



Keep the Sand Traps playable and the golfers off your back

John Lelean examines ways to manage bunkers

The easiest shot on the golf course is the sand iron out of the bunker - if you cannot believe it ask Gary Player! He would certainly agree, but most of your members will not, particularly if they can point to one of a great number of problems the greenkeeper can face if he does not maintain his bunkers with the same degree of care, that is lavished on the greens.

If the greenkeeper would care to look back over the past twelve months at the minutes from the Green Committee it is almost a cast iron certainty the condition of the sand traps will feature at least once during the season on most inland courses.

Complaints range over water-logged traps, compacted sand, sand too deep, no sand at all, overgrown edges, crumbling faces, impossible lies, inconsistency of sand from bunker to bunker and even original poor trap design put in by a predecessor, but never rectified.

To this list can be added broken rakes, rakes that will not smooth the surface, debris and stones and the activities of rabbits. There is little doubt you will be able to add to this catalogue of daily moans.

The sand trap has become an obligatory hazard for the golf course, though if they never existed in their original form on the sea side links it is doubtful whether any golf course architect would have dared to expose the sand and so catch what could have been considered a reasonable shot. Be that as it may,

bunkers both on the fairway and around the greens are part of the game of golf but that does not mean to say a slightly wayward shot deserves a full penalty.

There are some greenkeepers who do not consider it necessary to play golf nor take more than a passing interest in the game to manage and maintain a golf course, which could account for the fact they may not understand that a ball in the sand should not necessarily be a full lost shot. It should certainly be penalised by not making the following strokes easy, but the golfer must be given the opportunity to use his skill to redeem the situation.

This he will never achieve unless the bunker is fair. By fair means he should be given a reasonable stance, the club will cut through the sand and his swing is not impeded by objects that should not be there.

Let us look first of all at the bunker positions in relation to the hole from tee to green. Certainly they should be visible on the inland courses, though exceptions are permissible on the links where wind sweeping in from the sea tends to keep the traps in low profile.

Inland the fairway bunkers provide a frame for the opening shot, defining the line to the green, perhaps encouraging an adventurous approach with all the disadvantages if the ball is not hit in the direction or distance intended.



Above & Below:

Green staff at Beeston Fields G.C. Nottingham reconstruct a bunker using an ICI terylene liner which prevents loss of sand but will allow water to drain into the subsoil.

Around the greens the sand again provides perspective encouraging supreme accuracy for the short iron approach to the pin with the obvious consequences for failure, though the golfer should never feel a ball in the sand trap cannot be out and down in two more shots.

There is a tendency on every course to be constantly looking for improvements in layout and design, by extending the tees, reshaping or re-positioning the greens, putting in more trees or building ponds. These alterations, often in homage to the pagan God of Length, frequently ignore the original siting of the sand traps which are left in their original position completely destroying the intention of the architect who laid out the hole in the first place.

One such club comes to mind where the Committee bought the railway embankment which dissected their course when the line was closed under the Beeching Axe. It was a marvellous purchase, not only for the amount of extra land involved but because the 20 foot elevation offered so much opportunity to build "tiger tees" lengthening the hole by 30 or 40 yards.

We will not digress on the methods or merits of building tees on top of sandstone and clinker, suffice it to say there are problems and pouring water on is not the complete answer. What has been achieved are a number of very interesting and challenging par threes, loved by the big hitting single figure golfers, but detested by those who cannot carry an iron shot 210 yards



Above: Sand in steep faced bunkers should be pushed away from the face to avoid plugging and give the player a reasonable stance.

Below: Laying a stone drain on a permeable 'Tyvar' liner to avoid ponding in wet weather.

over the facing front bunkers guarding the putting surface, with a slight fade to avoid the out of bounds down the right hand side of the hole.

