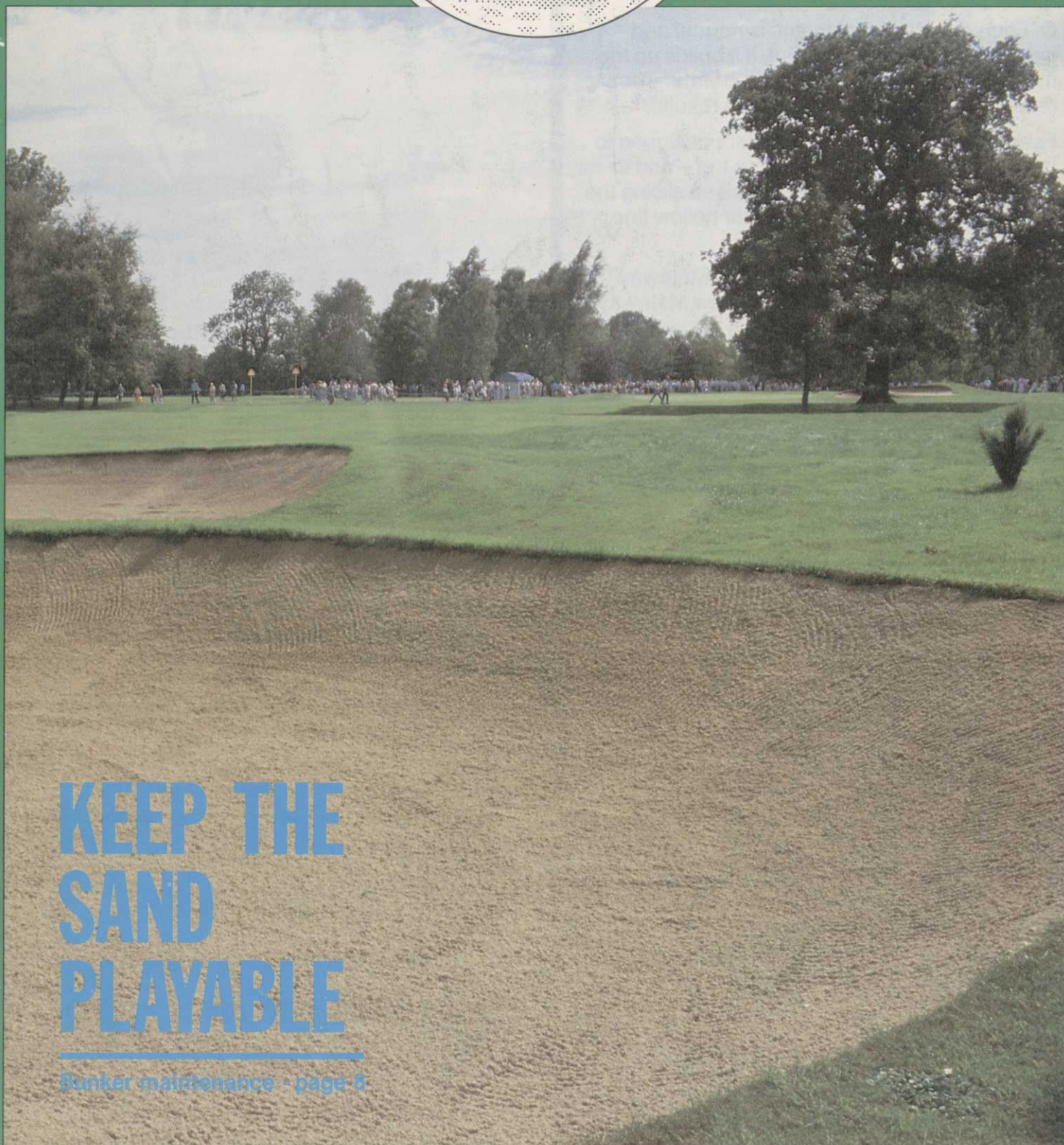


JANUARY '88

Golf

GREENKEEPING

MANAGEMENT AND MAINTENANCE FOR THE GOLF COURSE INDUSTRY



**KEEP THE
SAND
PLAYABLE**

Bunker maintenance - page 8

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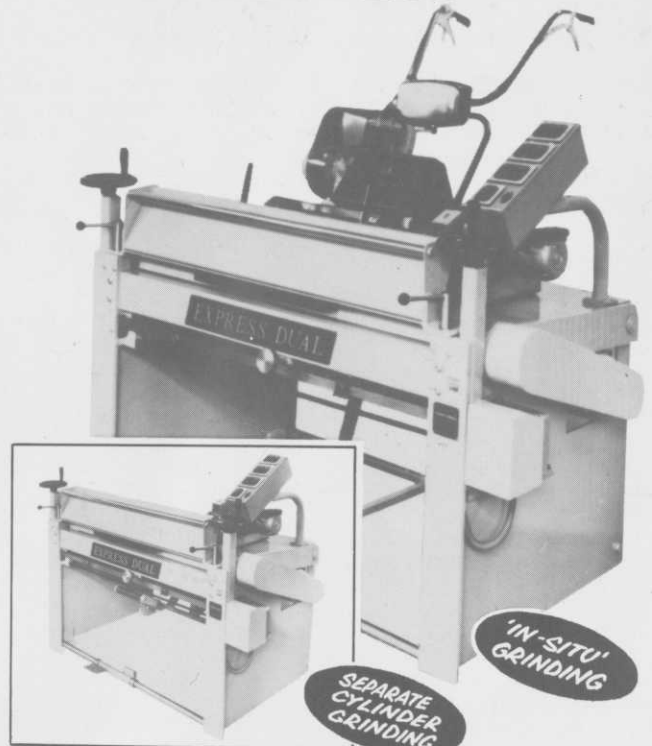
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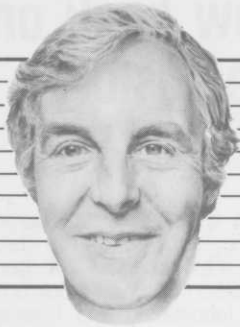


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Greenside Comment...



