeguarding water supplies is one thing, managing its usage is just as important. In this context it is obviously of equal importance to realise that the automatic watering system can play a key role in water conservation.

It will do so, providing it is properly designed, correctly installed, operated thoughtfully and serviced regularly.

The greenkeeping team can contribute much to achieve consistency of operation by learning as much as they can about the system. Sensibly, one member of the green staff should be given the responsibility of keeping a daily eye on the equipment and carrying out relatively minor adjustments or repairs. This will entail some training – often provided by the irrigation contractor who installed the system.

As knowledge and experience is gained, these skills can be put to good use: saving time, (awaiting an outside engineer to arrive and solve what is often a simple fault) frayed tempers and the possible loss of thousands of gallons of precious water should a sprinkler malfunction or pipe joint fail.

Talking of maintenance, Clubs should also consider the importance of budgeting for at least one major inspection and service each year. This is best achieved by arranging a contract with the company responsible for installing the system originally, or where contact has been lost, by asking the British Turf and Landscape Irrigation Association to provide the name of a suitable alternative.

**Footnote: Clubs should be aware that a licence to abstract water – be it from the mains, a river flowing through the course, a natural spring or by sinking boreholes is a mandatory requirement. Club secretaries should consult their nearest National River Authority office for details.**

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