These bunkers should have been adjusted when the realigned hole was planned, but they weren't and it is doubtful whether they ever will, certainly not as long as the Green Committee is dominated by those who regard

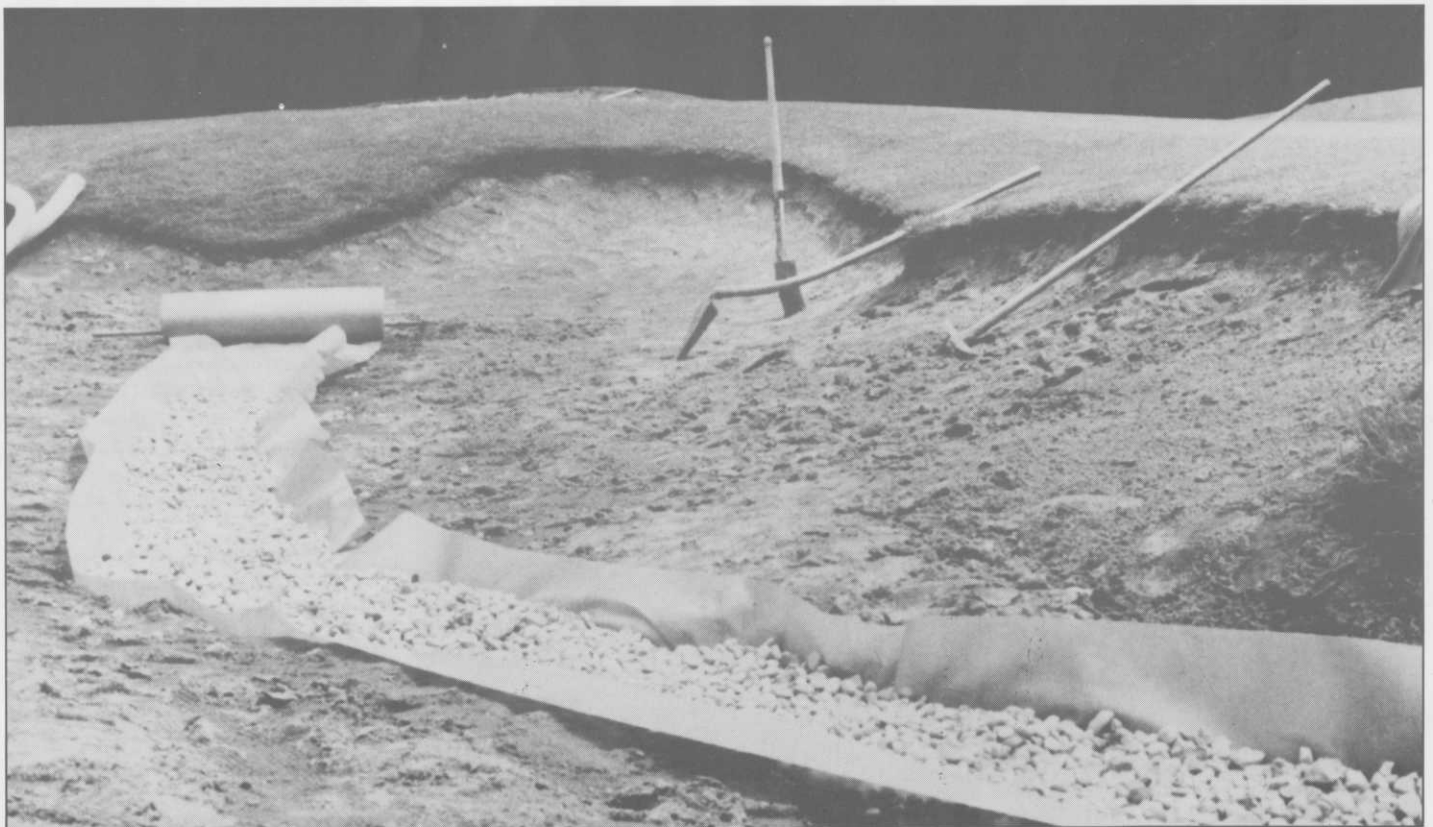
the holes as their individual perk to pick up the bonus of birdie twos in the medal rounds.