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The Year Ahead

As we enter the New Year, the prospects of a better deal for greenkeepers look extremely bright. Interest in the game of golf world wide is growing at an enormous rate and this must offer tremendous opportunities for those young men who are prepared to set forth and seek the rewards for hard work and initiative both at home and in foreign fields.

Massive financial investment is currently taking place in Spain, Portugal, France, Germany and the Middle East where golf courses are under construction combined with housing and hotel development. The investors know only too well their rewards will only be realised if the standards and condition of the golf course match the price levels they will be asking for the accommodation.

Experienced greenstaff and this must include the British greenkeeper, recognised as among the best, will be in great demand provided they are prepared to dedicate themselves to the job, adapt to the customs in their chosen country and learn a new language.

It is an opportunity for pioneers, those, who like their predecessors set out to the new world to seek their fortunes.

Even at home there will be increasing opportunities as private enterprise capitalises on the policy change relating to the release of more agricultural land for leisure purposes. Local authorities will find it increasingly difficult to find the huge sums to build new courses, so it will be the private sector where the majority of new development will emanate, but as those who already earn their living with company golf courses know, the rewards are considerable, but accountability severe.

The new Greenkeepers Association is one year old this month. It has a full-time administrator and offices at the Sports Turf Research Institute at Bingley St. Ives at Bradford, but if greenkeepers believe they can now sit back and let others organise their lives they will be in for a rude awakening.

The strength of any organisation is only as good as the effort put into it and this particularly applies to the BIGGA. We have been critical in the past of a seemingly lack of action, but there are a number of dedicated members who have put in considerable effort to launch the combined association and steer a passage through troubled

waters. As well as the nominated officers at national level those who organise the membership within the regions should also be recognised.

The priorities for their first full year are two fold. The development of a recognised improved education and training scheme to cover not only new entrants to the industry, but those who have not been given an opportunity in the past. Compared to other industries the standards of training available to greenstaff have been abysmal. What other business will only take trainees to a City & Guilds Certificate and not offer nationwide opportunities to progress to higher levels of certification?

The second goal must be improved salaries and working conditions, but one will not be achieved without the other. In some ways it is a "chicken and egg" situation. The answer is firmly in the control of the members themselves. Only they by their own efforts can improve the image of the greenkeeper and portray themselves as professionals doing a professional job.

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February: Artificial reinforcing for turf areas
All purpose terrain vehicles for the
golf course

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NEWS ROUND-UP

PEOPLE, PRODUCTS AND DEVELOPMENTS

IN THE GOLF COURSE INDUSTRY



Sotheby's Spring Sales £1,500

Sotheby's Spring series of sales in Sussex will this year include a sale of Golfing Clubs and Associated Works of Art, to be held at Summers Place, Billingshurst on March 31st 1988.

Enthusiasts of the sport and collectors may be interested in a variety of early golf clubs by Paxton, McEwan, Simpson and Auchterlonie.

A set of eight prints by Hassall, entitled 'Seven Ages of Golf' depicting figures in comic situations on the golf course has an estimated value of £1,200-1,500, and a Doulton vase decorated with golfing scenes is expected to realise between £700-£900.

Among other items in the sale include a number of interesting golfing books, quality paintings and unusual novelty pieces associated with the game.

Sotheby's Collectors Department will also be attending the National Exhibition Centre in Birmingham on March 4th-6th 1988 to advise on buying and selling golfing items through Sotheby's

NEWS 1



Wind Instruments

Met-Check, the leading meteorological equipment manufacturer and supplier, has been appointed sole UK agent for the Maximum range of wind and weather instruments made by Maximum Inc of Boston, Massachusetts.

Maximum's instruments are designed and manufactured to the highest professional standard; they are available with silver or black dials and are guaranteed for five years.

Products available from Met-Check include the Maestro which is an anemometer with either standard or standard and expanded scales, gust recorder and eight LEDs to show wind direction and the Vigilant anemometer which has similar standard and expanded scales but does not show wind direction. Both instruments are mounted in quality brass cases.

The Sirocco is a simple, self-powered wind speed indicator with a compact gauge mounted on a wooden block and is very competitively priced. The Mini-Max is a remote-reading dual scale electronic thermometer with high and low recording pointers.

A number of golf courses have purchased wind speed instruments, including Hunstanton on the East Anglian coast.

NEWS 2

New book on the History of Golf

Hot on the heels of Europe's historic victory in the recent Ryder Cup in the USA, comes publication of a new book on this most fascinating and frustrating sport: GOLF: AN ILLUSTRATED HISTORY by Robert Green which Collins Willow publish on October 29 at £14.95.

Starting with the probable origins of the game (from the Flemish sport of chole played in medieval times), the book looks at all aspects of its history - the Scottish connection; golf equipment; great champions and great championships; the US Tour and its equivalents worldwide; the Ryder Cup; and amateur golf and ladies golf.

In addition there are chapters on St. Andrew's, the cradle of the game, the other best courses around the world, and on an often overlooked breed - the architects. How many courses in Britain match up to Alister Mackenzie's (the Augusta National designer) 'essential features of an ideal course' found on page 167?

Author Robert Green also bravely picks his 30 household names of golf, with some contentious inclusions and omissions. Johnny Miller is in, but Hale Irwin, Fuzzy Zoeller and Larry Nelson are not. From an earlier age, both Willie Park (winner of the first Open Championship) and Willie Anderson are excluded, as is Jim Barnes, the emigrant Cornishman who in 10 seasons from 1916 won two PGAs and an Open on either side of the Atlantic. Readers, no doubt, will make up their own minds as to their all-time greats of golf!

As its title suggests, the book is handsomely and extensively illustrated with many vintage black & white photographs and etchings plus the best of today's colour shots of players and courses. All in all, Robert Green has written a lively and rich survey of this very great game.

