

GOLF COURSE DRAINAGE

new ways to install piping



Installing 35mm pipe with a trenchless machine pulled by a track vehicle.



Laying drainage pipe on the parkland course at Redditch Golf Club

Wet, soggy fairways and greens are among the most frequent criticisms made by Britain's golfers. Criticisms perfectly justified, which should not arise if Green Committees only recognised the solutions are readily to hand, though at a price.

Tom O'Brien, Royal Birkdale's Head Greenkeeper had problems with standing water shortly after his appointment to the club. His comments on how to handle the job are simple and to the point. "First find your outlet. There is no point in ripping up the course and installing drainage if there is no place for the water to escape. Only by working back from either a running stream an existing pond or a fully working drainage exit can the problems be overcome".

There are courses where none of these solutions are available and it may be necessary to excavate your own pond. Not such a difficult or expensive operation with the type of mechanical equipment now available on contract hire to the greenkeeper.

Many of our courses were constructed around a hundred years ago on land rejected by the farming

community as unsuitable for either cultivation or feeding cattle. They may have installed land drains and if they had most of them have either caved in or become blocked with silt and debris. Although the golf course may have occupied a position of splendid isolation on the fringes of habitation, because of the growth of personal transport, in the form of the car, those isolated sites overlooking golf

continued on page 16

Safe, simple and tidy trenches

Drain your ground, lay your water/irrigation pipe, put in your power supplies - here are six good reasons to use Bourgein trenching machines:

1. Speed
2. Narrow trench width
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5. Trenchers are small enough to operate in sites with limited access and light enough for delicate surfaces
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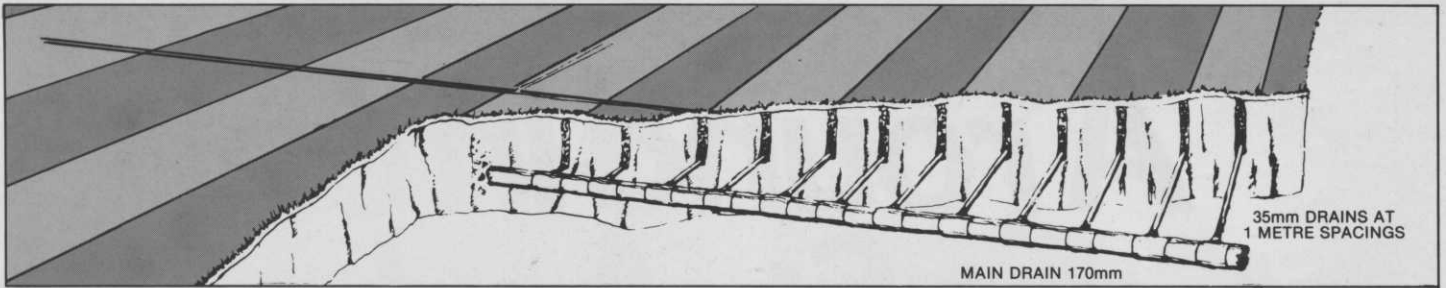
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Using pipelaying machinery now available and the revolutionary 35mm pipe designed and manufactured specifically for drainage by Aqua Pipes Ltd, the draining of sports grounds becomes simple.

courses became the desirable homes for those that could afford to move away from the needs of public transport.

People need water, thousands of gallons a year, most of which is poured into the drains or on to the land. Roads were built, collecting even more concentrations of rainwater much of it allowed to run on to the only open space nearby - the golf course.

No wonder our courses appear at times to be miniature versions of the lakes of Northern Ontario until by evaporation or seepage into the clay subsoil the surplus water disappears.

A number of drainage contractors now have techniques to install course drainage without the previous upheaval of deep trenches and mounds of earth that take weeks to replace.

A Land Drainage firm at Shipston-on-Stour, D. W. Clark are now specialising in golf course work using polypropylene pipe.

A small percentage of their contracting work has always been involved with the drainage of recreational areas, but as the volume of this work increased, they could see the need for a more specialised approach to suit the particular problems associated with sports field surfaces. The major problem is to disperse surface water as quickly as possible which requires drains laid as closely as economically possible, and without disturbance to the playing surface. This can be achieved by installing a drainage system at 6 metre to 10 metre spacings and cross gravel banding with 50mm wide slots at 1 metre to 2 metre spacings, but the installation of the basic drainage system is both expensive and causes major disruption.

To minimise these problems they have developed a 35mm diameter drainage pipe, which can be laid in the bottom of each gravel slot, eliminating entirely the need for

larger diameter pipes. Any collector drains can normally be kept off the playing area, for instance at the edge of the rough on Golf Fairways.