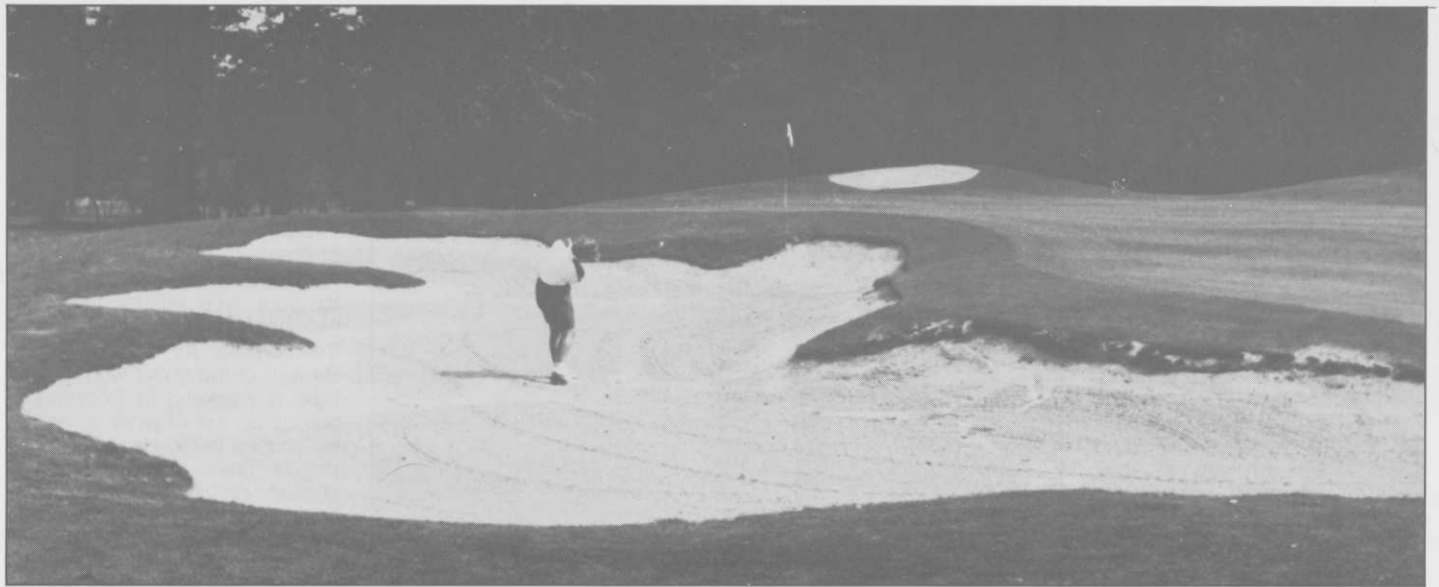
The "IDEAL" BUNKER

Bunkers are not available out of a pattern catalogue, each one has to be individually designed for your type of soil structure, the shape of the hole and to suit the purpose for its placement. Beware of the golfer who returns from a weekend in Scotland, a holiday on the Algarve or visiting his cousins in Florida, armed with sketch plans for the "ideal" bunker on our eleventh. He probably knows absolutely nothing about the course sub-soil, drainage capability, sand particle size or cost of the maintenance.

There is a tendency because of the high cost of labour to reduce the amount of physical maintenance work on the golf course, which is why many of the sand traps constructed between the wars have either been filled in or converted into grass bunkers. There are now some very efficient mechanical rakers on the market designed to rotovate and smooth the sand surface, but to keep the trap in pristine condition it is still necessary to get off the machine and finish the job by hand, though when greenstaff are under a time pressure, the finishing part of the exercise is too often missed.

continued overleaf





Above: Irregular shaped large bunkers require considerable maintenance and are extremely labour intensive.