ROBERT GREEN is a young writer who has worked for Golf World magazine and was the London Daily News golf correspondent. Born in Manchester, he lived in Derbyshire before attending university at Sheffield. A keen golfer himself, he is now based in north London and plays at Highgate Golf Club.

NEWS 3

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...News Brief...ne



HOWARD SWAN HAS LEFT GOLF LANDSCAPES TO ESTABLISH A PRACTICE IN HIS OWN NAME SPECIALISING IN GOLF COURSE CONSTRUCTION MANAGEMENT

Born in the North of England and intensely proud of his Geordie heritage, Howard Swan successfully completed two University degrees in the early seventies. From a domestic base in Essex, where his father had relocated because of his work, he decided that initially, at least, he would follow his chosen academic subjects and commenced employment with an American pharmaceutical company, in the corporate planning department.

After two years, however, the business which had been started by his father, and in which he had taken an interest, had begun to grow rapidly and in 1972 he joined the Board as a contracts director and began to build his first golf course at Mowsbury Park, Bedford, to the design of Hawtree and Son.

He has been a director of Golf Landscapes Limited for the past sixteen years and has seen them develop into one of the most experienced and respected specialist contractors in golf course construction in the United Kingdom and abroad. During that time he has led the Company into many design and build projects, as well as establishing an irrigation division as a regional distributor for Toro products in golf and turf generally.

As a confirmed internationalist, he has created many opportunities to travel abroad in pursuit of his career and is a regular contributor to the Golf Course Superintendents' Association of America, both in providing editorial material for the magazine 'Golf Course Management' and giving presentations at the Annual International Convention in 1985 and 1987.

In 1986 he was commissioned as the golf course consultant for Bovis International Ltd. and has been working for the company in managing the construction of the new championship course of Sao Lourenco, at Quinta do Lago, Portugal, its completion, and now its ongoing maintenance. Elsewhere in Portugal, he is retained by Shell Portuguesa, McInerney Lda. and Quinta da Marinha Golf and Country Club, as golf course consultant, as well as in Corfu, Greece.

He sees the development of a specialist role in construction management of great importance in his future years, linked with advisory work in golf course design, irrigation and ongoing maintenance.

In 1984 he was elected to The Chair of The National Turfgrass Council, a representative body for the amenity industry, acting as an umbrella organisation for trade and public bodies alike and specialising in all kinds of turf. This has enabled him to be particularly active in the development of NTC conferences, workshops and seminars throughout the United Kingdom, presenting a wide range of technical subjects, from sand constructions to wild flora, from recreational use of farmland to voluntary groundsmanship. Some 24 National Associations are represented on the Council, and with them he is presently developing a 5 year funding programme to establish a permanent secretariat.

On the Council, he represents the British Association of Golf Course Constructors. In an attempt to improve the industry in which he worked, Howard Swan founded the group for contractors specialising in golf course construction, drawing together representatives from, initially, three other companies. Meetings are regularly held and three Education Sessions have been organised with international participation. Presently eight construction companies and some fifteen suppliers are members of the Association.

Arising from his Chairmanship of the National Turfgrass Council, he has given papers to the European Landscape Contractors Association in Malmö, Sweden, on Sports Ground Provision, and to the American Society of Golf Course Architects, in Limerick, Eire, on the building of traditional golf courses.

This latter presentation led directly to his commissioning as golf course consultant to Tom Watson and Robert Trent Jones II in the construction of the new championship links at Spanish Bay, Pebble Beach, California.

Outside his business activities, he enjoys sport and travel and plays golf enthusiastically but says inconsistently.

NEWS 4

Ryder Cup Video

The BBC have launched two golf videos covering the memorable victories of the European Ryder Cup at the Belfry in 1985 and at Muirfield Village last September.

The re-released Belfry tape runs for 120 minutes and the 'Victory in America' video for 90 minutes, which just goes to show how much we all suffered on this side of the Atlantic from the constant breaks for advertising.

It is interesting to compare the coverage between the two events, which shows there is just "no contest" against the camera and production crews of the BBC when reporting golf. We all know they are brilliant - this proves it.

Both cassettes can be obtained from BBC Enterprises, 80, Wood Lane, London W12 0OT priced £9.99 each.

Q.E.2's propellers into golf clubs

Swilken of St. Andrews in conjunction with Sandhill (Bullion) Ltd. have bought one of the thirty-two and half ton marine bronze propellers from the Q.E.2 to melt down and turn into high quality golf clubs.

The metal which has the colour of platinum with a hint of gold will produce a distinctive set of irons for the golfer who is seeking the ultimate and is prepared to pay for it.

Gold Award for the STRI

Following the successful launch of the National Turfgrass Council's new initiative designed to revitalise industry awareness and set a progressive strategy for the future, the Sports Turf Research Institute has donated £800 to become a "Gold Patron".

The N.T.C. are seeking donations from the sports turf industry to finance the Council's activities in education, training, research, promotion of amenity turf in general and lobbying support within the corridors of power.

Midland expansion for Rigby Taylor

Rigby Taylor, the Bolton based supplier of fertilisers and accessories for the golf course industry has recently doubled the size of their Budbrooke Trading Estate warehouse and offices in Warwick.

Owen Jones, 35 years in the horticultural trade has been appointed the depot's Sales Office Manager.

Quote of the Month

Pro golfer Carl Mason asked for his impressions of the new Emirates Golf Club, built in the desert outside Dubai said he thoroughly enjoyed the course, but thought there should be a little less sand in the bunkers!

Mason, Horton, Marchbanks, Longmuir and Gregson were part of a Pro-Am team who played two tournaments at the first all grass golf course to be built alongside the Arabian Gulf.

New Turfgrass Manual from British Seed Houses

The third revised edition of the BSH Turfgrass Manual, first published in 1980 will be available from 1st January, priced £3.75, postage paid.

The twenty-one chapters over sixty pages represents a slightly enlarged reference book compared to the second edition and this year includes information on grass species recommended for coastal and derelict land reclamation as well as wild flora seed.