In conjunction with the 35mm pipe they have also developed two machines for installation, one machine excavates a trench to a true gradient, controlled by laser, elevates the soil directly into a trailer, lays the pipe and installs the gravel fill in one pass - this machine is ideally suited for areas where gradient is critical. Where gradient is not a problem, a simple trenchless machine is available which draws a slit through the ground and injects the pipe and gravel fill as it passes. As the majority of golf courses enjoy good slopes this system is ideally suited to the drainage of most fairways.

continued on page 20

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On Wednesday 17th December we held the Christmas meeting at Okehampton Golf Club. In the morning some 30 members played a greensome for the P. J. Flegg Trophy. Most were lucky to complete before the rain set in for the day, and that in itself is unique for this Winter.

It was noted however that over half made their annual visit to the river by the 12th green.

The results were:-

- | | | |
|------|--------------------------------|---------|
| 1st: | R. Whyman (Bude G.C.) | |
| | M. Pike (Elfordleigh G.&C.C.) | 39 pts. |
| 2nd: | P. Newcombe (Exeter G.&C.C.) | |
| | J. Mills | 37 pts. |
| 3rd: | T. Blackburn (Downes Crediton) | |
| | R. Parker | 34 pts. |

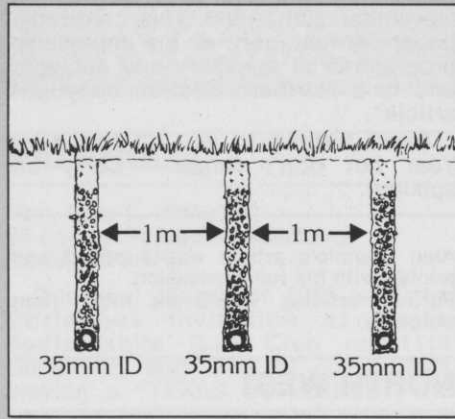
Golf was followed by a splendid Christmas dinner for a full house of 70, after which we were entertained by Hercules Britain's funniest strong man. The day ended with the raffle draw, by which time we were all full of food, good fun and Christmas spirit. It only leaves me to thank all who made this day one we will all remember. The staff at Okehampton G.C. P. J. Flegg and Iseki for the golf prizes. D. O. Hunt for the wine at the tables. All members and trade for raffle prizes, and to Browns for the Christmas hamper.

Unfortunately I was unable to attend the Christmas meeting (did anyone notice?) and I would like to thank Gordon Child and Brian Summers who stepped in and ran the meeting so well for me.

The annual match versus the Secretaries will be at Teignmouth G.C. on Tuesday 24th February 1987, the team will be notified by our Chairman.

One final point, if Mr. Bert Flack happens to be reading this, thank you for your Christmas card, please send me your address so I can reciprocate in the future, also you are often asked about at our meetings so any news would be appreciated.

Happy New Year to you all.



Use 35mm pipe at the required grade, with gravel fill and topped as required, for cost economy. Water will drain away horizontally only through pipe, not through gravel.

A typical situation was encountered at Redditch Golf Course, which enjoys a very attractive undulating setting, partly in old parkland and partly woodland. At the time of construction an excellent job was made of the course layout, irrigation system and, of course, the Club House, but little or no attention was paid to under drainage. The course is constructed on Red Marl and the lack of drainage has caused serious problems with maintenance and even playing on the course in particularly wet periods. Over the years various attempts have been made to improve the situation by installing odd drains into the wettest

areas and mole ploughing complete fairways. None of these treatments was particularly successful and the mole ploughing caused an unacceptable amount of disturbance.

The Club decided to allocate a budget to drainage on an annual basis and starting with the wettest fairways, drain the whole course over a number of years. The whole course was examined, planned out and costed. It was found that the problem in the woodland areas was mainly a complete lack of soil structure coupled with very thin top soil, whereas in the old parkland the soil was in generally much better condition but the old existing drains had been broken in the construction of the course. A decision was taken to install drains with the trenchless machine at 2 metre spacings and to treat the whole of the wettest fairways within the budget available.

The first phase was installed in the early summer of 1985 during a fairly wet period; disturbance was minimal and in fact most players continued to use the fairway whilst the work was in progress. The system performed very well over the 1985-86 winter and the second phase was completed in dry conditions in 1986.

The cost of draining a fairway varies considerably depending on length and width etc. but the total cost of the two phases completed was £20,000 and eight complete fairways have been improved, so an average cost per fairway is around £2,500.

SEMINAR FOR THE NORTH-EAST

A distinguished line up of speakers has been booked for a one day seminar on Tuesday 17th March at Houghall Agriculture College by the Cleveland Section of the Greenkeepers' Association.

Jack McMillan the BGG A Vice-Chairman and Sunningdale's Course Manager will preside over the proceedings which will commence at 9.00 a.m.

Among the speakers are Nick Bissett from Askham Bryan College, who will discuss Greenkeeper Training, Robin Hume from Turf Irrigation Services and Eddie Sims of Par 4 on Irrigation for

the Golf Course, Derek Gannon, the Belfry's Course Manager on Preparing a Championship Course and an up date on the latest Pesticide Legislation by a spokesman from the Ministry of Agriculture.

There will be an opportunity for questions to the panel at the end of the session.

The total seminar fee of only £6.00 includes, coffee, lunch and a set of notes.

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