One of the most common complaints is that of loss of sand and how much it costs each year to replace it. Many Committees are convinced that armies of thieves descend at dead of night to remove tons of the stuff along with the rakes to build beaches alongside the swimming pools in their gardens.

Where does it all go? Some is deposited on the green when the ball is played, some is blown away, but the bulk washes

through the soil into the sub-strata after every shower of rain and even by the action of the irrigation system in the dry days of summer.

To overcome this problem there is only one solution, dig out the bunker completely to the level of the sub-soil, install a drainage layer to the standard necessary even though this might mean a full piped system and then lay one of the several synthetic liners on the market before replacing the sand.

Make sure it is correctly positioned, anchoring the edge of the material by digging a two foot trench all round the bunker, dropping a good overhang of the material into the trench and firming it down with sub-soil.

Choose the correct grade of sand even though it may cost a few pounds a ton more. Take the advice of your supplier and then obtain a quote from a competitor. The company that wants to

continue doing business will never give you bad advice.

It is well worthwhile keeping a chart in the greenkeeper's shed of every bunker on your course noting the amount of sand used during the year for topping up. Those which appear to lose considerably more than others should be listed for investigation, excavation and possible re-building.

TECHNICAL 1

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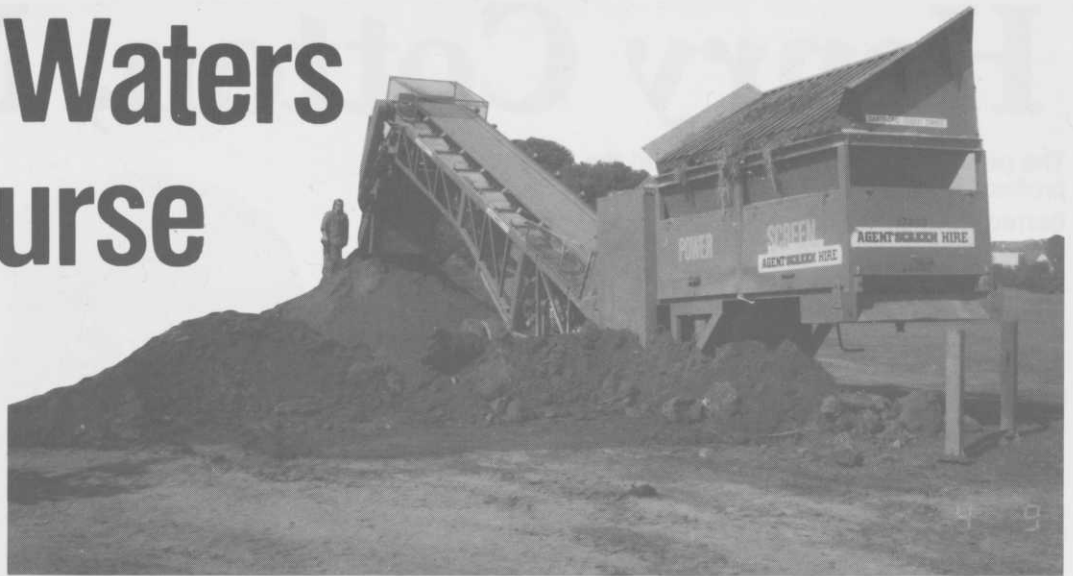
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Fairlop Waters Golf Course

Golf was cancelled for days on end at many clubs in the South of England following the great October storms. But not at one of the newest courses in the country, Fairlop Waters at Redbridge, Essex, where only a couple of days were lost.



This reflects the quality of workmanship which has gone into creating the main full 18 hole course out of an area which had been a fairground, a wartime fighter airfield, a gravel pit and a refuse tip. Fairlop Plain, as this flat-as-a-pancake 350 acre site in the Borough of Redbridge was called, has been all of these things, but over the past five to six years it has been transformed into Fairlop Waters, a landscaped amenity with sailing, angling, country park, adventure playground, horse-riding and now a magnificent 120 acre golf course and golf driving range.