With a publication offering wide advice to the turf maintainer it was most surprising to find this advice was directed at Lawn Management, Race Course Management, Cricket, Football, Hockey, Bowls and Tennis, but nothing specifically for the golf course.

Perhaps the authors believed they cannot teach the golf greenkeeper anything about maintaining his greens, tees and fairways!

Copies may be obtained from BSH Ltd., Pitt Street, Warrington, WA5 5LE, enclosing £3.75.

ief...News Brief...



A Cautionary New Year Fable

...by Fred Hawtree

I have spoken to you before of Britain's favourite clay course - that adhesive track known as Sludgecombe-on-Ouse. But that was primarily to record the fate of one of its earliest head-greenkeepers. You will remember, as a faithful reader of these priceless pages, that the man in question was Charlie Lee who developed a serious grass addiction and disappeared, believed drowned in the Ouse, only to surface 25 years later in China, where he was experimenting with acupuncture. Although still hooked on the stuff, he was having some success with the application of the sharp ends of bamboo shoots in the right places.

There has been a steady turnover of superintendents since those early days as, one by one, they have slunk off, their spirits crushed by the Ouse silt. Some, indeed, were laid to rest in this self-same material but most were unable to obtain any rest until they had reached sand, gravel, or anything with a particle size in excess of 0.25mm.

Only one man ever mastered the deeply churned wastes between tees and greens (Not to mention those between greens and tees). But his reign was even briefer than most because 'Sludgers', as the locals call it, got to him in another way. I will tell you about it while the story is still fresh in my mind so that the little details which I vividly remember may help to convince you that I am not making it up.

Of recent years I have only gone down to Sludgecombe for a few weeks at a time and, being older and perhaps wiser, I generally stay in the club-house and catch up with the gossip. There seldom seems to be any shortage... My family always took its summer holidays down there and so I know nearly all the names which crop up even if the people they belong to come from the next generation.

That fact alone would endear the place to me but there is an even stronger tie because Sludgecombe is where I learned to play golf and was first allowed on to a course. Whatever happens to a man later in life, no matter how many more testing, more beautiful or more exotic layouts he explores, the place where he

first hit a long iron right on the sweet spot and straight to the heart of the green will always occupy a special corner in his affections. I can still see in my mind's eye the dazzling white expanse of Daisies across the fairways, the Toadrush in the brown summer greens, the tattered seed-heads of Rye-grass on the tees. I can still feel the thrill of finding a deeply plugged golf ball at the bottom of a hole wrongly attributed to a burrowing animal. It is sad to think that the young golfers of today will never experience these pleasures.

But by the time of which I speak, tests demonstrated that at least 80% of the playing area consisted of grass, though of widely varied strains. Sludgers has never been too fussy about which ones. So it was generally agreed that the course had greatly improved in the forty years since the Second World War in spite of the fact that the number of greenkeepers it had destroyed in the process now totalled 27.

I think I may be partly to blame for what followed because I happened to mention casually to the Captain that this seemed to be a turn-over rather in excess of the average. I did not pick a good moment because he had only just been elected and was therefore unduly sensitive to any suggestion that reform might be called for. Moreover No. 27 had only just departed and the Chairman of The Green Committee was already interviewing applicants for the vacancy. The Captain acted swiftly. 'The Chairman', he ordained, 'would

appoint the youngest applicant... someone who would make Sludgecombe his life's work from the very start and not be all the time looking over his shoulder at other openings'.

'So be it, Captain!' said the Chairman followed by something else under his breath which I did not quite catch.

That is how young Andrew Wytchett came south from Scotland like so many before him. He arrived in the Autumn, not the most promising time, and set about showing his new employers that they had made the right decision. He had acquired all the traditional skills but, being an observant lad, he knew what was going on in the rest of the world of greenkeeping and not only tackled the drainage problems, of which there was no shortage, but also introduced new mowing regimes with which he hoped to bring out some of the moribund design features at holes otherwise lacking interest, that is to say all of them.

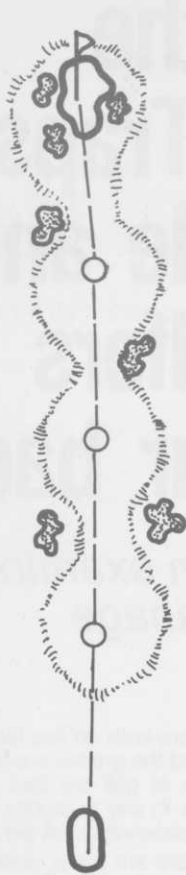
The Sludgecombe members had never seen anything like this and entered into the spirit of the thing with enthusiasm. Unfortunately, some of them entered rather too far, to be specific, the President, the Captain, the Chairman of the Green Committee, and the Hon. Secretary. We can also assume that the Professional had his say.

After dealing with the usual problems, curable at that time of the year, like 'Too much sand in the bunkers', 'Not enough sand in the bunkers', 'Mud in the sand in the bunkers', Andrew concentrated on his drains during the winter and really made great strides. The Ouse fortunately was relatively low for the time of year and there were none of the usual February floods. The Captain was able to relate how his one simple policy decision had transformed the course; the Chairman was able to say that all that had been lacking before was a firm direction of the ground staff from the top; the Hon. Secretary was able to say that it was lucky he had put Andrew at the top of the short list. The President was not able to say anything because

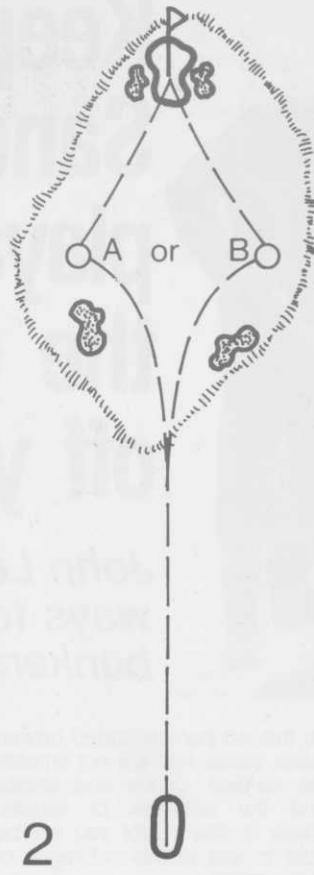
he was golfing in Majorca for the winter and was not due back till April. It was in fact the most peaceful winter that Sludgecombe members could recall. Nobody fell off the verandah at the Prize Presentation, no lady members behaved in a scandalous fashion at the Annual Dance, subscriptions all arrived punctually during January, and the flag had only to be flown at half mast twice, ten less than the average. Having established this favourable atmosphere, Andrew moved to his next programme. He started to sculpt the fairways.

Up to this point, chiefly because it was cold out on the course in the winter, he had been left pretty much to his own devices. But now the club officials felt able to get out and give him the benefit of their advice. Even the President returned from the South to seek out, like a large House-martin, his last year's nest, though not for the same reasons, and was to be seen happily engaged in conversation with the red-haired custodian of his course.

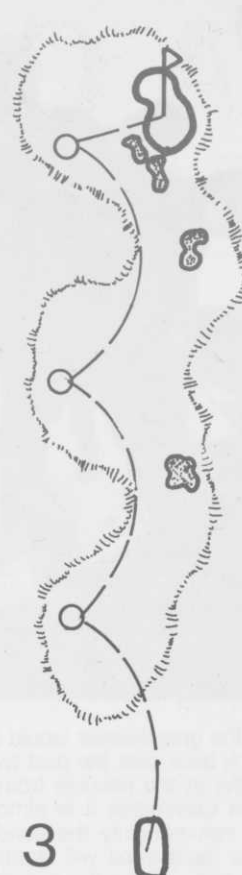
Growth was late in starting that Spring and it was not till the famous Sludgecombe flush arrived, when members swear they can actually see their ball rising on growing grass as they address it, that it began to become clear that something unusual and possibly untoward was going on. Personally I put it down to Andrew's youth and his natural desire to satisfy the senior officials of the club. I blame them for interfering or indeed imposing their own ideas on to their protégé. At all events, by the end of June, the club was in an uproar. The Professional's golf ball sales had trebled, rounds were lasting six hours and were often not completed at all due to lack of ammunition. When I arrived in July, I was just in time to record the situation before the flail mowers arrived. These sketches show roughly what I found. There were five different patterns in the new fairway shapes which I found all over the course and I was puzzled by the wide variety. Then the light dawned.



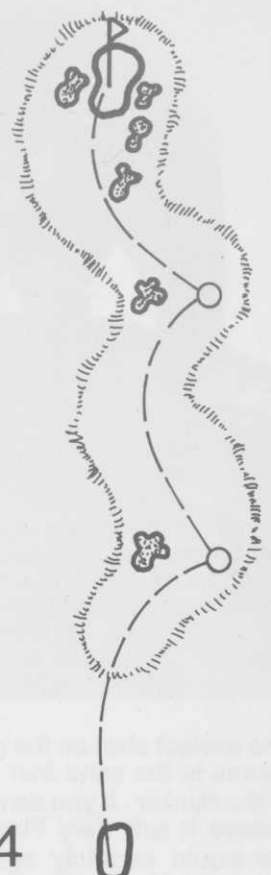
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4

The President hits the ball about 140 yards and is always straight down the middle. He must have been working on Andrew at the Type I holes. The Captain is long but wild. He was naturally responsible for Type II. The Chairman has always tended to produce a quick hook when under pressure. Or so he says. Actually he produces it all the time. Obviously Type III. The Hon. Secretary shapes a wily game based on the banana, and clearly adaptable to Type IV. That only left the Pro. and it was easy to see where he had put in his oar.

Unfortunately, while all the members at Sludgers regularly produced shots admirably designed to fit these patterns, they could not be sure of producing them at the appropriate hole. All Hell broke loose.

The President called the Extraordinary General Meeting for August in the hope that most people would be away on holiday but the Country Members were there in force and the Rules clearly gave them a vote however you tried to twist them. And they were as vociferous as anyone, especially as their unusual participation in the Club's domestic affairs promised at least one evening's relief from the stroll along the promenade after dinner. It was clear that heads had to roll if there was to be any hope of appeasing this assembly.

Preparing for the meeting, the President had not got much leeway. His wife's younger sister's daughter was married to the Captain. That ruled him out. The Chairman of the Green Committee was Headmaster of the school attended by the son of the President's elder daughter and exams, were coming up. A whole career could be blighted by one false step. The Hon. Secretary was a sort of cousin due to an indiscretion about which the family did not talk too much. All might be revealed if he had to go. And the Pro. had a contract. The choice therefore lay between the President and Andrew. What would you have done, chums?

FEATURE 1

Postscript

In wishing you a Happy New Year, I hope it will not take much of the *fest* out of the festive season if I inform you that **This Column** will be taking a Sabbatical during 1988 and you will therefore have to try and live without the monthly tips from the top which I hope have been some comfort to you in your arduous task. If this loss leaves a big hole in your life which nothing else can fill, then I am sorry. But I rather doubt that it will, I salute you.

1. The President's Hole

Short off the tee, 2 irons straight down the middle. Holes out in five, but has a shot for a net par.

2. The Captain's Hole

Long but wild. A hook or slice will still give him a chance for a 'birdie'.

3. The Chairman's Hole

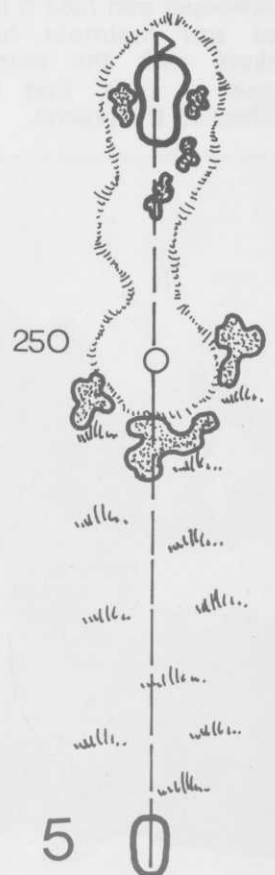
Three quick hooks and a pitch to the flag and another par is marked on the card.