Like all the other amenities at Fairlop Waters, the course, on land owned by Redbridge Borough Council, is operated by Norstead Leisure Limited on a 125 year lease, with profits shared by the Council and the company.

Creating the golf course presented all the expected problems of land drainage and irrigation on restored land. It was subject to settlement and suffered badly from flooding.

First enquiries by the Council suggested that it would be difficult to drain the site which is very flat, with only an 11ft fall in about 1,100 yards. Anglian Sportsturf Ltd of Witham, Essex, who are specialists in sportsfield and leisure area creation and improvement, believed it could be done.

Technically, the drainage of a site so flat with Anglian Sportsturf's design expertise and previous experience is possible. However, in order to install the pipe drains with sufficient falls to overcome shifting levels in the ground, it was first necessary to design a drainage scheme that would take account of any natural

drainage fall already existing. In fact, the natural ground gave little help. However, a scheme was designed that would take what advantage it could from the existing levels. Even so, it is difficult to install pipes with a very shallow fall, that this design demanded and the use of specialist laser controlled trenchers are essential. Anglian have pioneered the highly sophisticated computer controlled laser technique and with machines equipped with this technology, the fundamental pipe drainage scheme was installed.

Considerable difficulties were encountered during the course of installation, due to the debris - everything including the kitchen sink - being buried in the tip.

Following the installation of the pipe drainage scheme an inter-connecting matrix of Sand/Gravel

Every part of the Fairlop course is man made, with the help of enormous machines. This machine is screening top soil for drainage.

drainage channels were installed. These pick up the surface water and carry it to the pipe drains. This enables the intensity of the drainage to be dramatically improved to an acceptable level for all year use of a facility of this kind.

Anglian's work has been so successful that the drainage system has proved an effective safety valve, allowing the gas to be vented in a controlled manner so that it has little or no effect on the grass.

John Jacobs Golf Consultants were retained to design the course and supervise its construction in conjunction with the Director of Technical Services. The first parts to be constructed were the tees and greens, giving these the maximum time to settle down before play would begin.

Unfortunately the company to which this work was contracted went into liquidation and Anglian Sportsturf agreed to complete the contract. The company continued to maintain the course and do necessary horticultural work until the course opened during the early summer.



This was how the first green looked during the first summer after seeding. The greens were the first part of the course to be made in order to give them time to settle down before play began.

Every feature of the Fairlop Waters golf site is man-made. Starting from a flat surface, 6,300 yards of interesting and enjoyable golf course has been built, with 87 bunkers, some very large, as well as ditches and lakes. Over the course 5,000 trees and whips have been planted. The teeing areas are very large, which means that they have a longer life during heavy-play times in the summer, and there are holes which would tax a very competent golfer.

The 7th, is extremely long and the 14th requires a straight drive as the out of bounds area lies just to its left and a man-made gully lurks on the right.

All this adds up to a two-and-a-half hour round for a good golfer, with another hour for a less competent player.

Tony Bowers, who controls the course, is delighted with the first four months of Fairlop Waters. With 250,000 people living in the area and a mid-week round costing only £2.75, the course is well patronised.

Fairlop Waters site had many uses over the years, from wartime airfield to rubbish tip. This was how it looked when work began on the construction of the golf course.



Naturally the course is improving with time and as the young trees mature it will take on a new appearance, but comments are becoming more favourable and people are coming a long way to play.

He is particularly pleased that Fairlop Waters has coped with the rainstorms of the early autumn and feels that the drainage system has proved itself highly successful.

Together with a driving range and a magnificent centre where meals and snacks are available, Fairlop Waters is a popular lunchtime rendezvous for business people. With a whole range of other sports facilities on hand, the centre also attracts families who come, not just to play golf, but to sail, fish, ride or just walk.

John Topping, Norstead's general manager for the whole Fairlop Waters Complex, sees the new course as a great amenity and a triumph.

From a most unpromising site a huge new amenity has been provided for Redbridge.

TECHNICAL 2

Article by.....

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