4. The Secretary's Hole

He calls it a 'controlled fade', others, out of earshot say it was modelled on the 'banana slice'.

5. The Pro's Hole

230 yards to make the cut grass, while lesser mortals hack about in the undergrowth, knowing he has extracted another "fiver".



5



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

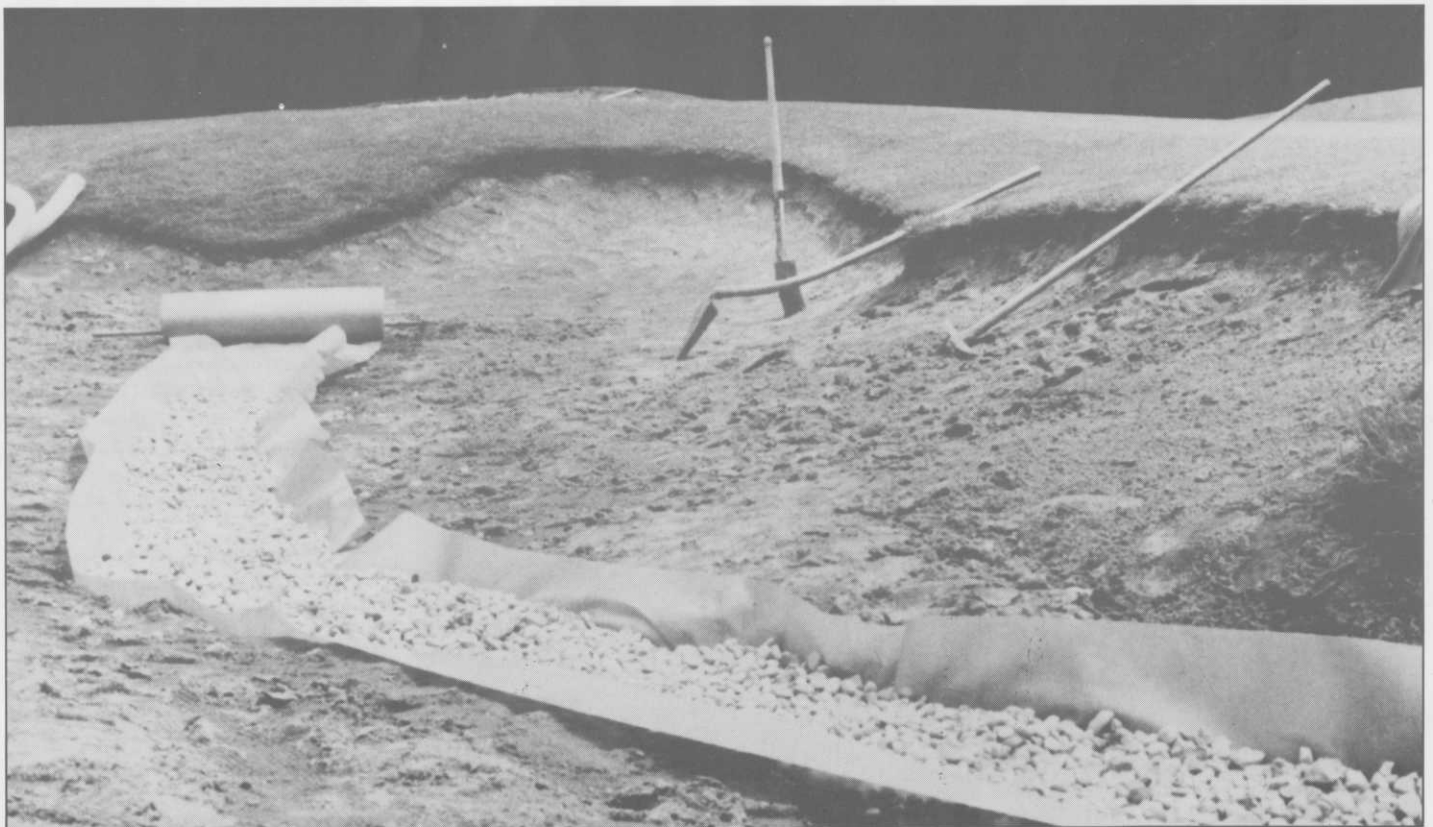
the holes as their individual perk to pick up the bonus of birdie twos in the medal rounds.

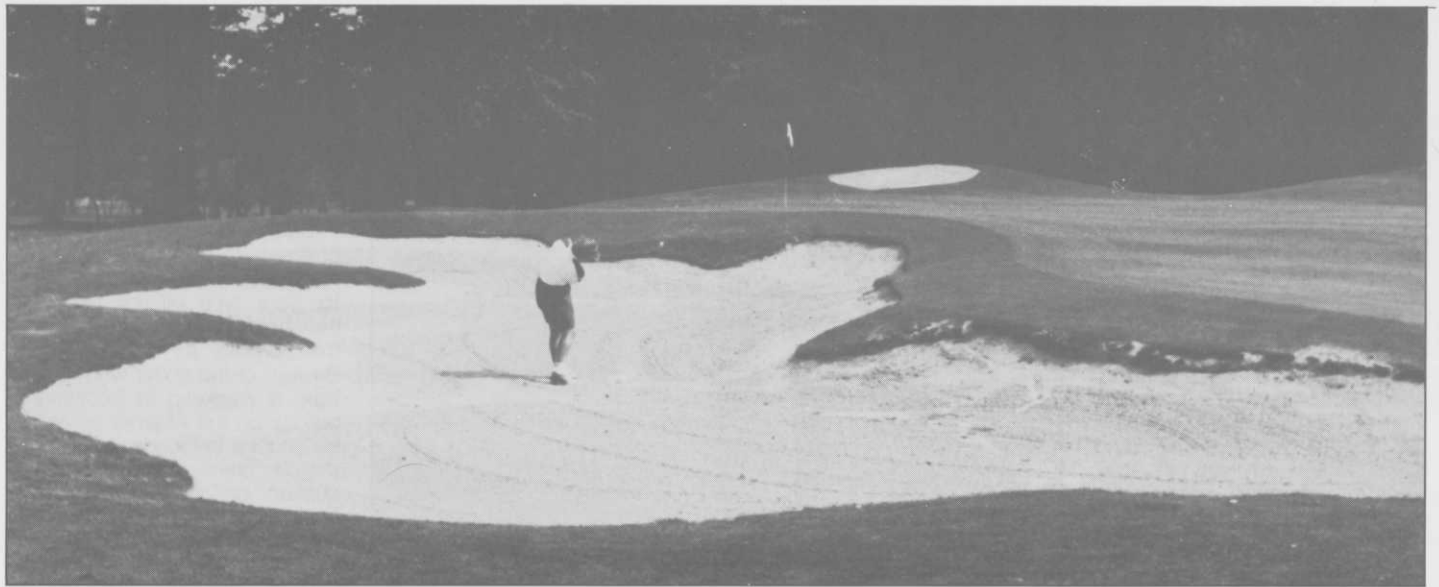
The "IDEAL" BUNKER

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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Henry Cotton, MBE.

The public schoolboy who changed the face of professional golf.

Barred from a clubhouse, he picknicked from the boot of his Rolls Royce out of a hamper from Fortnum & Masons.

Married to an Argentinian heiress Sir Henry Cotton lived life as he loved it - luxuriously and to the full.

Friend of Kings, partner to Princes, no one has done more to bring the game within reach of all levels of society.

The year ended sadly with the death of one of golf's greatest characters, Thomas Henry Cotton, a month short of his 81st birthday.

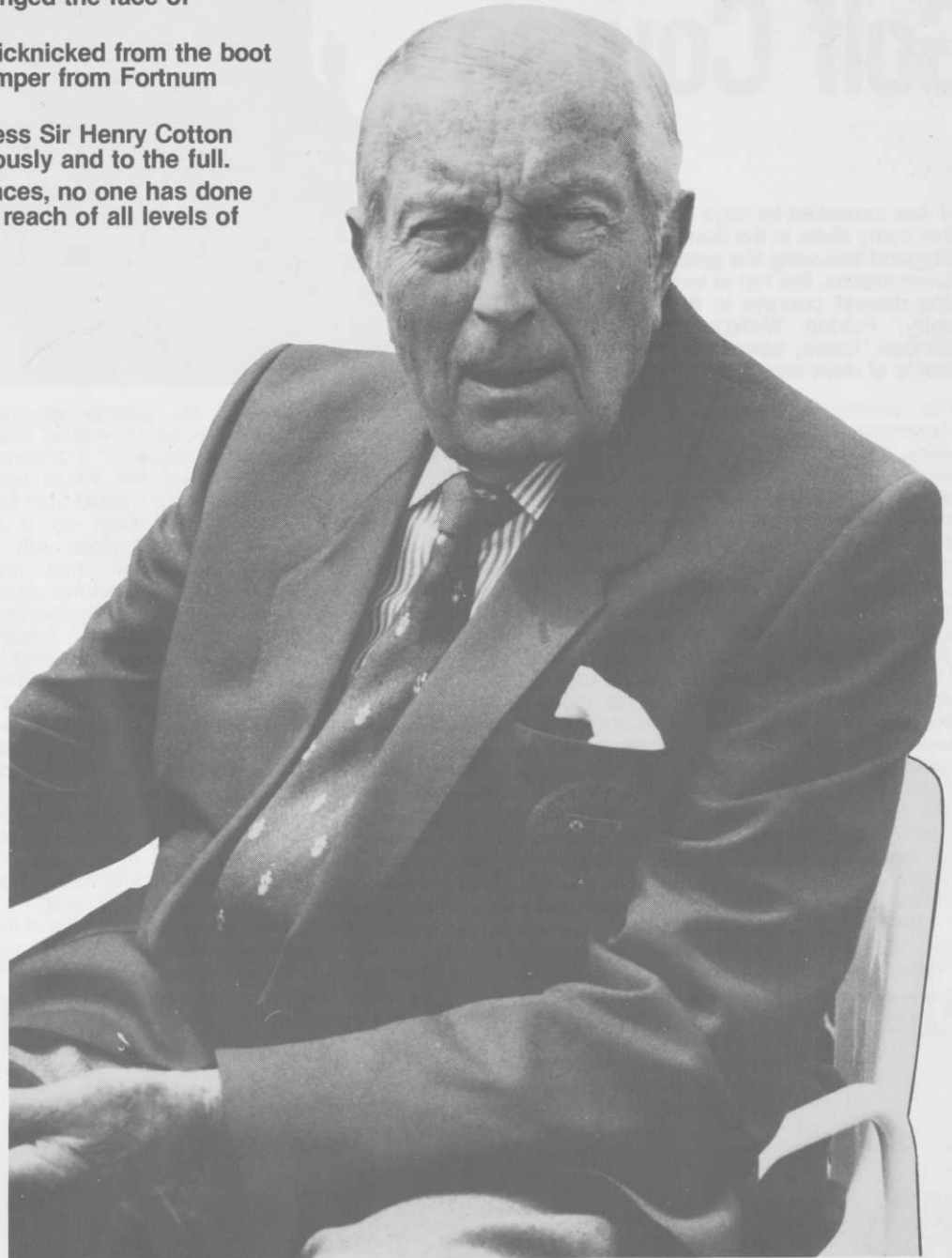
Controversial to the very end, Henry will no doubt revel in his last poser to officialdom, whether he will in future be referred to as "the late Sir Henry Cotton" or just plain Henry Cotton MBE. At least the long awaited recognition was given to him and he knew a month before he died.

No man gave more or fought harder for the professional game and this applies not only to golfers but greenkeepers as well. Latterly, his playing days over, he took an increasing interest in course design and maintenance and was a regular visitor to new constructions and irrigation schemes all over the country, discussing with a considerable depth of knowledge the needs of the greenkeeper. Although spending winters at his beloved Penina, Henry made England his home for the summer to attend the Open Championship and Test Matches at the Oval and Lords. In between he squeezed in his personal appearances, usually for a fat fee - and who can blame him!

The stories of Cotton are legendary and no doubt someone is already compiling a best seller of his life interspersed with a host of anecdotes. A conversation with Cotton was invariably one way - he spoke and you listened, but it was never boring, always informative.

Henry was a regular reader of this publication and only shortly before his untimely death wrote a short note to say how much he enjoyed receiving his copy asking for it to be redirected to his London address.

If one may be permitted a personal recollection it will be the advice he offered when discussing how to play a hole at the Berkshire. "Don't try anything fancy, my boy. Keep the ball on the cut grass - you are less likely to get into trouble". Such philosophy could be regarded as sound advice in many fields other than golf.



Thomas Henry Cotton
Born at Holmes Chapel,
Cheshire
26th January, 1907

- Open Champion:
- 1934 Royal St. Georges,
Sandwich
- 1937 Carnoustie
- 1948 Muirfield

- Winner:
- Belgian Open 1930-34-38
- Italian Open 1936
- German Open 1936-37-38-39
- French Open 1946-47
- Argentine Open 1930

- Ryder Cup:
- Three appearances
- 1929 - Moortown
- 1937 - Southport
- 1947 - Portland, Oregon
- Non-playing Captain:
- 1953 Wentworth

Hon Member of the
Royal & Ancient
Captain of P.G.A.
1934-48

Founder Member of the
Golf Foundation

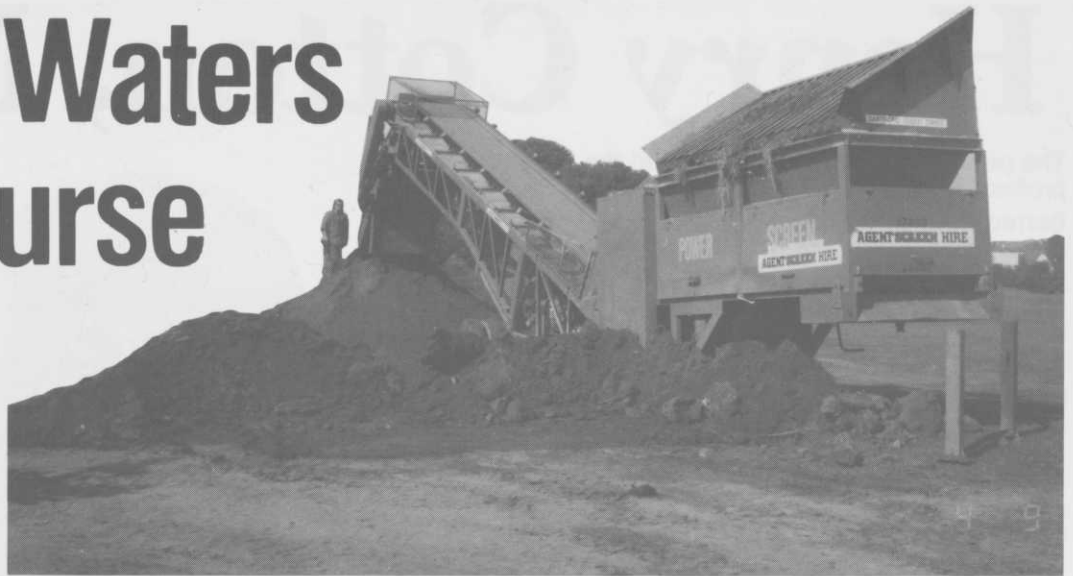
- Awarded:
- Harry Vardon Trophy 1938
- Walter Hagen Award 1979

Seventeen holes in one
during his competitive
playing career

Had the Dunlop 65 golf ball
named in honour of his round
of 65 in the Open at
Royal St. Georges in 1934

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 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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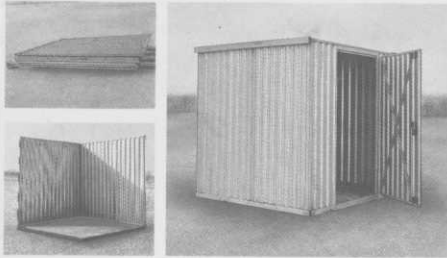
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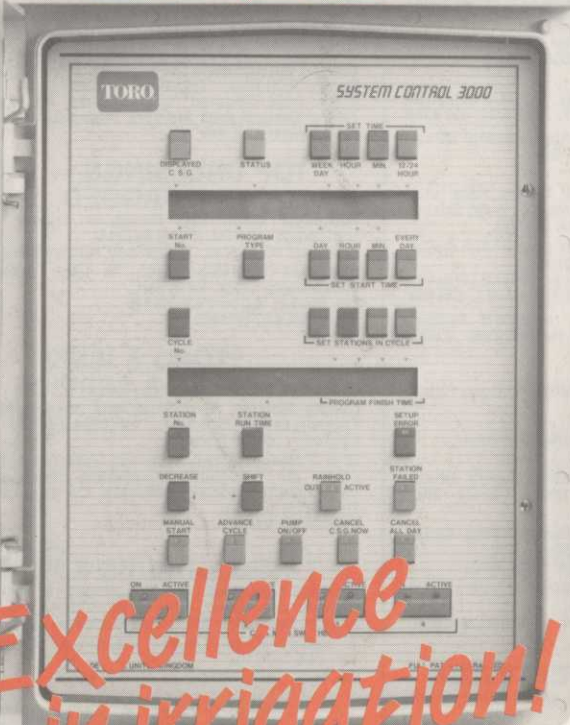
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